



HEALTH DASHBOARD UPDATE REPORT 2022

NGĀTI
POROU
HAUORA



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Foreword

Tēnā tataau.

Mauri ora kia Ranginui e tū nei Mauri ora kia Papatūānuku e hora nei. Mauri ora ki te taiao e tauawhi nei i a tataau.

Ko Ngāti Porou me te hunga i raro i te maru o Ngāti Porou hauora tēnei e takatu nei i nga mahi o te wa, me kore e muia te ora i runga i nga whānau kei nga kokoru kei nga pumotomoto o te rohe. E kapohia nei e te wa nga tangi nga aue kia noho roa ai tataau i runga i te mata

We are pleased to present Ngāti Porou Hauora (NPH) Health Dashboard 2021 Update Report. This tool provides the most comprehensive picture of the health and wellness status ever produced for the Ngāti Porou rohe. The first edition, produced in 2016, established the baseline for demanding health equity for Ngāti Porou. This update will assist us with the process of tracking our journey to equity, good health, and long life.

It presents a set of indicators, including trend analysis of service coverage, utilisation, social determinants, and the health profile of populations of the Ngāti Porou rohe. The Dashboard gives an aggregated snapshot of indicators for NPH relative to the Tairāwhiti DHB, and the total New Zealand population where available. This feature can help NPH to highlight where we are doing well, and where particular focus and additional resources are required. The unprecedented challenges COVID-19 presented during the past years have re-emphasized the importance of work underway to address health inequities. We know and are gravely concerned that outbreaks of infections such as COVID-19 disproportionately impact people and populations already facing the challenge of poorer health outcomes.

Ngāti Porou Hauora, together with Te Runanganui o Ngāti Porou, worked closely with Hauora Tairāwhiti, local communities and whānau for the rollout of the COVID-19 vaccination programme. During 2021-22 we undertook plan-ning for one of the largest changes the New Zealand health and disability sys-tem will experience. As we work with the new entities, Te Whatu Ora, Health New Zealand and Te Aka Whai Ora, Māori Health Authority, NPH continues to evolve and develop strategic priorities and services that are aligned with this reform. Our Board remains committed to ensuring we are in a sustainable financial position, and work continues to ensure we optimise our resources to deliver quality care with whānau at the centre.

Kei te mihi ki te hunga i whakapau kaha i pe o ratau ringaringa ki te hiki ki te waha i to tataau hauora i roto i nga taumahatanga e pehi nei i a tataau,kaore ha ki te poari o nanahi.

Na reira kia tau te ia o te Mauri kia tataau katoa.

Selwyn Parata
Chairman, Ngāti Porou Hauora

**NGĀTI
POROU
HAUORA**





Ngati Porou Hauora – Rose Kahaki - General Manager, Selwyn Parata – Chair, TRONPnui, Dr Emily McNicholas, Rei Kohere, George Reedy – CE TRONPnui.

Acknowledgements

NPH would like to acknowledge those who have passed since the 2016 report and the huge significance of each of these precious whānau members. Moe mai rā e te whānau kua whetūrangitia. Moe mai, moe mai, moe mai.

The Ngāti Porou Hauora (NPH) Health Dashboard project was initiated by the NPH Board in 2014-15 by past Chair Teepa Wawatai, Deputy Chair Huti Puketapu Watson, members Dr Julia Carr, Lois McCarthy-Robinson, Kylee Potae, and then CE, Rose Kahaki. Gratitude for their support for the development of NPH Dashboard as part of the learning journey and commitment to making health equity the foundation of NPH.

The data analysis and writing of this update faced more challenges in 2021 due to less published information specific to Ngāti Porou Hauora and benchmarks. The Dashboard indicators came from a variety of sources of customised data. During 2021, the requests for customised data were often constrained by conflicting delivery timeframes due to other larger projects, particularly because of COVID-19 related work and/ or the availability of affordable technical expertise with access to the official data.

In these challenging circumstances, the NPH Dashboard project was completed, and this report is written as a result of the collaboration with professionals who committed their energy and precious time for advice, technical analysis and peer review. Each of them shared a degree of professionalism, interest and commitment to the work that deserves profound gratitude.

In 2021, I would like to particularly acknowledge Rose Kahaki, who trusted me with this huge project. Special gratitude for her oversight and assistance with management, staff connection and workspace during my stay and work onsite in Te Puia Springs.

Dr Julia Carr provided ongoing guidance, mentoring and peer review. She made a particular contribution through stimulating ideas and offering encouragement which helped me to consolidate the focus for this project. Bridget Robson, Associate Dean Māori, University of Otago and Te Rōpū Rangahau Hauora a Eru Pōmare, University of Otago Wellington, provided peer review and valuable insights that helped to fine-tune this report.

Professor Don Matheson, then Deputy Director-General of Health, assisted by Tony Cooke facilitated access to health data from the Ministry of Health. The Ministry's Data Services provided analytical support to complete the suite of health outcome indicators, to give a longer-term health profile of Ngāti Porou rohe. In this regard, I want to thank Sean Carroll, MoH Information Analyst, who took on this extra work, while working on other significant projects, including COVID-19 related tasks.

The NPH clinicians, Dr Helen Gardyne, Cheryl Johnson, Lisa Porter, Gina Chaffey and colleagues provided valuable input on local service delivery issues and enlightened me with local context. The administrative staff Denise Hovell, Carol Nuku, Rawinia Campbell and Tangihaere Vaatuitui helpfully supplied NPH data and answers to numerous questions.

The staff at Karo Data Management Ltd who assist NPH, provided customised PHO data over and above the contractual obligation. Hauora Tairāwhiti staff Janine Brown, Karen Anderson and Evelyn Cross helped with childhood immunisation statistics and cervical screening data respectively.

Mark Cockburn, Land Information team leader, GIS Mapping services for Gisborne District Council, provided two visual maps on PHO enrolment coverage. Stats NZ were very helpful with their contribution of customised data for life expectancy, geographical data, social statistics and population estimates for NPH rohe. June Atkinson, Senior Data Analyst, Department of Public Health, University of Otago Wellington provided NZDep2018 indexes of socioeconomic deprivation.

I am grateful to my community, The Sisters of St Joseph of the Sacred Heart for supporting this Dashboard project as my ministry in 2021-22.

Responsibility for all the analysis and interpretation in the report (including any errors or omissions) remains mine alone.

Nō reira, nei taku mihi maioha ki a tātou katoa, ko te tohu o te rangatira, he manaaki. Mei kore ake ahau i a koutou katoa. E mihi ana.

Lee Tan, Research Analyst and Project Manager

Executive Summary

Introduction

This report documents a set of indicators for Ngāti Porou Hauora (NPH) to understand trends and progress in health outcomes at the population level for the people served by NPH. Such information provides a view of the impact of services and initiatives on communities and evidence of health outcomes for whānau over time. It also provides data for us to feedback to communities, funders and the Crown.

The contents may not be easy reading for some, while for others, it is a testimony of what is already a reality. The report will assist Te Manawa Taki Region and the new leadership of Te Whatu Ora, Health New Zealand and Te Aka Whai Ora, Māori Health Authority understand the context of this important population and unique locality. However, the solutions for progress in the health of the population largely rely on addressing the wider social determinants, an effective mix of funder and stakeholder collaboration, locally designed, developed, delivered services, and regular performance monitoring.

What We Learned

There is evidence of positive impacts of NPH health and related services on the health and amenable mortality for Māori in the rohe. Some of these trends and impacts are:

- Steady increases in PHO enrolment from 2019 to 2021 with quite substantial increases in PHO enrolment since the start of COVID-19 outbreak in 2020
- The high number of clinical consultations and a fair level of intermediate performance outcomes reflects the availability of primary health care services for the Ngāti Porou people; these services are provided by a mix of doctors, nurses, kaiāwhina and support staff delivered in Gisborne and six clinics located in the rural east coast which maintained a continuity of care
- Ambulatory-sensitive hospitalisations (ASH) for Ngāti Porou Māori population have declined over time and are trending towards the rate for the rest of the country, which shows that NPH primary health care is effective in reducing hospital admissions across all age groups
- Life expectancy is increasing for both NPH women and men but the gap between Māori and non-Māori has not diminished over the past 15 years
- Overall mortality rate has declined as have the amenable mortality rates for NPH Māori

However, there remain high levels of poor health and unmet need and unacceptable disparities in health outcomes, compared to the general New Zealand population. Areas for further investigation and follow up are:

- The life expectancy at birth for Māori men in the rural coastal rohe shows that they die 10 years younger than the average New Zealander, and their life expectancy has declined from 72 years to 70 in the period 2012 to 2019. This worsening disparity is alarming and tragic!
- More than half of the total deaths among NPH Māori are potentially avoidable because the leading causes of amenable deaths are cardiovascular diseases, lung cancers, suicides, cancers of digestive organs, respiratory disease, and female breast cancer. These top causes accounted for more than half (51%) of all amenable deaths, and they are also leading causes of ethnic inequities in mortality
- Ongoing agency collaboration is essential to enable regular monitoring and benchmarking of NPH intermediate performance indicators with the local region and New Zealand, as it is important to chart progress and to maintain accountability for Māori health to address any service gaps towards health equity

In recent years, any service gaps have been exacerbated somewhat by COVID-19 associated lockdowns at various times to protect the population, limiting access to kano ki te kano health care for some periods, and diverting staff time to COVID-19 related activity. These limitations have included the following impacts:

- The rural GP and nursing shortage is serious, especially in the rural coastal NPH rohe where enrolment has steadily increased by 4% since the COVID-19 outbreak while urban enrolment increased by 2%. NPH services are not resourced to manage a steadily increasing number of enrolments, complex health needs, and impacts of the COVID-19 pandemic
- The NPH Coastal services are made up of smaller teams than urban services. Consequently, small gaps in the workforce are felt more intensely. For example, in the early days of the vaccination roll-out, the Ministry of Health set very stringent criteria on the requirements for health providers to deliver vaccinations. Guidelines included instructions on how many health workers or assistants a provider needed to have in a vaccination centre and this, along with the initial requirements for cold storage of the vaccination made it very difficult for rural providers to institute innovative ways of delivering vaccinations, while greatly reducing the clinical staff and opportunities for routine primary health prevention services such as childhood immunisation, cancer screening, cardiovascular risk assessment and diabetes annual reviews

This analysis builds on previous analysis in 2015-16 undertaken by NPH and highlights (again) that, to achieve equitable health outcomes, a serious, quantum change is needed to invest in health service access and quality, infrastructure and to expand current action to improve the determinants of health. In 2019 the NPH Board signalled to the Crown the need to secure additional funding for NPH to deliver sustained, quality health services to rurally remote whānau on the Coast. While this objective is still a priority, Te Runanganui o Ngāti Porou (The Runanganui) is considering a mix of approaches, including integrating NPH and Runanganui Whānau Oranga services, leveraging the new opportunities presenting through the health reforms. The Runanganui, working with the Tūranganui iwi, has commenced discussions on the composition and appointment of members to the new Iwi Māori Partnership Board. The Board will be responsible for leading the preparation of the Tairāwhiti locality health plans and establishing direct lines of engagement with Te Aka Whai Ora, Māori Health Authority and Te Whatu Ora, Health New Zealand, influencing policy settings, funding formulas, and informing a new visionary iwi/ Māori hauora agenda¹.

Key Facts

The NPH Health Dashboard highlights the following facts:

PHO enrolment and access to primary care

- There has been a gradual increase in PHO enrolment with NPH from 2019 onwards, which represents a substantial growth (at 5%) that reached a total of over 9,500 people in 2021
- On average, the team of doctors and nurses in NPH have provided more than 54,000 in-person consultations (and thousands more telephone contacts) in 2020-21, which means that NPH enrolled patients have visited an average of 5.8 times over the past 12 months or 1.5 times per quarter in the past four quarters

Social Determinants

- Several indicators of social determinants that are fundamental to driving health inequalities showed that about 4 in every 5 people in NPH live in areas of highest deprivation (NZ Deprivation index 9-10)
- more than 3 in 4 people live in low-income households that are more likely in poorer quality housing
- the combination of many people living in high deprivation and very rural areas most likely compounded in terms of resource need, which is a crucial point for the development of new funding formulae by the Māori Health Authority and Health New Zealand to ensure they make a difference

1. The 2021 Annual Report for Te Runanganui o Ngāti Porou.
Available at <https://ngatiporou.com/nati-news/nati-publications/ripoata-tau-2021> (accessed December 2021)

Intermediate Performance outcomes

A selection of key PHO performance measures shows the following patterns:

Childhood Immunisation

- This rate is progressing to the same level of uptake as Hauora Tairāwhiti, but there is still a large gap compared to the rest of New Zealand
- A recent quarterly result showed that NPH Māori children fully immunised at 8 months milestone age (80%) is close to the coverage for Māori children for Tairāwhiti DHB (81%) and is substantially higher than the national average for Māori children at 75%. However, it is far short of the 95% target
- The question for NPH PHO is likely to be capacity issues to keep up with performance to sustain the good results observed in particular quarters

Wellchild Tamariki Ora: Breastfeeding

- There are some fluctuations in the infant breastfeeding status over the past two years with an overall average at 76% which is slightly higher than the target at 75%
- In the last 6 months ending 30 June 2021, every 3 in 4 (75%) of NPH babies has full or exclusive or partial breastfeeding in the first 6 weeks, this rate dropped very slightly at three months (74%)

Cardiovascular disorders and Diabetes

- The long-term trends for NPH enrolled population show that there was gradual declining prevalence of current smokers, with a total decrease of 6% over the past seven years
- Prevalence of current smokers for NPH rohe (39%) is still substantially higher than their DHB (26%) and NZ counterparts (14%)
- NPH PHO continued to achieve high coverage of cardiovascular risk assessment for 89% of their enrolled patients, which is quite close to the recommended target of 90%
- Diabetes prevalence for NPH PHO has decreased slightly over the past 3 years from an average of 10% to 8%, although the total number of people with diabetes has increased around 26% over the past 6 years while number of annual reviews increased by 6% over the same period due to increased PHO enrolment
- Despite the slight drop in prevalence, the workload and resources around diabetes for the NPH rohe continue to be demanding due to the increase in the actual numbers involved with annual review in NPH for enrolled people with diabetes
- more than half of the people diagnosed with diabetes in NPH have good glycaemic control (HbA1c level ≤ 64 mmol/mol)

Cervical screening

- The HPV self-test pilot has contributed to increasing uptake of screening for rural under-screened Māori women
- The overall screening coverage increased by 8% for NPH rohe when the HPV self-test results are included, helping to address low coverage.



Health Outcomes

Life expectancy and births

- Life expectancy at birth for Māori in the NPH rohe was 75 years for females and 71 years for males, while New Zealand average for females is 84 years and 80 years for males
- Māori men and women in the NPH rohe die 9 years younger than the average in the general New Zealanders
- Māori men in the rural coastal NPH rohe die 10 years younger than the average New Zealanders
- Although life expectancy is increasing for all people, the gaps between NPH Māori and non-Māori have not diminished over the past 15 years
- Overall, the prevalence of premature babies in the Ngāti Porou rohe was slightly higher than Tairāwhiti and substantially higher than national rates

Hospital admissions

- Overall, Ngāti Porou rohe Māori have maintained nearly the same hospital admission rate as Tairāwhiti and New Zealand average, but with occasional fluctuations of both lower or higher rates
- ASH rates for Ngāti Porou Māori population across all ages were declining over time and trending nearly the same as Tairāwhiti DHB and New Zealand. Furthermore, cohort analysis of those enrolled with NPH for a longer duration show lower ASH rates
- This shows that NPH primary care is reducing hospital admissions across all age groups.

Cancers

- The rates of all cancer among NPH Māori have been stable and started to decline slightly in the four years 2015-2018
- The most common cancers registered for Māori people in the Ngāti Porou rohe were cancers of the digestive organs (stomach, colorectal or pancreas) and lung cancer
- Lung cancer rates were substantially higher for Ngāti Porou Māori population, two times higher than Tairāwhiti and nearly three times higher than the national rate
- The most common cancers for females are cancers of the breast and lung; and for males, prostate cancer and cancer of the digestive organs

Mortality

- On average, there were 75 deaths per year among NPH Māori, with a mortality rate more than twice the national rate and 1.5 times higher than Tairāwhiti
- The trend in amenable mortality for NPH Māori is declining since 2007-10, in spite of the slight increase in overall mortality trends. This signals a very positive health outcome contributed by improved access to, or quality of, care which led to effective health interventions for NPH Māori
- On average, more than half of the total deaths among NPH Māori are potentially avoidable over time through better access to health care, and better quality or more effective health care
- The leading causes of amenable mortality for NPH Māori are cardiovascular disease, lung cancer, suicides, cancer of digestive organs, respiratory disease and female breast cancer.



Ngāti Porou Hauora Dashboard – Summary

Indicator	Legend	Conditions
Urgent attention		NPH % is worse than Tairawhiti by at least 10% or RR at least 2 times
Warning		NPH % is worse than Tairawhiti by at least 5% but less than or equal to 10% or RR higher than 1.3 but <= 2 times
Fair - could be better		NPH % is about the same as Tairawhiti within +/- 5% or RR is 1 - 1.3 times
Good performance		NPH % is better than Tairawhiti by at least 5% or RR is 1 or less

Ngāti Porou Hauora Dashboard: Summary of Results as at July 2021								
Domain	Indicator measure by:		Data period	NPH	Tairāwhiti	Total NZ	Difference	
Population Coverage and Service Access				Percentage				
Access to PHO	1a	PHO Population coverage	Jul-2021	19%	97%	94%		
	1b	PHO Coverage Rural Areas (East Cape to Tolaga Bay)	Jul-2021	77%				
	1c	PHO Coverage for Urban Areas (Kaiti and Tamarau)	Jul-2021	25%				
	1d	% Māori in PHO enrolment	Jul-2021	87%	50%	15%		
	1e	% High Deprivation in PHO enrolment	Jul-2021	82%	45%	19%		
	1f	% Tamariki 0-4 years	Jul-2021	9%	7%	6%		
	1g	% Tamariki kura 5-14 years	Jul-2021	18%	16%	13%		
	1h	% Pakeke 45-64 years	Jul-2021	24%	24%	25%		
	1i	% Matua 65+ years	Jul-2021	12%	16%	17%	Rate Ratio	
	1j	PHO GP+Nrs consults (visits)	2019-20	5.6	3.5	3.4	1.6	1.6
Social Determinants							NPH - TDH	NPH - NZ
	2a	High Deprivation	2018	82%	45%	19%	37%	63%
	2b	Low income	2018	77%	63%	50%	15%	28%
	2c	Unemployed	2018	8%	5%	4%	3%	4%
	2d	Home always damp	2018	10%	7%	7%	3%	3%
	2e	No Heating at home	2018	5%	3%	5%	1%	-1%
Intermediate Performance Outcomes				NPH Māori	Tairāwhiti	Total NZ	NPH - TDH	NPH - NZ
Prevention	3a	Childhood Immunisations 8 month milestone age	Jul20-Jun21	79%	83%	88%	-4%	-10%
	3b	Childhood Immunisations 24 month milestone age	Jul20-Jun21	80%	82%	88%	-2%	-8%
	3c	Full or exclusive or partial breastfeeding (6 wk)	Jan-Jun21	75%				
	3d	Full or exclusive or partial breastfeeding (3 m)	Jan-Jun21	74%				
	3e	Proportion of smokers 15 - 75 years old	2017-20	39%	26%	14%	13%	25%
Primary Health	4a	Diabetes prevalence	2017-20	8%	8%	7%	0%	1%
	4b	Diabetes Annual Review Total Population 15 -75 years	2019-20	71%	77%	87%	-6%	-16%
	4c	Diabetes Good Glycaemic Control % HbA1c <= 64 mmol	2019-20	54%	47%		7%	
	4d	CVD Risk Assessment Total Population	2017-2021	89%				
	4e	Cervical Screening All 25 - 69 y	2021	64%	72%	70%	-8%	-6%
	4g	Breast Screening Coverage All 50-69 y	2015-16	71%	74%	74%	-4%	-3%
	4h	Breast Screening Coverage High Need 50-69 y	2015-16	71%	69%	69%	1%	2%

Ngāti Porou Hauora Dashboard Update: Summary of Health Outcome

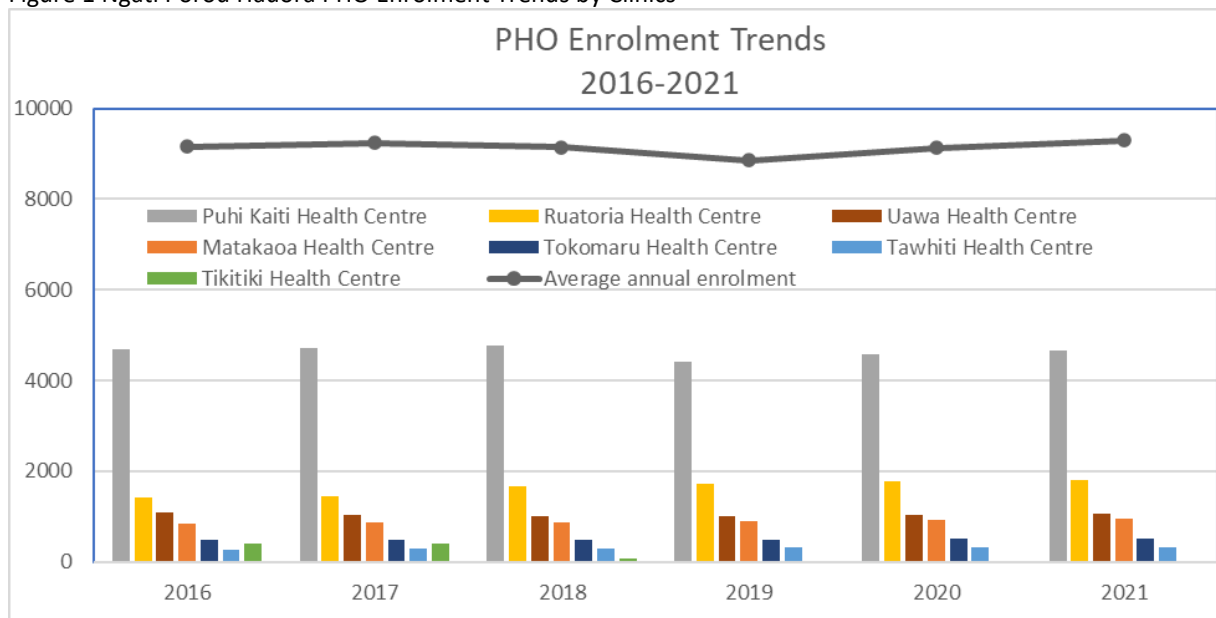
Domain	Indicator measure by:		Data period	NPH Māori	Tairāwhiti	Total NZ	Difference		
				Population	Average number of years			NPH - TDH	NPH - NZ
Life Expectancy at Birth	5a	NPH Māori Female	2017–19	4060	75	81	84	-6	-8
	5b	NPH Māori Male	2017–19	3928	71	77	80	-6	-9
	5c	Rural NPH Māori Male	2017–19	2022	70	77	80	-7	-10
				Avg per yr	Percentage of life births			NPH - TDH	NPH - NZ
Births	6a	Premature births	2013-18	25	12%	10%	8%	2%	4%
	6b	Low birthweight	2013-18	16	8%	7%	6%	1%	2%
	6c	High birthweight	2013-18	5	3%	3%	2%	0%	0%
				Age-standardised rate per 100,000			Rate ratios		
Hospital Admissions	7a	All cause hospital admissions	2018	2,271	23,378	21,523	20,921	1.1	1.1
	7b	Injuries	2018	555	3,897	3,440	3,391	1.1	1.1
	7c	Respiratory disease	2018	330	2,384	2,423	2,520	1.0	0.9
	7d	Digestive system disease	2018	348	2,197	2,126	2,068	1.0	1.1
	7e	Genitourinary system	2018	175	1,082	1,052	923	1.0	1.2
	7f	Circulatory system diseases	2018	255	1,050	1,048	1,033	1.0	1.0
	7g	Cancers	2018	167	904	836	661	1.1	1.4
Ambulatory Sensitive Hospitalisations	8a	ASH 0 - 74 years	2018	469	3917	3310	3032	1.2	1.3
	8b	ASH 0 - 4 years	2018	89	1107	1026	1044	1.1	1.1
Cancers	9a	All cancers	2015-18	43	954	881	767	1.1	1.2
	9b	Lung Cancer	2015-18	8	155	77	56	2.0	2.8
	9c	Digestive organs	2015-18	7	142	138	139	1.0	1.0
	9d	Female Breast Cancer	2015-18	7	161	154	129	1.0	1.2
	9e	Male Prostate Cancer	2015-18	7	148	115	109	1.3	1.4
	9f	Female Total	2015-18	21	938	936	757	1.0	1.2
	9g	Breast Cancer	2015-18	7	307	297	250	1.0	1.2
	9h	Lung Cancer	2015-18	5	200	96	55	2.1	3.6
	9i	Digestive organs	2015-18	3	124	144	118	0.9	1.1
	9j	Female genital organs	2015-18	3	153	120	88	1.3	1.7
	9k	Male Total	2015-18	21	989	825	780	1.2	1.3
	9l	Prostate Cancer	2015-18	7	320	239	226	1.3	1.4
	9m	Digestive organs	2015-18	4	169	132	163	1.3	1.0
	9n	Lung Cancer	2015-18	3	106	58	57	1.8	1.9
Mortality	10a	All Cause Mortality	2015-18	75	1504	985	700	1.5	2.1
	10b	Amenable Mortality	2015-18	43	806	523	347	1.5	2.3
	10c	Cardiovascular Disorder	2015-18	23	396	206	133	1.9	3.0
	10d	Lung Cancer	2015-18	8	155	77	56	2.0	2.8
	10e	Suicide	2015-18	3	108	82	41	1.3	2.6
	10f	Cancer digestive organs	2015-18	4	82	52	46	1.6	1.8
	10g	Respiratory Disease	2015-18	5	69	42	29	1.7	2.4
	10h	Female Breast Cancer	2015-18	2	26	23	20	1.1	1.3

Ngāti Porou Hauora Health Profile

Access to primary care

There has been a gradual increase in PHO enrolment from late 2019 onwards, which represents about 5% increase from 2019 to 2021. This is a growth from an average enrolment of about 8850 people in 2019 to just over 9500 people in 2021

Figure 1 Ngāti Porou Hauora PHO Enrolment Trends by Clinics



PHO Coverage

Currently, 97% of Tairāwhiti DHB's population is enrolled with a PHO: 19% are enrolled with NPH. See Table 1, Maps 1 and 2 for a summary of PHO coverage and access.

- NPH has enrolled a substantial percentage of the population in the East Coast areas (77%), but there is still room to increase enrolment in East Cape (91%), Tokomaru (86%), Wharekaka (51%), Kaiti areas (NPH has 25% enrolled) and several other urban areas of Gisborne with high Māori population (Elgin, Te Hapara and Mangapapa);
- On average, the team of GPs and nurses in NPH have provided more than 54,000 consultations in 2020-21. This means that NPH enrolled patients have visited an average of 5.8 times over the past 12 months or 1.5 times per quarter in the past four quarters.

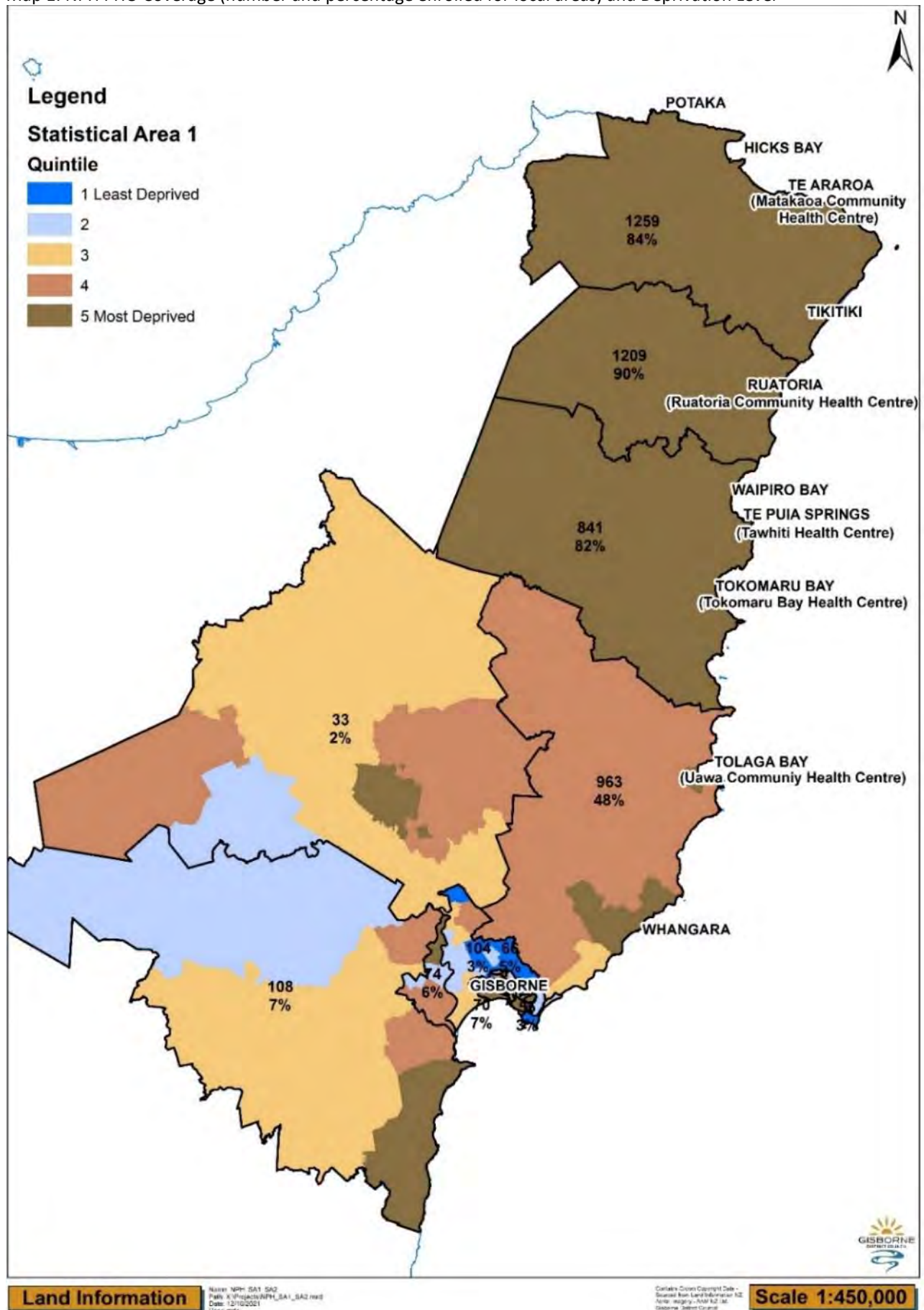
Table 1 Population Coverage and Service Access Dashboard

Indicator measure by:	NPH	Tairāwhiti	Total NZ
NPH PHO Enrolment in relation to population	19%	97%	94%
PHO Coverage for the Coast Rural Areas (East Cape to Tolaga Bay)	77%		
PHO Coverage for Urban Areas (Kaiti and Tamarau)	25%		
PHO GP+Nrs visits (July 2020 – June 2021)	5.8	3.5	3.4

Source: Stats NZ (Census 2018), Karo Data Management (NPH PHO Monthly Enrolment Register)

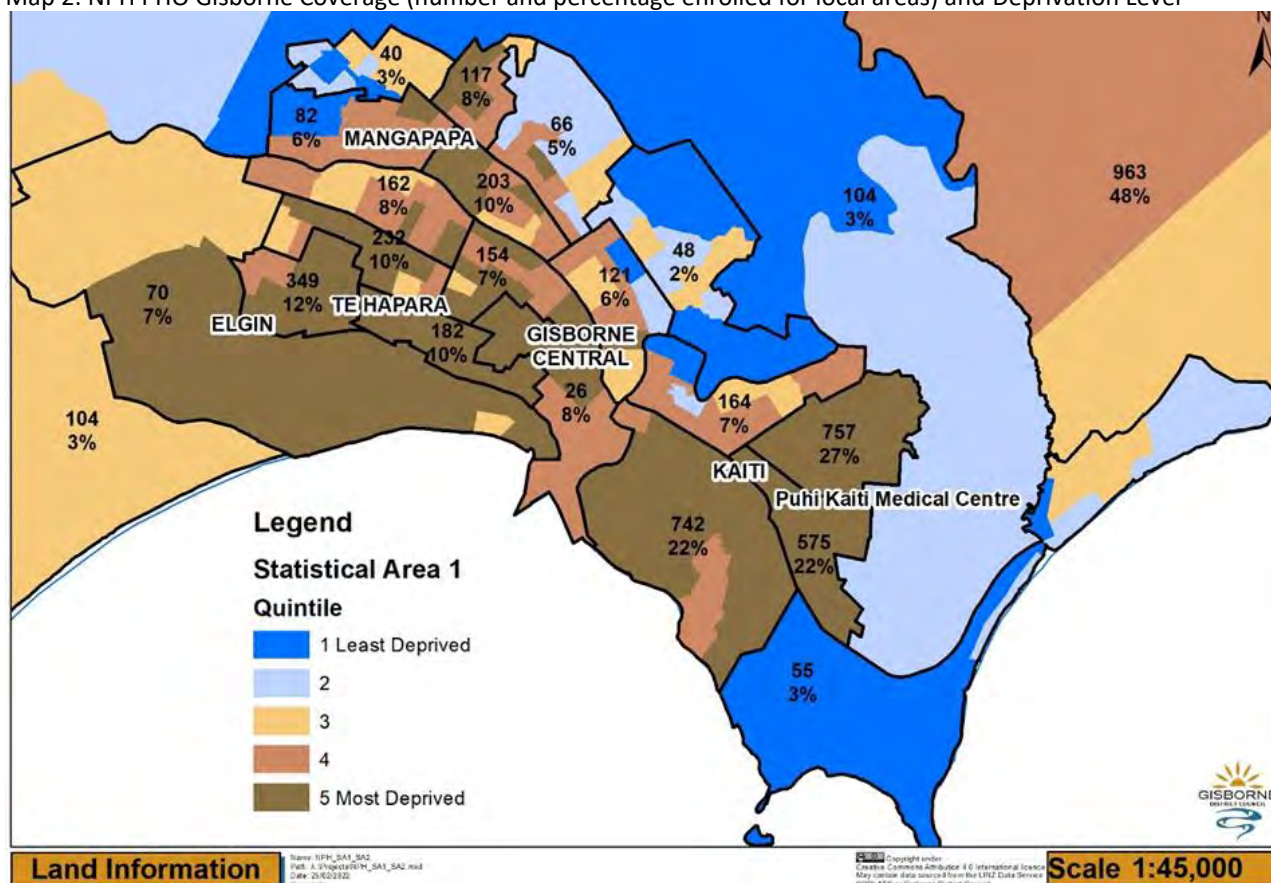


Map 1: NPH PHO Coverage (number and percentage enrolled for local areas) and Deprivation Level





Map 2: NPH PHO Gisborne Coverage (number and percentage enrolled for local areas) and Deprivation Level



Sources: Karo Data Management (NPH PHO enrolment 2021 update) and Land Information - Gisborne District Council

SOCIAL DETERMINANTS

People from more deprived circumstances, especially Māori, do not enjoy the same health status as other New Zealanders. However, this is the very inequality that NPH is, as part of Te Rūnanganui o Ngāti Porou, striving to address. Some of the inequality will be affected by better health services and the NZ health system as a whole. Many factors such as employment, income, housing and education also need to be improved to make a real difference.

This section provides selected indicators of some of these social determinants (income, housing conditions, and employment) that are fundamental to driving health inequalities. Table 2 shows:

- About 4 in every 5 people in NPH live in areas of highest deprivation (NZ Deprivation index 9-10)
- more than 3 in 4 people live in low-income households that are more likely to be poorer quality housing (always damp and no heating)

Table 2 Social Determinants or socioeconomic indicators (Dashboard Indicators 1 – 4)

	Number	Percentage			Percentage difference	
		NPH Māori	TDH	NZ	NPH - TDH	NPH - NZ
High Deprivation	6633	82	45	19	37	63
Low income	2223	77	63	50	15	28
Unemployed	660	8.3	5.2	4.0	3.1	4.3
Home always damp	258	9.8	7.1	6.6	2.7	3.2
No Heating at home	387	4.5	3.3	5.1	1.2	-0.6

Source: Stats NZ, customized data licensed for re-use under the Creative Commons Attribution 4.0 International license; Census 2018 work and labour force status

These social determinants, intermediate health outcomes and the whole suite of health outcome indicators in the next section can contribute to an equity focus for prioritisation of health resource allocation, and inform quality improvement policies and programmes, and improved information systems. To address equity, this means, among other things, more equitable funding, transparent monitoring, addressing regional variations in access, and ongoing provider education and support.





INTERMEDIATE HEALTH OUTCOMES

This section is partially completed when compared with the 2016 NPH Health Dashboard due to the following factors:

- Difficulties in accessing and obtaining consistent data across NPH, Tairāwhiti and New Zealand; except for childhood immunisation and Ambulatory Sensitive Hospitalisation (ASH) that are still being monitored quarterly as part of the System Level Measure (SLM) framework
- In the 2016 report, there were consistent quarterly reports published by the Ministry of Health for the Integrated Performance and Incentive Framework (IPIF). The IPIF programme not only provided reliable performance measures, but also very important incentives for PHOs to achieve good performance across several essential preventive and early interventions in primary care settings²

For the purpose of monitoring primary health preventive measures, some of NPH PHO performance trends for this update are listed in the following paragraphs. They include benchmarking Ngāti Porou Hauora (NPH) Māori with the total population of the local Tairāwhiti DHB and the NZ national average, with associated measures of inequality expressed as percentage difference in comparison with Tairāwhiti total or New Zealand total. There are a few exceptions where NPH total population is used for benchmarking, when the base is small number, or when ethnicity data is not readily available, such as indicators for infant breastfeeding, cardiovascular risk assessment, smoking prevalence and diabetes prevalence and control.

The following colour coded guide is used when benchmarking data are available:

	NPH Māori % is worse than Tairāwhiti DHB or NZ by at least 10%
	NPH Māori % is worse than Tairāwhiti DHB or NZ by at least 5% but less than or equal to 10%
	NPH Māori % is about the same as Tairāwhiti DHB or NZ within +/- 5%
	NPH Māori % is better than Tairāwhiti DHB or NZ by at least 5%

Childhood Immunisation

Improving childhood immunisation coverage is part of the health system's early action to lay foundations for life-long wellbeing. The current immunisation health target is to achieve 95% of 8-month milestone age to be fully immunised³. Fully immunised at age eight months is defined as having received all measured immunisations scheduled between birth and age eight months.

Immunisation continues to be an important focus and a key primary care activity across NPH clinics with the following results:

- Long-term trends for Ngāti Porou Hauora, Tairāwhiti DHB and New Zealand for 8 months old milestone age shows gradual increases towards the target with the highest rate attained at 90% for all people enrolled with NPH (see Figure 2), as well as nearly achieving equity by 2015-16

2. See Appendix 2 for further notes regarding data monitoring and benchmarking

3. Ministry of Health, 2021. DHB non-financial monitoring framework and performance measures. Accessed on 30 May 2021. <https://nsfl.health.govt.nz/accountability/performance-and-monitoring/performance-measures/performance-measures-202021>



NGĀTI
POROU
HAUORA



- Similar positive childhood immunisation trends were achieved for children at the two-year old milestone age with increases very close to the target, and the highest rate attained at 94% (see Figure 3), with equity achieved during 2013 through to 2016
- The rates started to decline for both milestone ages and across all levels since 2017, with slightly widening inequalities which have stayed constant over the past 12 months

Figure 2 Immunisation for 8 months old babies: 12 months results

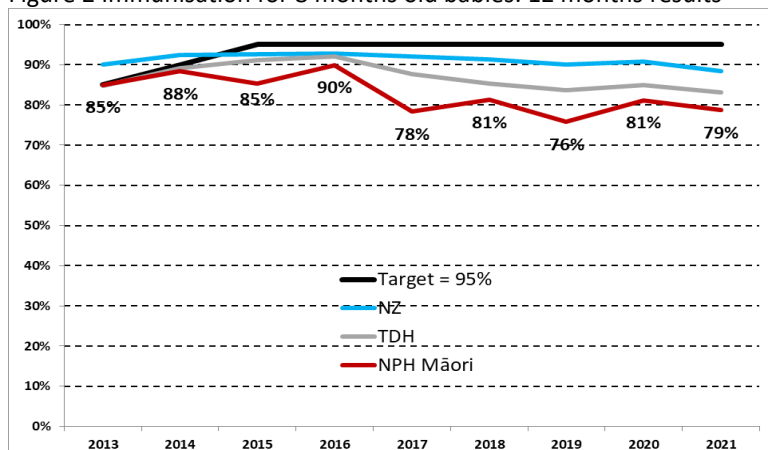
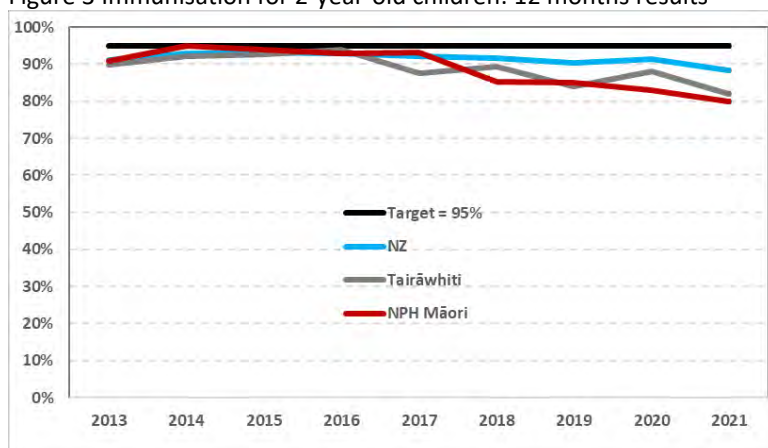


Figure 3 Immunisation for 2-year-old children: 12 months results



Source: NIR Datamart Reports and Ministry of Health Qlik Sense Hub

Table 3 Dashboard: Childhood immunisation 12 months ending September 2021
fully immunised for milestone ages

Milestone ages	Percentages			Percentage difference	
	NPH Māori	TDH	NZ	NPH - TDH	NPH - NZ
8 months	79%	83%	88%	-4%	-10%
2 years old	80%	82%	88%	-2%	-8%

Source: Ministry of Health Qlik Sense Hub

The quarterly trends for Ngāti Porou Hauora (NPH) Māori, Tairāwhiti DHB and New Zealand for 8 months old milestone age (as shown in Figure 4) indicate a lot of fluctuations between the quarters. The first quarter 2021-22 (July – September 2021) progress has been quite encouraging for NPH:

- Table 4 shows 79% of NPH children are fully immunised at 8 months milestone age (one of SLM performance measures)
- This rate is progressing to equity with Hauora Tairāwhiti (82%), but there is still a large gap compared to the rest of New Zealand



- Note that NPH Māori children fully immunised at 8 months milestone age (80%) is reaching the same level as Tairāwhiti DHB (81%) coverage for Māori children, and these rates are substantially higher than the national average for Māori children at 75%

Figure 4 Childhood Immunisation: Quarterly trends (2020-2021) for 8 months old milestone age
NPH Māori, Hauora Tairāwhiti DHB and New Zealand

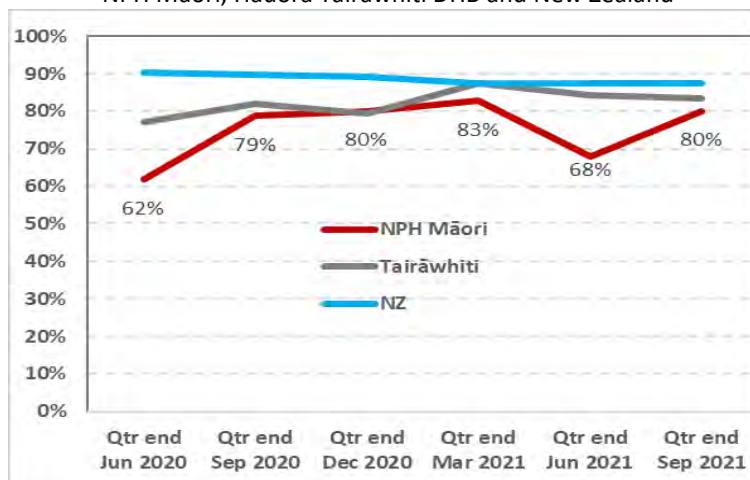


Table 4 Childhood immunisation Quarterly trends (2020-2021 Qtr1 Jul- Sep 2021)

	Milestone 8m	# Eligible	# Fully immunised	% Fully immunised
Ngāti Porou Hauora	Total	34	27	79%
	Maori	30	24	80%
Tairāwhiti	Total	169	139	82%
	Maori	108	87	81%
New Zealand	Total	14512	12674	87%
	Maori	3609	2702	75%

Source: Ministry of Health Qlik Sense Hub

Tamariki Ora: Breastfeeding

The Ministry of Health recommends breastfeeding at least until babies are ready for extra food at around 6 months; with targets set for 75% at 6 weeks and 70% at three months. One limitation of breastfeeding indicators is that up-to-date data are not published nor easily accessible for NPH PHO to be comparable with the DHB and/or New Zealand average.

- Figure 5 and Table 5 show that there are some fluctuations in the breastfeeding status over the past two years with an overall average at 76% which is slightly higher than the target at 75%
- In the last 6 months ending 30 June 2021, 3 in 4 (75%) of NPH babies has full or exclusive or partial breastfeeding in the first 6 weeks. This rate dropped very slightly at three months (74%)

Figure 5 Infants are exclusively or fully or partially breastfed: NPH enrolled population

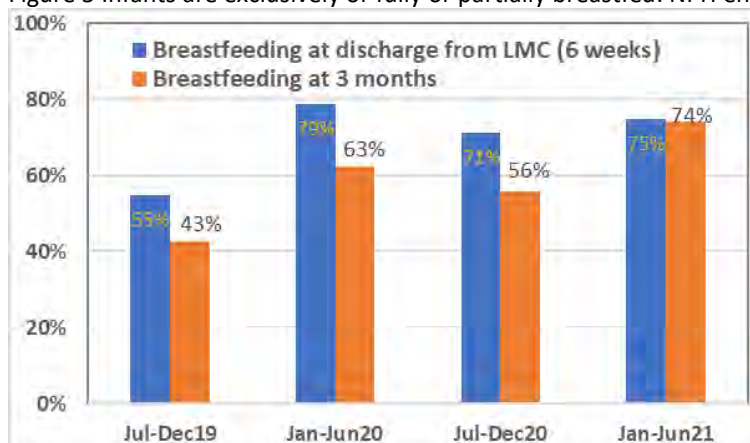


Table 5 Infants are exclusively or fully or partially breastfed for NPH enrolled population

Rep Period	6 weeks	3 months
Jul-Dec19	55%	43%
Jan-Jun20	79%	63%
Jul-Dec20	71%	56%
Jan-Jun21	75%	74%

Source: Karo Data Management (quarterly Tamariki Ora Analysis)

NPH has at least three Māori nurses trained in the Wellchild Tamariki Ora framework to follow up LMC referrals in the rural coastal areas. The Tamariki Ora nurses have been proactive in scheduling appointments with the mothers to complete the core checks for infants, including the Before School Checks (B4SC). This often includes advice and encouragement to overcome the barriers to breastfeeding. NPH Māori health professionals and support workers are critical in bringing cultural and environmental understanding, local knowledge and values in the delivery of the programme.

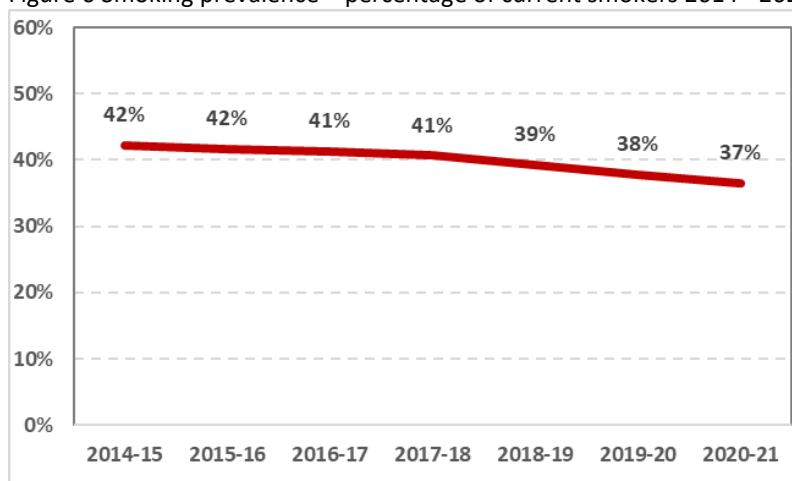
Cardiovascular risk

Cardiovascular disease (CVD) and diabetes are the leading causes of potentially avoidable hospitalisation and mortality in New Zealand. NPH mortality statistics show that both CVD and diabetes were among the leading causes of death in both females and males in 2007-2011 and also key contributors to potentially avoidable hospital admissions⁴. Many cardiovascular and diabetes related deaths are premature, preventable and contribute to amenable mortality. The main benefit of assessing and recording the CVD risk and diabetes follow up for patients is to encourage healthy lifestyle and offer appropriate treatment options, as early as possible.

Monitoring trends in exposure to risk and protective factors informs the development and evaluation of health promotion, disease prevention and primary health care. For example, smoking increases the risk of developing complications from diabetes, including heart disease, stroke and circulation problems. The smoking rate provides an overall measure of the effectiveness of smoking cessation initiatives/ programmes run from a range of providers in primary care, DHB and NGO settings.

- The long-term trends for NPH enrolled population show that there is a gradually declining prevalence of current smokers (those who currently smoke cigarettes, included “everyday” smokers or “somedays” or “social” smokers) with a total decrease of 6% over the past seven years as shown in Figure 6

Figure 6 Smoking prevalence – percentage of current smokers 2014 - 2021



Source: Karo Data Management (monthly clinical data)

4. Ngāti Porou Hauora (2016) Ngāti Porou Hauora Health Dashboard, Ngāti Porou Hauora, Te Puia Springs.



Hato Hone
St John

Mobile Wellness Unit

Tomo mai

Tomo mai

Tomo mai

Tomo mai



- The Dashboard in Table 6 shows that the proportion of NPH patients who are current smokers is 39% compared with averages of 26% at Tairāwhiti DHB and 14% for New Zealand
- Prevalence of current smokers for NPH rohe is still substantially higher than their DHB and NZ counterparts

Table 6 Current Smokers Status: Four yearly average prevalence

	Percentages			Percentage difference	
	NPH	TDH	NZ	NPH - TDH	NPH - NZ
2014-17	42%	30%	16%	12%	26%
2017-20	39%	26%	14%	13%	25%

Sources: Karo Data Management (monthly clinical data)
New Zealand Health Survey 2019-20 (time series data)⁵

The coverage of Cardiovascular Risk Assessments (CVRA) is one of the contributory measures for Amenable Mortality in the SLM framework with Tairāwhiti DHB, with a target of 90% of CVD risk recorded within the last five years⁶. However, compatible data for monitoring these indicators are not published for DHB or New Zealand. Table 7 shows that the percentage of eligible population enrolled with NPH PHO who have had CVD risk assessment in last 5 years has mostly achieved the 90% target.

Table 7 Percentage of eligible population who have had CV risk assessment in last 5 years

	Percentage
2014-2018	106%
2015-2019	98%
2016-2020	93%
2017-2021	89%

There were substantial changes in the criteria for CVRA in 2018-19 with the new Ministry of Health guidelines 2018⁷, which increased the numbers of enrolled patients (denominator increased from an average of 1200 per month to 2900 per month) eligible for this assessment. Although the percentages of CVRA have dropped since the beginning of 2019 when the new guidelines with expanded eligible population were implemented, NPH PHO has continued to assess close to the targeted 90% of their eligible patients.

Diabetes

Diabetes indicators are for information only and there was no national target set for them. The PHO practice data identified diabetes prevalence as a percentage against the count of enrolled people in the PHO who are over 15 years old. Existing internal quarterly reports including the diabetes detection trends provide an indication of the uptake of the annual review of people who have already been diagnosed with diabetes, with results as follows:

- Table 8 shows the number of diabetes annual reviews increased by 6% over the past 6 years most likely due to increased PHO enrolment and broader cardiovascular risk assessment criteria
- Diabetes prevalence for NPH PHO has increased slightly over the past 4 years from an average of 9% to 10%, with the total number of people ever recorded with diabetes increased around 26% over the past 6 years

5. Ministry of Health. 2020. New Zealand Health Survey 2019/20. Wellington: Ministry of Health. Available at https://minhealthnz.shinyapps.io/nz-health-survey-2019-20-annual-data-explorer/_w_d73d5508/#/download-data-sets (accessed 10 November 2021)

6. 2021-22 Hauora Tairāwhiti STATEMENT OF Performance Expectation. Available at <https://www.hauoratairawhiti.org.nz/assets/Uploads/202122-Hauora-Tairawhiti-STATEMENT-OF-Performance-Expectation.pdf> (accessed November 2021)

7. Ministry of Health. 2018. Cardiovascular Disease Risk Assessment and Management for Primary Care. Wellington.

- Despite the slight rise in prevalence, the workload and resources around diabetes for the NPH rohe continue to be demanding due to the increase in the actual numbers involved with annual review in NPH for diabetes and CVRA, and the proportion with poorer glycaemic control

Table 8 NPH PHO: Diabetes Prevalence, Annual Reviews and Glycaemic Control (HbA1c ≤64mmol/mol)

Report year	15+ years	Prevalence	Annual Reviews	% Diabetic	% AR done	% Good control	Mean HbA1c %
2014-15	6272	568	487	9%	86%	52%	68
2015-16	6457	610	513	9%	84%	57%	65
2016-17	6598	626	495	9%	79%	60%	64
2017-18	6642	637	495	10%	78%	53%	67
2018-19	6564	651	458	10%	70%	56%	67
2019-20	6791	676	477	10%	71%	54%	68
2020-21	6974	717	514	10%	72%	56%	66

Source: Karo Data Management: PHO CVRA quarterly reports & PMS customised data

- Table 9 shows that diabetes prevalence has rise slightly for NPH, and the more recent update is very slightly higher than both the Tairāwhiti DHB and New Zealand averages

Table 9 Diabetes: Four yearly average prevalence

	Percentages			Percentage difference	
	NPH	TDH	NZ	NPH - TDH	NPH - NZ
2014-17	9%	5%	7%	4%	2%
2017-20	10%	8%	7%	2%	3%

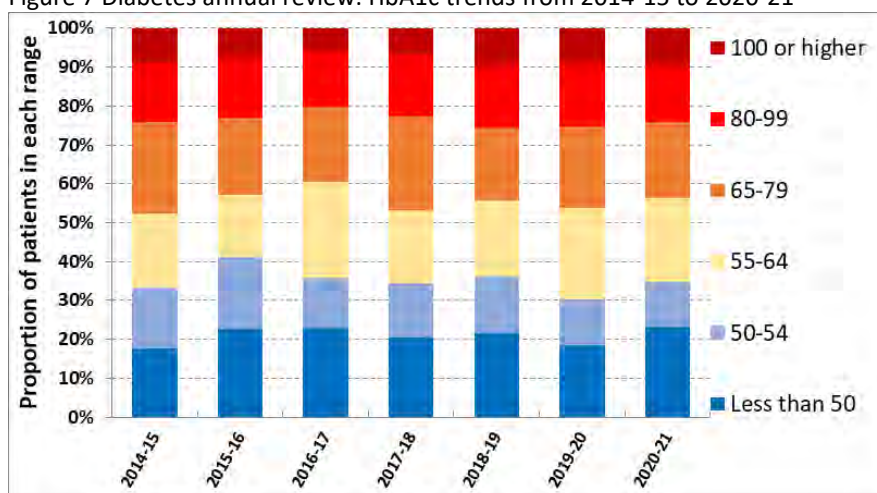
Sources: Karo Data Management (monthly clinical data)
New Zealand Health Survey 2019-20 (time series data)

Figure 7 shows the trend in glucose control, the HbA1c level, for those who have had annual reviews in NPH at the time of the annual check. Note that the denominator for the percentage of HbA1c trends is based on those with diabetes who completed the annual review. See Appendix 3 for guidelines for interpreting HbA1c results.

The graph in Figure 7 and Table 8 show that more than half of the people diagnosed with diabetes in NPH have good glycaemic control (HbA1c level =< 64 mmol/mol)

- NPH has a much better rate of good glycaemic control (at 54% in 2019-20) compared with the DHB average at 47%⁸. However, more work is needed to increase good control

Figure 7 Diabetes annual review: HbA1c trends from 2014-15 to 2020-21



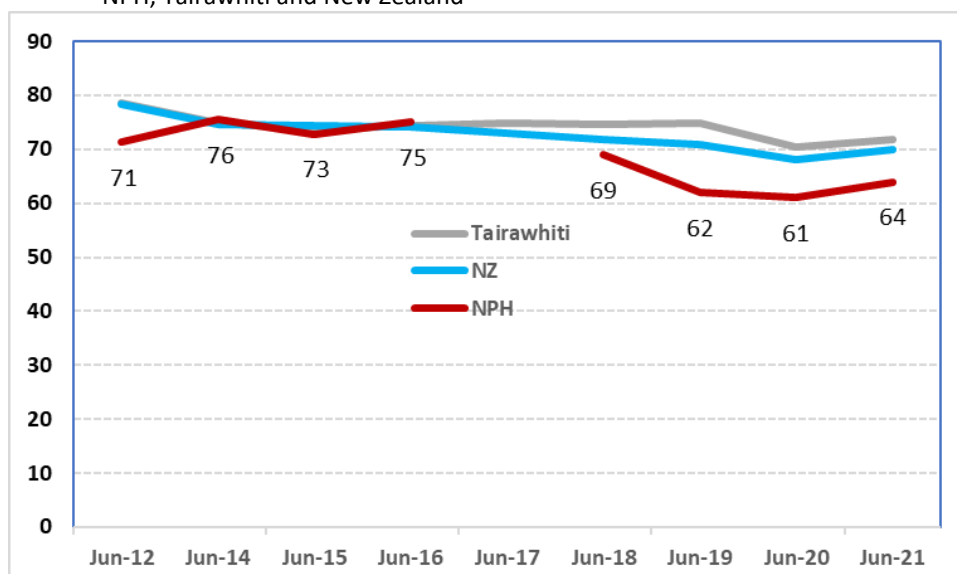
Source: Diabetes annual review data from NPH practice management system

8. 2021-22 Hauora Tairāwhiti Statement of Performance Expectation.

Cervical screening

- There are some fluctuations in total cervical screening uptake for NPH (see Figure 8) and declining uptakes detectable from 2019 and 2020. The reduction in in-person consultations due to COVID-19 will have influenced the 2020/2021 uptake
- The overall screening coverage increased by 8% to 72% for NPH rohe when the HPV self-test results are included as shown in Table 10. This has helped address service gaps to some extent
- From February – July 2021, the HPV self-test pilot has contributed to a 29% increase uptake of screening for rural under-screened Māori women of the East Coast

Figure 8 Cervical screening uptake 2012-2021
NPH, Tairāwhiti and New Zealand



Source: Karo Data Management: based on NSU customized PHO clinical data
Ministry of Health: Interactive tools for NCSP reports: DHB and NZ

Table 10 Cervical screening coverages trends 2018 - 2021

Year	NPH Māori	Tairāwhiti	Total NZ	NPH - TDH	NPH - NZ
Jun-18	69	75	72	-6	-3
Jun-19	62	75	71	-13	-9
Jun-20	61	71	68	-10	-7
Jun-21	64	72	70	-8	-6
Jul-21 incl HPV Swab	72	72	70	0	2

Source: Karo Data Management: based on NSU customized PHO clinical data
Ministry of Health: Interactive tools for NCSP reports: DHB and NZ
Victoria University of Wellington's Te Tātai Hauora o Hine Centre for Women's Health Research

At the writing of this report, the HPV self-test pilot will continue to be offered at NPH until around April-July 2023, and most likely to dove tail with the start of the new NCSP screening roll out from July 2023.

Breast screening

Although the National Kaitiaki Group fully supported the NPH request for screening data, capacity issues at the National Screening Unit (NSU) have prevented access to NPH customised data. The NSU capacity was due to key analytical team members being seconded to COVID work in 2020-21 and recruitment was still ongoing at the time of the data request. Only DHB and NZ total data were available on the NSU website.

HEALTH OUTCOMES

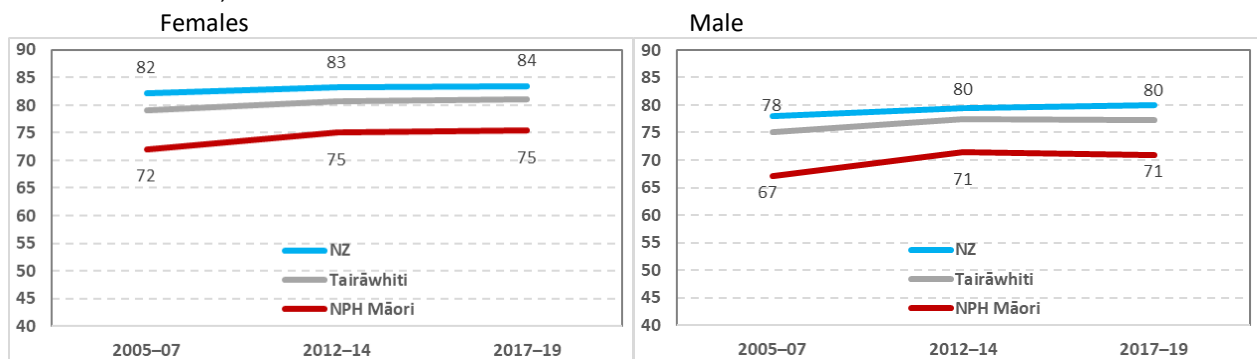
Having insights and understanding of the general health status of a population is important for ensuring the provision of adequate and effective health services. This section presents information about the health status of Māori living in the Ngāti Porou rohe in comparison with Tairāwhiti DHB district and all New Zealanders.

Life expectancy

Contrasts in life expectancy between people in the same district reflect the likely uneven and unfair distribution of factors affecting health such as access to quality information, education, employment, income, housing and health care over the course of life. In 2017-2019, life expectancy at birth for Māori in the NPH rohe as shown in Figure 9 was 75 years for females and 71 years for males, while the New Zealand average for females is 84 years and 80 years for males. This means that:

- Māori men and women in the NPH rohe die 9 years younger than the average for all New Zealanders
- Although life expectancy is increasing for all, the gap between Māori and non-Māori has not diminished over the past 15 years

Figure 9 Life expectancy at birth, 3-year average 2005 to 2019
NPH Māori, Tairāwhiti and New Zealand

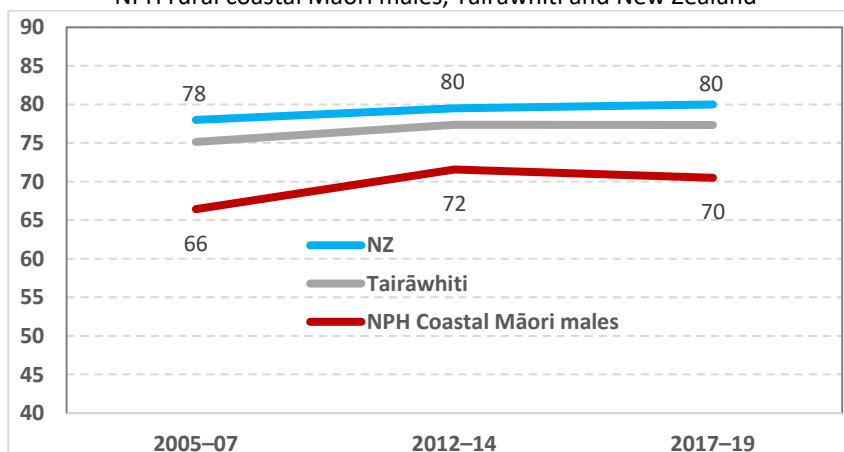


Source: Stats NZ, Population Insights – Life Expectancy at Birth Estimates from Period Life Tables licensed for re-use under the Creative Commons Attribution 4.0 International license

Furthermore, the life expectancy at birth for Māori in the rural coastal rohe as shown in Figure 10 was lower and it has declined from 72 years to 70 in the period 2012 to 2019 which means that:

- Māori men in the rural coastal NPH rohe die 10 years younger than the average for New Zealanders

Figure 10 Life expectancy at birth, 3-year average 2005 to 2019 for Males
NPH rural coastal Māori males, Tairāwhiti and New Zealand



Births

Trends in births and deaths, chart the intergenerational journey, and help to identify equity gaps between different groups of people. During 2009-2020 there was an average of 202 Māori infants born per year, out of a total of 228 infants in the Ngāti Porou rohe.

The results as shown in the graph in Figure 11 and Table 11 below indicate that:

- the prevalence of premature babies among Ngāti Porou Māori were nearly the same (range around 1% to 4%) as Tairāwhiti and national rates, but it appears to be higher from 2010 – 2018 by 2-4%

Figure 11 Percentage of premature babies, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand
Preterm less than 37 weeks gestation

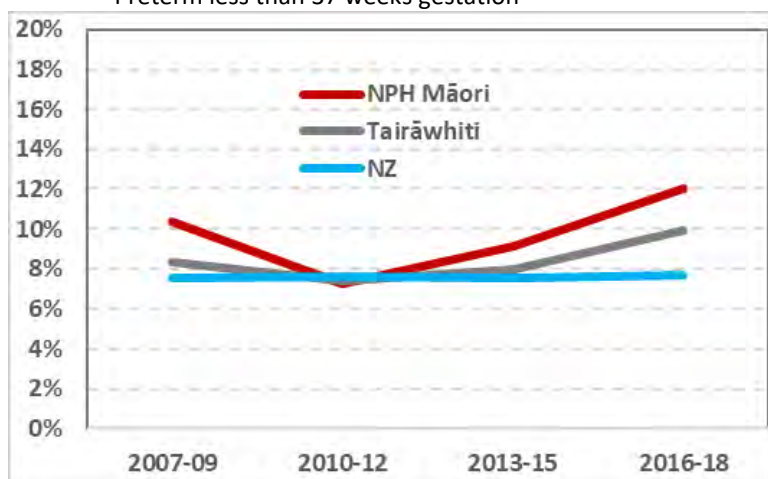


Table 11 Percentage of premature babies, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	Difference TDHB	Difference NZ
2007-09	10.3%	8.3%	7.6%	2.0%	2.8%
2010-12	7.2%	7.4%	7.6%	-0.2%	-0.4%
2013-15	9.2%	8.0%	7.6%	1.2%	1.6%
2016-18	12.0%	9.9%	7.7%	2.1%	4.3%

Source: Ministry of Health: Birth Registration

- The proportions of low birthweight and high birthweight were relatively close to Tairāwhiti and the national rates as shown in Figure 12 & Table 12, and Figure 13 & Table 13 respectively.

Figure 12 Percentage of Low birthweight babies, 2007–2018
Low birth-weight less than 2500g

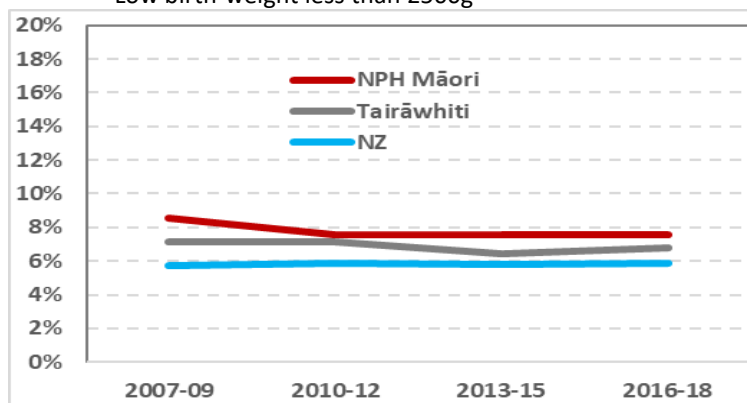


Table 12 Percentage of Low birthweight babies, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	Difference TDHB	Difference NZ
2007-09	8.5%	7.1%	5.7%	1.4%	2.8%
2010-12	7.6%	7.2%	5.9%	0.4%	1.7%
2013-15	7.6%	6.5%	5.8%	1.1%	1.8%
2016-18	7.5%	6.8%	5.9%	0.7%	1.6%

Figure 13 Percentage of High birthweight babies, 2007–2018

High birth-weight greater than 4500g

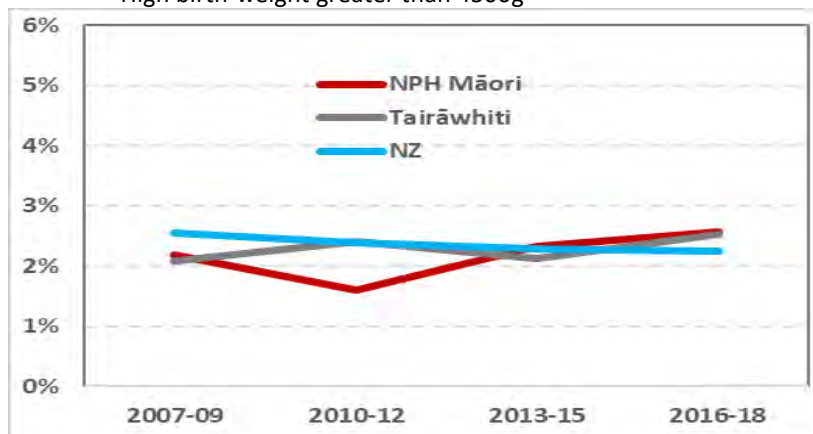


Table 13 Percentage of High birthweight babies, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	Difference TDHB	Difference NZ
2007-09	2.2%	2.1%	2.6%	0.1%	-0.4%
2010-12	1.6%	2.4%	2.4%	-0.8%	-0.8%
2013-15	2.3%	2.1%	2.3%	0.2%	0.0%
2016-18	2.6%	2.5%	2.3%	0.0%	0.3%

- From 2016-18, an average of 25 NPH Māori babies were born prematurely (12% of live births), 16 per year were born with low birthweight (at 7.5% of live births) and 5 with high birthweight (at 2.5% of live births) as indicated in the Dashboard on gestation and birthweight in Table 14

Table 14 Dashboard: Births, 2016–2018

Births	NPH Māori Average	Percentages			% Difference	
		NPH Māori	TDH	NZ	NPH - TDH	NPH - NZ
Premature	25	12.0%	9.9%	7.7%	2.1%	4.3%
Low birthweight	16	7.5%	6.8%	5.9%	0.7%	1.6%
High birthweight	5	2.6%	2.5%	2.3%	0.0%	0.3%

Source: Ministry of Health: customised report based on Birth Registration

The following sections show the trends by age standardised rate per 100,000 people⁹, after adjusting for differences in population age and sex structures, with associated measures of inequality expressed as standardised rate ratios (RR) in comparison with Tairāwhiti or New Zealand. The colour coded guide is as follows:

	NPH rate is worse than Tairāwhiti RR at least 2 times
	NPH rate is worse than Tairāwhiti RR higher than 1.3 but less than or equal to 2 times
	NPH rate is about the same as Tairāwhiti/ NZ RR is 1.1 - 1.3 times
	NPH rate is equal or better than Tairāwhiti/ NZ RR is 1 or less

Hospital admissions

On average, Ngāti Porou rohe made up 2,200 (26%) of the total 8,400 hospital admissions per year in Tairāwhiti. This proportion has been decreasing since 2008 and it has remained stable in the past six years as shown in Figure 14. Overall, Ngāti Porou rohe Māori have maintained nearly the same hospital admission rate as Tairāwhiti and New Zealand average, but with occasional fluctuations of both lower or higher rates, as shown in Table 15.

Figure 14 All-cause hospitalisations per 100,000, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand

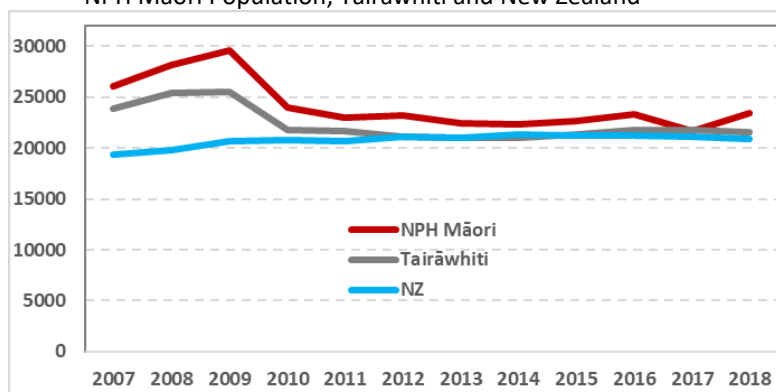


Table 15 All-cause hospitalisations per 100,000 and rate ratios, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	RR Tairāwhiti	RR NZ Total
2007	26109	23830	19332	1.1	1.4
2008	28135	25450	19804	1.1	1.4
2009	29539	25477	20619	1.2	1.4
2010	23952	21783	20724	1.1	1.2
2011	22972	21604	20617	1.1	1.1
2012	23199	21076	21095	1.1	1.1
2013	22447	20960	20970	1.1	1.1
2014	22278	20968	21314	1.1	1.0
2015	22695	21325	21257	1.1	1.1
2016	23295	21815	21181	1.1	1.1
2017	21646	21745	21100	1.0	1.0
2018	23378	21523	20921	1.1	1.1

Source: NMDS (National Minimum Dataset – hospital events)

9. All types of hospital admissions, cancer registration and mortality rates, were age–sex-standardised to the 2001 Māori population. The use of the 2001 Māori population standard makes the age-standardised data in this report comparable to the District Health Board (DHB) Māori Health Profiles 2015 and Ministry of Health’s Māori health chartbooks, but not to other Ministry of Health documents which use the World Health Organisation’s world population.

Leading Causes of Hospital Admissions

During 2007-2018, the top six reasons for hospitalisation in Ngāti Porou rohe were for injuries, diseases of the respiratory, digestive, genitourinary, circulatory systems and for cancers as shown in Table 16. Overall, Ngāti Porou Māori have maintained nearly the same rate as Tairāwhiti and New Zealand in the reasons for admission, except for a few fluctuations. While the rate of admission in 2018 for respiratory disease was the same as Tairāwhiti but lower than New Zealand, the cancer admission rate was slightly higher than Tairāwhiti, and higher than New Zealand.

Table 16 All-cause hospitalisations and top six leading causes per 100,000, 2018

Hospital admissions	NPH Māori Avg	Age-standardised rate per 100,000			Rate ratios	
		NPH Māori	Tairāwhiti	Total NZ	NPH/ TDH	NPH/ NZ
All hospital admissions	2,271	23,378	21,523	20,921	1.1	1.1
Injuries	555	3,897	3,440	3,391	1.1	1.1
Respiratory disease	330	2,384	2,423	2,520	1.0	0.9
Digestive system disease	348	2,197	2,126	2,068	1.0	1.1
Genitourinary system	175	1,082	1,052	923	1.0	1.2
Circulatory system diseases	255	1,050	1,048	1,033	1.0	1.0
Cancers	167	904	836	661	1.1	1.4

Source: NMDS

Potentially avoidable hospitalisations (PAH)

Avoidable admissions are hospitalisations of people younger than 75 years, which fall into three sub-categories:

- preventable admissions, resulting from diseases preventable through population-based health promotion strategies
- ambulatory-sensitive hospitalisations, resulting from diseases sensitive to preventative or therapeutic interventions deliverable in primary health care or outpatient setting
- injury preventable admissions, avoidable through injury prevention

The rates of avoidable admission for tamariki Māori in the Ngāti Porou rohe were nearly the same as Tairāwhiti as shown in Table 16 (rate ratios 1.1). Figure 15 shows the trends of age standardised PAH rates for tamariki 1month - 4 years old, and that Ngāti Porou rohe and Tairāwhiti have continuously shown trends that are quite a lot higher (about 1.5 times) than the national rates (see Table 17).

Figure 15 Avoidable Hospitalisations per 100,000 Tamariki 1 month to 4 years, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand

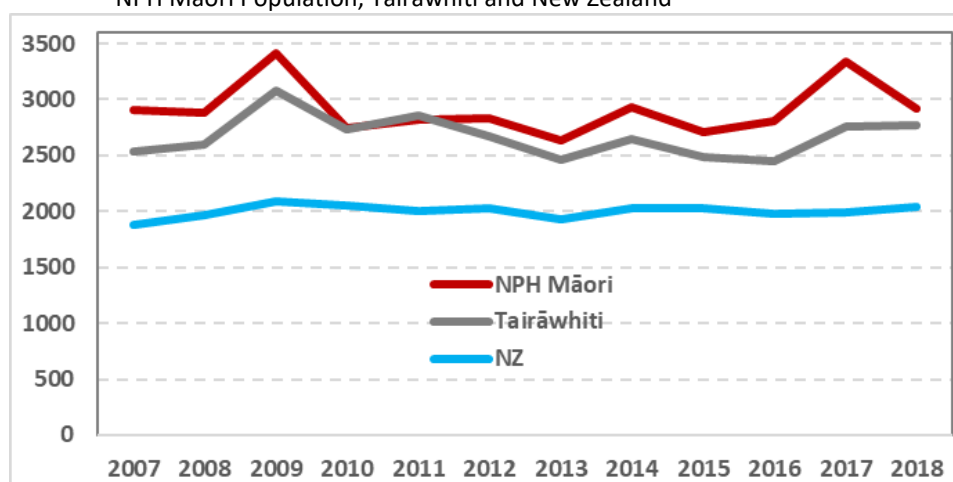


Table 17 Standardised Avoidable Hospitalisations per 100,000 and Rate Ratios:
1 month - 4 years, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	Rate ratio with Tairāwhiti	Rate ratio with NZ Total
2007	2906	2540	1885	1.1	1.5
2008	2885	2596	1961	1.1	1.5
2009	3418	3080	2085	1.1	1.6
2010	2749	2735	2055	1.0	1.3
2011	2821	2860	1998	1.0	1.4
2012	2828	2672	2028	1.1	1.4
2013	2636	2460	1932	1.1	1.4
2014	2928	2651	2026	1.1	1.4
2015	2704	2481	2025	1.1	1.3
2016	2813	2449	1980	1.1	1.4
2017	3345	2764	1996	1.2	1.7
2018	2920	2769	2039	1.1	1.4

Source: NMDS

Ambulatory sensitive hospitalisations (ASH)

Ambulatory Sensitive Hospitalisation (ASH) measures hospital stays that could have been avoided if earlier care was provided at home, through outpatient services, or in the community. They are mostly acute admissions that may be potentially prevented through treatment or early intervention in a primary care setting. A lower ASH rate suggests good performance in those people who are enrolled with the PHO were receiving early intervention and treatment. The graphs in Figure 16 and Figure 17 show the trends of age standardised ASH rates for people 0-74 years old and 0 – 4 years respectively.

- ASH rates for Ngāti Porou Māori population, 0 to 74 years old, have declined over time and are trending nearly the same as Tairāwhiti DHB and New Zealand (1.1 times higher) as shown in Figure 16
- Similar trends were observed for tamariki 0-4 years old as shown in Figure 17 and Table 18
- This shows that NPH primary care is reducing hospital admissions across all age groups

Figure 16 ASH per 100,000 for 0 to 74 years, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand

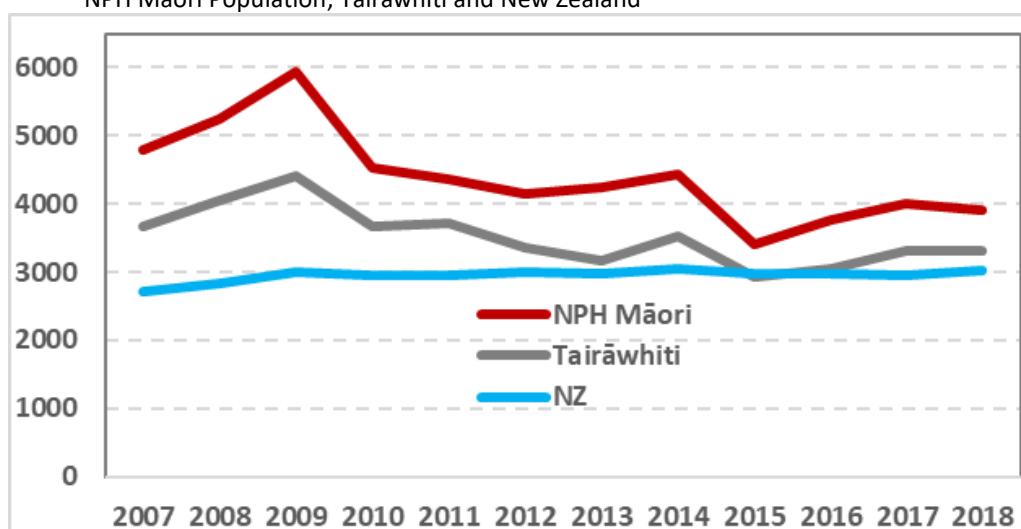


Figure 17 ASH per 100,000 for 0 – 4 years, 2007–2018

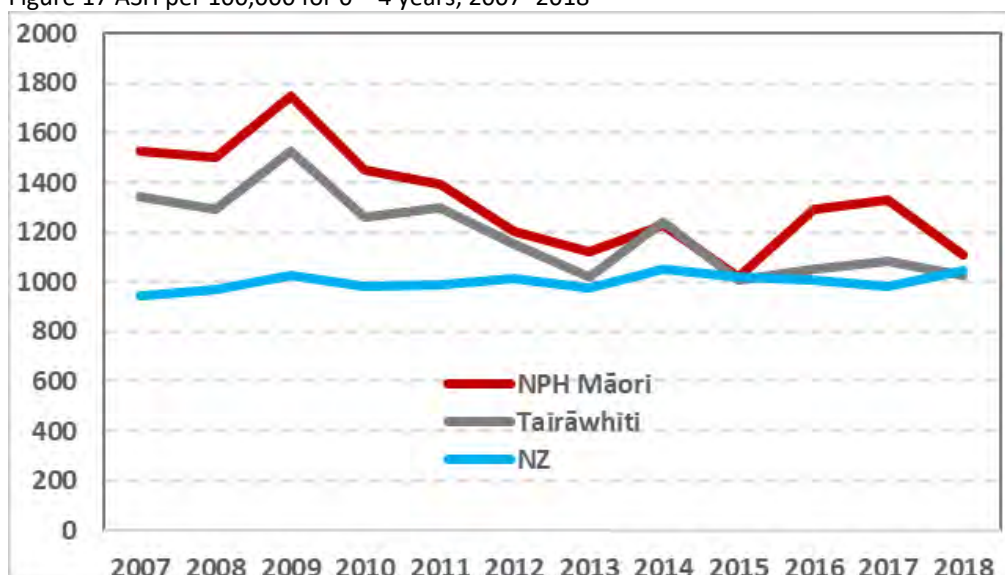


Table 18 Standardised ASH per 100,000 and Rate Ratios: 0 - 74 years, 2007–2018

Year	NPH Māori	Tairāwhiti DHB	Total New Zealand	Rate ratio with Tairāwhiti	Rate ratio with NZ Total
2007	4799	3671	2725	1.3	1.8
2008	5251	4060	2830	1.3	1.9
2009	5939	4406	2995	1.3	2.0
2010	4539	3664	2964	1.2	1.5
2011	4366	3717	2956	1.2	1.5
2012	4145	3358	3009	1.2	1.4
2013	4240	3177	2987	1.3	1.4
2014	4434	3525	3047	1.3	1.5
2015	3414	2935	2982	1.2	1.1
2016	3755	3039	2972	1.2	1.3
2017	4009	3303	2964	1.2	1.4
2018	3917	3310	3032	1.2	1.3

Source: NMDS

Table 19 Ambulatory Sensitive Hospitalisations (ASH) Standardised rate per 100,000: 2018

	Average	Age-standardised rate per 100,000			Rate ratios	
		NPH Māori	Tairāwhiti	Total NZ	NPH/ TDH	NPH/ NZ
ASH 0 - 74 years	469	3917	3310	3032	1.2	1.3
ASH 0 - 4 years	89	1107	1026	1044	1.1	1.1

Source: NMDS



NPH PHO Cohort Analysis

Tairāwhiti has a very mobile population; people may seek care in different locations at different points in time. The high mobility and transiency of the East Coast rural population is most likely to mean a relatively high “churn” per year for the PHO enrolment. A similar rate of patients’ movement was also seen with PHO enrolment at the practice level, where some people may change home address without changing GP practice enrolment, and some people may change GP enrolment without changing home addresses. For example, over the 12 months from 2020 to August 2021, NPH enrolled 1150 new patients, 809 patients formally exited the PHO; and the enrolment increased by a further 4 percent. In an enrolled population of 9,500, this represents a high scale of churn in and out of the PHO practices.

This cohort analysis attempts to explore the question:

For a population enrolled with NPH that receives continuity of primary care over 10 years, what impact does that have on health outcomes such as avoidable admissions, amenable or avoidable mortality?

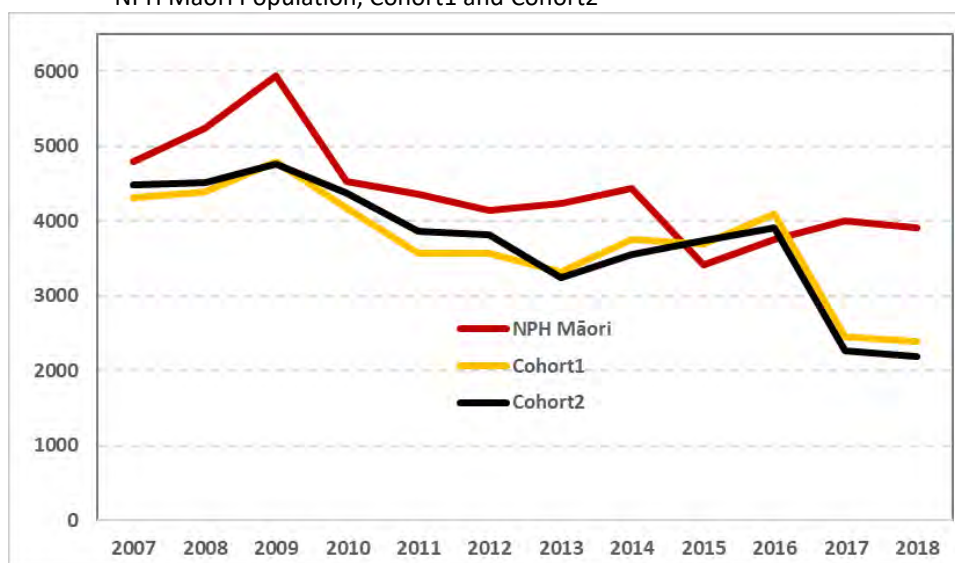
From the analysis of PHO enrolment data from 2007-2021, two cohorts were identified as follows:

1. **Cohort1:** Include in the cohort, anyone who has ever enrolled with NPH for 10 years or more, which results in a cohort of around 6739 people, which is the largest base due to a more relaxed cohort definition over 2007-2021
2. **Cohort2:** Include in the cohort, anyone who has continuously enrolled with NPH over the last 10 years only, which results in a cohort of around 4668 people, which is a smaller base due to a more stringent cohort definition

Both cohorts’ NHIs were matched with the NMDS and mortality databases. The only reliable health outcome measure is Ambulatory Sensitive Hospitalisation (ASH) because there was sufficient hospital admissions data, while the numbers for mortality data were too small.

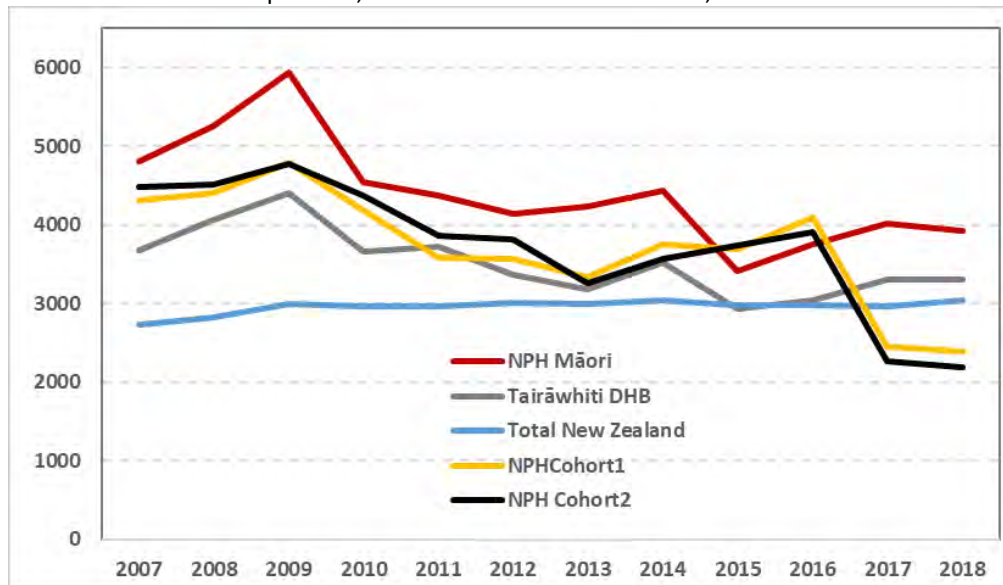
The graphs in Figure 18 show the ASH rates of the two NPH cohorts compared with the Ngāti Porou Māori population (top red line), as well as with the general population of Tairāwhiti DHB and NZ respectively (Figure 19). Note that the NPH Māori would include people who are transient and moved in and out of enrolment with NPH over time, and therefore many would not have continuous primary care contacts with NPH, when compared with Cohort 1 and Cohort 2 in this study.

Figure 18 ASH per 100,000 for 0 to 74 years, 2007–2018
NPH Māori Population, Cohort1 and Cohort2



Source: NPH PHO Monthly Enrolment Register
Ministry of Health customised data from NMDS

Figure 19 ASH per 100,000 for 0 to 74 years, 2007–2018
NPH Māori Population, NPH Cohort1 and NPH Cohort2, Tairāwhiti and New Zealand



Source: NPH PHO Monthly Enrolment Register Ministry of Health customised data from NMDS

The trends are:

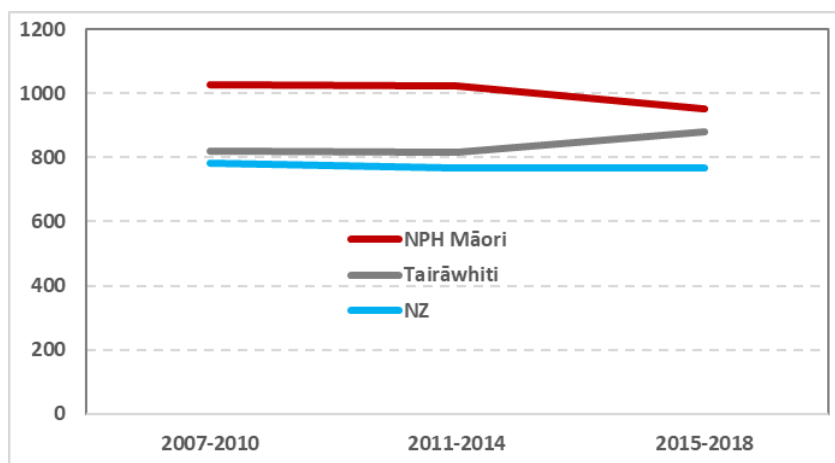
- ASH rates for the Cohorts generally declined over the periods 2007 – 2018, except for 2014 to 2016
- ASH rates for the Cohorts are lower than NPH Māori ASH rate, except for 2015 and 2016
- ASH rates for the Cohorts have dropped below the Tairāwhiti DHB and NZ national rates in 2017-2018
- These results suggest that those enrolled with Ngāti Porou for a longer duration and hence received consistent and continuity of primary health care with NPH, have lower ASH rates that are also declining over time (except for 2014-2016). Furthermore, Figure 19 shows that the ASH rates in recent years (2017-2018) outperformed the ASH rates per 100,000 for 0 to 74 years of Tairāwhiti DHB and New Zealand.



Cancers

On average during 2015-2018, there were 43 cancer registrations per year among NPH Māori, at a rate higher (1.1 times) than Tairāwhiti and national rates. However, the rates of all cancer among NPH Māori have been stable and started to decline slightly in the four years 2015-2018 as shown in Figure 20 and the associated table as follows:

Figure 20 Cancer registrations age-standardised rate per 100,000 all ages, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand



Year	NPH Average	NPH Māori	Tairāwhiti DHB	Total New Zealand	RR: Tairāwhiti	RR: NZ Total
2007-2010	39	1026	818	782	1.3	1.3
2011-2014	42	1022	817	769	1.3	1.3
2015-2018	43	954	881	767	1.1	1.2

The most common cancers registered for Māori people in the Ngāti Porou rohe were lung cancer, cancers of the digestive organs (stomach, colorectal or pancreas), breast cancer and prostate cancer. These four cancers account for more than two-thirds of all cancers (as shown in Table 19).

- Lung cancer rates were substantially higher for Ngāti Porou Māori population, at two times higher than Tairāwhiti and nearly three times higher than the national rate. The most common cancers for females are cancers of the breast and lung; and for males, prostate cancer and cancer of the digestive organs.

Table 19 Most Common registration: annual average and standardised rate per 100,000, 2015-18

	NPH Māori Average	Age-standardised rate per 100,000			Rate ratios	
		NPH Māori	Tairāwhiti	Total NZ	NPH/ TDH	NPH/ NZ
All cancers	43	954	881	767	1.1	1.2
Lung Cancer	8	155	77	56	2.0	2.8
Digestive organs	7	142	138	139	1.0	1.0
Female Breast Cancer	7	161	154	129	1.0	1.2
Male Prostate Cancer	7	148	115	109	1.3	1.4
Female Total	21	938	936	757	1.0	1.2
Breast Cancer	7	307	297	250	1.0	1.2
Lung Cancer	5	200	96	55	2.1	3.6
Digestive organs	3	124	144	118	0.9	1.1
Female genital organs	3	153	120	88	1.3	1.7
Male Total	21	989	825	780	1.2	1.3
Prostate Cancer	7	320	239	226	1.3	1.4
Digestive organs	4	169	132	163	1.3	1.0
Lung Cancer	3	106	58	57	1.8	1.9

Source: The New Zealand Cancer Registry (NZCR)

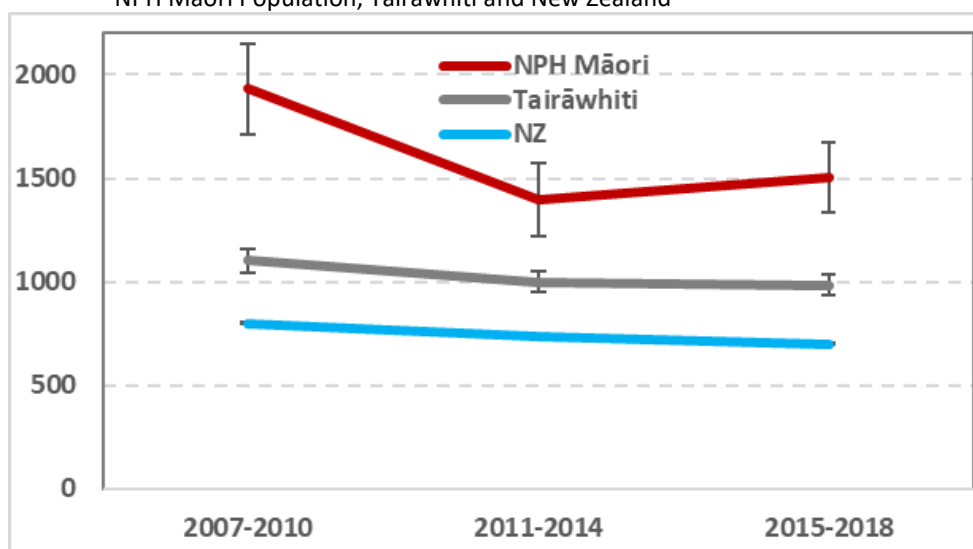
Mortality

NPH would like to acknowledge those who have passed since the 2016 report and the huge significance of each of these precious whānau members. Moe mai rā e te whānau kua whetūrangitia. Moe mai, moe mai, moe mai.

On average, there were 75 deaths per year among NPH Māori in the years 2015-2018. This resulted in a substantially higher overall mortality rate¹⁰ when compared with the rest of the population. The mortality rate for NPH Māori is more than twice the national rate and 1.5 times higher than Tairāwhiti as shown in the table below.

The mortality rate has declined between the periods 2007-10 and 2011-14 (see Figure 21), but a particularly high number in 2017 has increased the rate slightly but not significantly in more recent years 2015-18. It is worth noting that there were an unprecedentedly high number of deaths in 2017 due to several potentially avoidable causes such as cardiovascular disorder, suicide, and breast cancer.

Figure 21 All-cause mortality per 100,000 all ages, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand



Year	NPH Māori Average	NPH Māori	Tairāwhiti DHB	Total New Zealand	Rate ratio with Tairāwhiti	Rate ratio with NZ Total
2007-2010	74	1931	1101	800	1.8	2.4
2011-2014	60	1395	1000	735	1.4	1.9
2015-2018	75	1504	985	700	1.5	2.1

Source: The Mortality Collection (MORT)

According to NPH staff, the increased number of deaths in recent years can be due to Ngāti Porou Māori who have lived away from Tairāwhiti returning to their homeland to die. However, further investigation is warranted to ascertain and quantify this observation.

10. Overall mortality rate is the probability of dying across all ages, based on national mortality data which collects numbers of deaths by place, time and cause. NZ mortality data reflect deaths registered by Births, Deaths and Marriages (Whānautanga, matenga, mārenatanga) systems of deaths, with the underlying cause of death coded by the Ministry of Health.

Amenable Mortality

Amenable mortality is a subset of avoidable mortality and is restricted to deaths from conditions that are amenable to health care at all levels (Ministry of Health 1999):¹¹

- 1) amenable to primary prevention
- 2) amenable to early detection and treatment
- 3) amenable to improved treatment and medical care

For example, amenable deaths include premature deaths from infections, cancers, birth complications, injuries and chronic illnesses. The graph in Figure 22 shows that amenable mortality for NPH Māori has been declining since 2007-10, despite the slight increased overall mortality trends indicated in the previous section. This rate is still more than twice (2.3 higher) the national average in New Zealand, and about 1.5 times higher than Tairāwhiti as shown in Table 20. The NPH Māori rate remains among the highest rates of amenable mortality in the country.

Figure 22 Amenable mortality per 100,000 all ages, 2007–2018
NPH Māori Population, Tairāwhiti and New Zealand

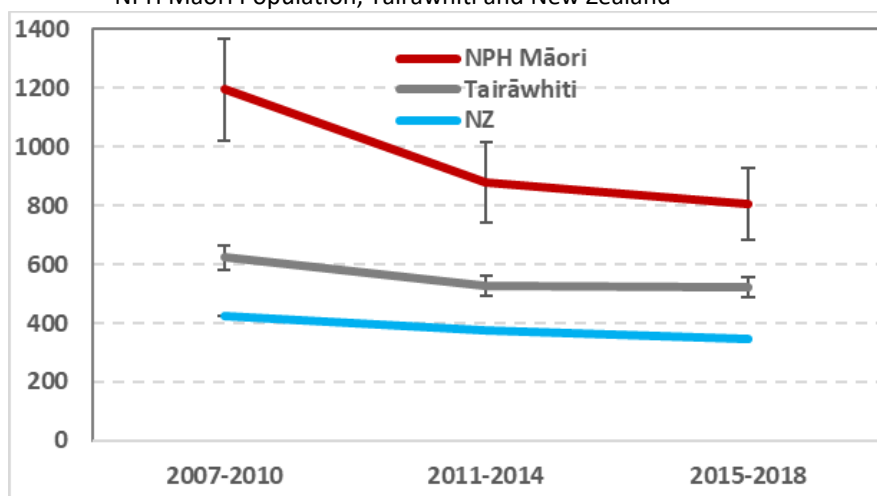


Table 20 Amenable mortality and leading causes: all ages 2015–2018

	NPH Māori Average	Age-standardised rate per 100,000			Rate ratios	
		NPH Māori	Tairāwhiti	Total NZ	NPH/ TDH	NPH/ NZ
Amenable Mortality Causes	43	806	523	347	1.5	2.3
Cardiovascular Disorder	22	396	206	133	1.9	3.0
Lung Cancer	8	155	77	56	2.0	2.8
Suicide	3	108	82	41	1.3	2.6
Digestive Organ Cancer	4	82	52	46	1.6	1.8
Respiratory Disease	5	69	42	29	1.7	2.4
Female Breast Cancer	2	26	23	20	1.1	1.3

Source: The Mortality Collection (MORT)

Table 20 also shows that on average, more than half (43 deaths per year or 56%) of the total deaths among NPH Māori are potentially avoidable over time through better access to health care, and better quality or more effective health care. The leading causes of amenable mortality for NPH Māori are cardiovascular disease, lung cancer, suicide, cancer of digestive organs, respiratory disease and female breast cancer. These top causes account for more than half (51%) of all amenable deaths, and they are also leading causes of ethnic inequities in mortality.

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Appendix 1 Data Notes and Sources

Quantitative analysis presented in this report is collated from various sources and the most recently available data are used. Appendix 1 lists the data sources used in this report.

Data sources and key methods

The main data sources for this report include the 2018 Census of Population and Dwellings, NPH PHO registers, public hospital discharges, mortality registrations, cancer registrations, the national immunisation register, data from the Well Child/Tamariki Ora Quality Improvement Framework indicators and Te Manawa Taki (TMT) Child Health Action Group (CHAG) for selected PHO quarterly reports.

Most data are presented for NPH Māori, all residents of Tairāwhiti DHB (Total population) and the total New Zealand population. Excel tables are available on request, where they also include data for the non-Māori in NPH and Tairāwhiti DHB for mortality, cancer registrations, and hospital discharges. The NPH boundary was determined through consultation with Te Rōpū Rangahau Hauora a Eru Pōmare and Karo Data Management Ltd. The criteria used in deciding the most appropriate boundaries for the 2013 Census Area Units (CAU) are as follows:

- Enrolment with NPH to be 30% or more; or
- CAU has high number of Maori population and Maori enrolment with NPH to be 30% or more.

These criteria resulted in eight CAUs as follows:

- The east coast areas: East Cape, Ruatoria, Tokomaru Bay, Wharekaka and Tolaga Bay
- Gisborne urban areas: Outer Kaiti, Tamarau and Kaiti South

Having these boundaries would include a fair representation of NPH enrolled population, but they have the following limitations:

- miss out about 27% of the NPH population; and
- include some people not enrolled with NPH, and there are substantial numbers of non-NPH people in Wharekaka and Gisborne urban areas.

Despite these limitations, this is the best possible approach to defining the NPH population, with consistent estimates for both the numerator and the denominator for the population health outcome indicators. Quantitative analysis presented in the NPH Health Dashboard is collated from various sources and the most recently available data were used.

Data sources for numerators

Source	Data	Period	Type of data
Ministry of Health	Mortality Collection Data Set (MORT) mortality	2007-2018	National collection
	National Minimum Data Set (NMDS) hospitalisations (exclude ED Short stay events)	2007-2018	National collection
	New Zealand Cancer Registry (NZCR)	2007-2018	National collection
	New Zealand Health Survey	2019-2020	DHB Reports
	National Immunisation Register	2013 – 2021	Business Object and Qlik Sense Hub
Statistics New Zealand	Low birthweight, live births	2007-2018	Birth registration
	Life expectancy	2005-2019	Life tables
	Demographics	2018	Census
	Socioeconomic indicators	2018	Census
Karo Data Management	Monthly PHO enrolment data Quarterly clinical data Tamariki Ora Wellchild data	2013-2021	PHO Enrolments CVD and Diabetes Screenings Wellchild data

Appendix 2 Some Data Monitoring and Benchmarking Issues

A. Childhood Immunisation reporting issues

There are some key changes that affected how “fully immunised” is counted in the National Immunisation Register.

1. NIR (Reporting) System Change from 1 July 2020

The new NIR reporting system Qlik Sense has a more stringent definition of “fully immunised”. The previous Datamart reports used a final dose complete definition to count ‘fully-immunised’ children, Qlik uses an all-dose complete methodology. This means that to count as ‘fully-immunised’ at a milestone age, children need to have received ALL scheduled vaccinations by the relevant milestone age and recorded. At the clinic level, this means that any past immunisations given but not recorded correctly will result in a previously “fully immunized child” not getting counted in the NIR report. The Ministry of Health has acknowledged that while this is a more accurate measure of immunisation coverage, the change of definition will likely decrease reported immunisation coverage.

2. National Immunisation Schedule Change from 1 October 2020

From 1 October 2020, a new schedule was introduced with different timing for the second dose of MMR (changed from 4 years to the first dose at 12 months of age, second at 15 months). The second dose coverage is now measured at the 18-month milestone event, which was previously at 5 years. This change resulted in some children aged 2-4 years at 1 October 2020, being scheduled for catch up on the second dose of MMR long before they reach 5 years. Some children in this age group have not yet had this catch-up dosage, affecting the 12-month results for the 24-month milestone age immunisation level. Furthermore, MedTech 32 has not fully implemented these changes and there was a period when clinic staff was required to manually check and adjust their immunisation data until a later release (November 2020) of Medtech 32 was implemented. It appears that there have been cases when the child/children were vaccinated but the audit tool still showed ‘overdue’.

3. Issues with Audit Tools for “Overdue”

Similar issues with ‘overdue’ cases are also likely with the monthly list generated by the administrator from the NIR database. These cases require regular notification from the clinic staff to NIR administrator to manually adjust any gaps in the database to accurately reflect the actual completion of the childhood vaccinations according to schedule.

In summary, the system changes with NIR reporting followed by the immunisation schedule change, as well as ongoing “inadequacies” with both the MedTech audit and NIR audit tools have made it more complicated to get to the root cause of lower immunisation coverage rates over the past 20 months.

B. Data collection, monitoring and benchmarking:

Until 2016, there were quarterly reports for a range of health services indicators published by the Ministry of Health as part of the PHO Performance Programme (PPP) and IPIF (Integrated Performance and Incentive Framework). While the effectiveness of these performance pay programmes and health targets may be debatable, the underlying reporting systems provided quite consistent data collection and valuable information across all the PHOs every quarter. These reports included a range of health service quality indicators including benchmarks with their local DHBs and New Zealand average by ethnicity and NZ Deprivation index.

Since then, the Ministry of Health has continued to collect a range of data such as enrolment data from PHOs, vaccination data through the National Immunisation Register, screening data through the National Screening Unit. However, the analysis and monitoring of service quality, and the use of primary care data for service development and improvement are mostly left for PHO. The DHB also collects data and reports from the PHO through their funding contract requirements, and these data and reports are not publicly available.

In this setting, generating robust data and performance indicators is easier for the larger PHOs who, currently and historically, have had the resources to monitor their service performance actively and regularly. The current nature of data gathering and analysis in primary care has been a barrier to monitoring service quality and robust primary care policy in New Zealand. For Māori providers, there is both a historical inequity in access to data and under-resourced analytical capacity. The current health reforms present a unique opportunity to address this gap.

Appendix 3 Type 2 diabetes and glycaemic control

The NZSSD Working Party, made up of members representing clinicians, academics, laboratory staff, general practitioners, and population health experts, has recommended the following criteria:¹²

Reporting and interpreting HbA1c results

HbA1c Range	Results	Risks
Less than 50	Excellent control	Increased risk of hypoglycaemia if on insulin/ sulphonylureas
50-54	Very good control	some risk of hypoglycaemia if on insulin/ sulphonylureas
55-64	May be appropriate and acceptable in many individuals but higher than ideal from clinical trial evidence	Microvascular complication risk increases exponentially above around 55 mmol/mol
65-79	Suboptimal glycaemic control	Consider more intensive treatment. Microvascular complication risk increase exponentially above around 55 mmol/mol
80-99	Poor glycaemic control	More intensive treatment recommended. Microvascular complication risk increase exponentially above around 55 mmol/mol
100 or higher	Very poor glycaemic control	Warrants immediate action

The reasons why people with type 2 diabetes have poor glycaemic control, i.e. HbA1c > 64mmol/mol, are numerous and complex. For some patients, a glycaemic target higher than 64mmol/mol is considered acceptable, eg. for an older patient living alone, and not to be regarded as a failure by the patient or the health professional. However, poor glycaemic control is a signal for improved partnership and intensification of management. For many patients, management to improve health outcomes will also involve intensive management of other risk factors such as obesity, hypertension, hyperlipidaemia, and smoking.¹³

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