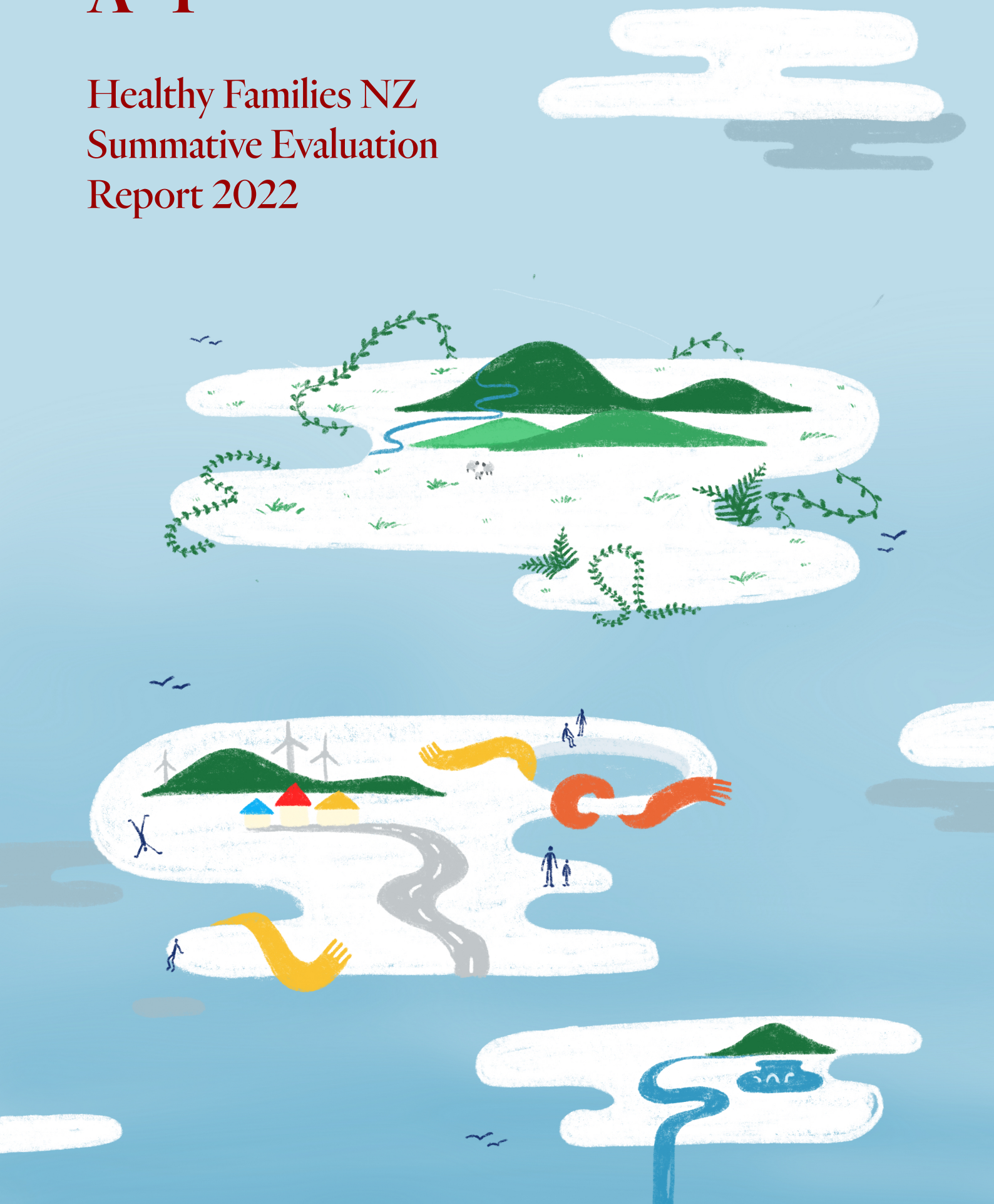
Appendices Volume 1: A–I

Healthy Families NZ Summative Evaluation Report 2022



Appendices Volume 1

A–I

Healthy Families NZ Summative Evaluation Report 2022

Contents:

Appendix A: Initiative story over time with key moments (2013–2022)

Table A.1 maps some key events and insights, since its inception in 2013, that have helped to shape what the Healthy Families NZ initiative looks like today in 2022.

Table A.1 Healthy Families NZ key events and insights 2013-2021

Year	Key events	Key insights
2013	Policy decision to establish Healthy Families NZ following MP visit to observe Healthy Together Victoria (HTV). Cabinet paper proposing Healthy Families NZ be developed	According to the Cabinet Paper, the design of Healthy Families NZ would draw on evidence from: "the Be Active Eat Well pilot (Colac, Australia), EPODE pilots (France) and Project Energize (Aotearoa New Zealand). The model is also influenced by Healthy Together Victoria" The process happened quickly, whereas in Victoria there had been more time to set up the initiative HTV. Healthy Eating, Healthy Action (HEHA) is not mentioned as an influence in the Cabinet Paper, and/or in the early build of Healthy Families NZ. Funding for HEHA was reallocated after the 2008 election. Healthy Families NZ has been compared to, and/or referenced by stakeholders as a replacement of HEHA, even though Healthy Families NZ and HEHA had different remits and focus areas.
2014	April: Minister of Health writes to DHB chairs telling them how they could support the initiative Healthy Families NZ provided for in July 2014 Budget Design includes Building Blocks and Principles to guide action 10 locations selected from a possible 13	Growing interest in system change approaches, along with sense that "business as usual" was not shifting population health outcomes. National political rivalry a factor influencing initiative being adopted as well as the international influence of HTV. Tensions from the competitive bid process lingered in some locations, where some of the new teams' potential partners and stakeholders would have also been bidding for the Lead Provider contract.

	Team of four recruited for national team at Ministry of Health Competitive bid process Contracts allocated	There was specific intent to test the capability of the non-government sector to become local Lead Providers (Ministry of Health 2014, Registration of Interest for Local Lead Providers). TLA boundaries were used to define locations' areas of responsibility.
2015	Evaluation was put out to tender. Massey University was contracted. Location Managers hired and team recruitment begins The two South Auckland teams - Manukau and Manurewa-Papakura — were to be based in two Lead Provider organisations but work together as an official alliance, effectively becoming one large location. Healthy Families Whanganui expands to include Rangitīkei and Ruapehu Learning about systems change Ongoing team recruitment Governance Groups Prevention Partnerships (wider network) Teams work on Roadmaps October: Healthy Families NZ included under government's new Childhood Obesity Plan for "supporting coordinated effort for prevention".	HTV was adapted to NZ context. This included equity being embedded within the initiative. Governance Groups were established to "activate spheres of influence" and bring connections to spread the mahi of Healthy Families NZ. Later becoming Strategic Leadership Groups (SLGs) Focus was on recruitment, mapping of local needs and assets, establishing relationships and learning about systems change methods Target issues are food, alcohol, smoking and physical activity, and activities are defined by the settings they relate to (where people "live, learn, work and play") Not contracted under a Results Based Accountability framework meaning outcomes will be measured differently.

	4 national hui for Healthy Families NZ location teams the year to share mahi across locations	
2016	Establishment and early implement phase continues Team recruitment continues Action Budget Decision Support Tool designed September: Healthy Families Spreydon-Heathcote becomes Healthy Families Christchurch and moves to a new Lead Provider (Sport Canterbury) after the first Lead Provider goes into liquidation	Challenges so far: ○ The wide scope of the initiative ○ Understanding and communicating systems change and therefore the purpose ○ External buy-in from other local organisations, and others parts of the public health sector. ○ Deciding how to allocate action budget resources for greatest system impact. ○ Recruitment, in some areas. ○ The position and role of the national team, and the function of Healthy Families NZ, met some resistance within the Ministry of Health meaning opportunities for learning, linking and sharing were limited. ○ Caution or scepticism among stakeholders, given the relatively recent memories of health promoting initiatives being lauded then defunded. ○ Teams focused on relationship-building.
2017	First Interim Evaluation Report published Some teams strengthening others requiring a reset Article published by evaluation team on evaluation method in Journal of Public Health Ministry of Health restructuring and national team member changes Change of government New Ministers briefed	The evaluation found: ○ Teams felt they were building the plane while flying it ○ There was integrity to intention in implementation ○ A lot of work on negotiating boundaries ○ Challenges of balancing top-down/bottom-up decisions and actions ○ Working with a hands-on national team (Ministry of Health) ○ Learning about systems thinking and acting ○ Growing emphasis on leadership ○ Attention given to enabling Māori ownership and leadership ○ Making equity an integral part of the initiative
2018	Iwi Chairs Forum at Waitangi passes a resolution endorsing Healthy Families NZ approach	Most teams re-contracted. The Ministry of Health's timeline for confirming budget approval, the renewal of contracts was not communicated until fairly late. This led to some uncertainty and staff turnover in the locations.

	Phase 2 contracting East Cape and Far North had change in Lead Provider (Christchurch had already changed) Lower Hutt changes geographic area to include Upper Hutt, becoming Healthy Families Hutt Valley New team roles originated: testing of roles focused on Active Transport, following requests from communities and the Associate Minister of Health Summative evaluation report published by Ministry of Health Ministry of Health responds to and addresses evaluation recommendations Article published by Evaluation team summarising evaluation findings Health Promotion International journal Evaluation findings misrepresented in media, impacting team morale in locations and eroding trust in evaluation.	Evaluation lessons incorporated into new contracts Summative Report findings: Initiative design, methods and kaupapa o The design has prioritised and supported Māori ownership, creating space for Māori perspectives on health and the environment. o The systems approach resonates strongly with traditional Māori world views. o Equity has been a guiding value in the design and implementation. o Methods such as co-design used, and deep local connections made. Initiative implementation o Leadership a key focus. o Workforce being empowered to be leaders themselves. o Maintaining the adaptive ability of the initiative key to its effectiveness to date. o An adaptive and flexible workforce has enabled teams to be responsive to local community needs and action. Wider impacts o Systems approaches to health and other social initiatives becoming increasingly utilised. o Organisations increasingly valuing and acting on prevention for better health outcomes. o Collaborative working within communities found to be increasing, but substantial constraints. Challenges so far o It is too early and complex to see changes to chronic disease risk factors. o Improvements in local data are needed, especially in how data and knowledge is managed and accessed to enable greater insights into local community contexts and improve community advocacy. o Local action on some issues has been constrained by regulatory inaction. o Mental health and wellbeing an underlying community concern. Recommendations o Investigate other regions that would benefit from increased investment in prevention through this approach.

		○ Teams require more communications capacity. ○ Funding and contracting of health and social service initiatives in communities should be reviewed to consider their impact on the ability of communities to work towards shared wellbeing goals.
2019	Evaluation team meet with the national team, and Healthy Families NZ Managers and kaimahi to discuss future evaluation activities and co-create the evaluation approach for Phase 2. Following hui Ministry of Health present paper to Chairs of Strategic Leadership Groups to confirm the approach. Focus on teams' work broadens beyond the initial four prevention areas to include mental health and wellbeing; Māori systems return and more focus on community empowerment. On discussion with National team, location teams agree to focus more on local influence because they had found their energy being directed increasingly towards national-level change and advocacy. Healthy Families NZ shifts within the Ministry of Health to be part of Healthy Communities. Health and Disability System Review begins Covid 19 pandemic begins	Meeting was opportunity for evaluation team and Healthy Families NZ teams to discuss lessons, share feelings and reflect on future. ○ Outcome Narratives agreed upon as a way to capture contextual activities in next evaluation phase. National team more connected within the Ministry of Health following shift to new team structure.
2020	Covid response continues – Lockdowns beginning in March and August. Teams strengthen their work and continue to play important role in community Covid response.	Covid response accelerates the impact of the Healthy Families NZ teams ○ Teams became very active in communities helping to coordinate food, information and medicines. ○ Importance of local communication capacity becomes apparent as teams use their skills in the context of COVID-19. ○ Systems change beginning to gain more credibility

	Whakamaua Māori Health Action Plan is launched; Healthy Families NZ is included in this.	○ Teams better informed ○ External buy in improving. Teams within Māori providers have been gaining momentum influencing the activities of other Healthy Families NZ location teams.
2021	Further Covid lockdowns particularly affecting Auckland Several SLGs are effectively disbanded by now, while others continue to meet. Teams making greater impact, learning from last time. Initiative going from strength to strength Waikato set up as a Healthy Families NZ location (not included in this round of evaluation). Confirmation of Phase 3 and new role of Kaupapa Māori lead based on discussion with Managers and evidence of success in Phase 2.	Growing areas of success ○ Efforts to change local prevention system: food systems, play environments, smoke free policy, active transport, suicide prevention, and freshwater advocacy. ○ An evolving, systems change approach: advocating for health and wellbeing, improving collaboration, prioritising equity, culture change, storytelling. ○ Empowering communities: Māori and Pasifika ownership, community engagement including with Māori and Pasifika communities, community response to COVID-19. ○ Contract model and working relationships: relationship with Ministry of Health, shifting practice in Lead Providers, skilled workforce. Where Healthy Families NZ has substantially contributed ○ Improved collaboration and relationships with stakeholders and other local organisations ○ Acceleration of locally driven action on health and wellbeing. ○ Relational contracting within Ministry of Health working well ○ The role of partnership within Ministry of Health and across govt strengthening ○ Adaptive contracting and the need for less prescribed approaches ○ Equity as a goal driving action on equity ○ Strengthening local storytelling and cultural narratives ○ Filling a capacity for action gap within communities Challenges ○ People not understanding the initiative at all levels of the system ○ Getting buy-in from traditionalists ○ Small resources and teams charged with big goals

		○ Looming health reforms and uncertainty around them ○ Progress takes time ○ Evolving view of Healthy Families NZ as an aspirational initiative, yet real shifts in practice, contracts, partnerships within the Ministry of Health a challenge.
2022	Phase 3 contracts negotiated (including with newly established team in Waikato) Evaluation informs next round of contracts Ministry of Health team move to Health NZ — Te Whatu Ora Summative Evaluation Report 2022 submitted to the Healthy Families NZ national team.	

Appendix B: Healthy Families NZ evaluation indicators and Te Pae Māhutonga Framework

1. Te Pae Māhutonga Framework

Te Pae Māhutonga is based on the Southern Cross constellation and developed by Professor Sir Mason Durie (1999). The model identifies four key tasks (representing the stars) as needed to promote health in communities:

- Mauriora (cultural identity)
- Waiora (physical environment)
- Toiora (healthy lifestyles)
- Te Oranga (participation in society)

Two pointer stars represent Ngā Manukura (community leadership) and Te Mana Whakahaere (autonomy).

2. Original Te Pae Māhutonga Indicators

The original Te Pae Māhutonga indicators developed for each star and pointer stars are outlined below. In the context of the Healthy Families NZ evaluation, each star directs us towards available information that can address the following indicators:

1. Mauri Ora: Access to Te Ao Māori

- access to language and knowledge
- access to culture and cultural institutions such as marae
- access to Māori economic resources such as land, forests, fisheries
- access to social resources such as whānau, Māori services, networks
- access to societal domains where being Māori is facilitated not hindered.

2. Waiora: Environmental protection

- water free from pollutants
- clean air
- earth abundant in vegetation
- healthy noise levels
- opportunities to experience the natural environment.

3. Toiora: Healthy lifestyles

- harm minimisation
- targeted interventions
- risk management
- cultural relevance
- positive development.

4. Te Oranga: Participation

- in the economy
- in education
- in employment
- in the knowledge society
- in decision making.

5. Ngā Manukura: Leadership

- community leadership
- health leadership
- tribal leadership
- communication
- alliances between leaders and groups.

6. Te Mana Whakahaere: Autonomy

- control
- recognition of group aspirations
- relevant processes
- sensible measures and indicators
- the capacity for self-governance.

3. Application of framework to Healthy Families NZ evaluation

Based on our analysis, feedback from people associated with Healthy Families NZ and the findings of our literature review, it was evident that participation in society, community leadership and autonomy are very important factors in a prevention system; and one that is able to change to meet the needs of those most affected by health inequities. We therefore decided to use

Te Pae Māhutonga as a framework or framing lens to ensure indicators reflected a Te Ao Māori, indigeneity and Te Tiriti perspective.

Table B.1 shows the six components of Te Pae Māhutonga — the Mauriora, Waiora, Te Oranga, Toiora and the two pointers, Nga Manukura and Te Mana Whakahaere — against a summary of the topics we planned to collect quantitative and qualitative information on. The column headed “Signs of a strengthening prevention system” shows our high-level summary of what we would expect to see, according to our prevention framework shown in Appendix C, if prevention in Aotearoa New Zealand is truly being strengthened.

Table B.1 Healthy Families NZ evaluation indicators and Te Pae Māhutonga components

Te Pae Māhutonga	Signs of a strengthening prevention system	Qualitative indicators		Quantitative indicators	
	High level indicator questions	Indicator topics	Data source(s)	Indicator topics	Data source(s)
Mauriora — Cultural identity, Access to Te Ao Māori "Cultural identity is a prerequisite for good health". "Requires access to Te Ao Māori" Meaningful contact with language, customs, and inheritance. Expression of Māori values.	Are we seeing Indigenous models of health being valued?) Are we seeing Te Tiriti upheld/ its principles being intentionally enacted?	Community self-determination, including processes that reflect commitment to Te Tiriti o Waitangi principles	Interviews, document, outcome narratives	Using te reo in daily life is important Recent visit to marae tipuna Consider marae tipuna as tūrangawaewae Being engaged in Māori culture is important	Te Kupenga Survey 2018
Waiora — Physical environment, environmental protection "Spiritual element that connects human wellness with cosmic, terrestrial, and water environments" Nature and quality of the interaction between people and the surrounding environment.	Are we seeing health, wellbeing (social and natural environment) and equity being valued? (priorities, goals, methods, outcomes) Are we seeing improvement in health promoting physical infrastructure? Are we seeing more health promoting settings?	Policy changes that support prevention Change in health promoting environments	Outcome narratives, local data	Household crowding Health of the natural environment is important Looking after the natural environment is important Looked after Māori cultural sites of importance recently Looked after the health of the natural environment recently	Census (data can be used for context but not time series) Te Kupenga Survey 2018

Te Oranga — Participation in society "Wellbeing is also about the goods and services people can count on and voice they have in deciding the way those goods and services are made available". Confidence with which can access good health services, schools, sport and recreation. "Wellbeing, Te Oranga, is dependent on the terms under which people participate in society". E.g. Access to primary health care to stay healthy in order to participate in society. Being in good physical and mental health in order to fully participate in society. Access to home ownership.	Are we seeing local perspectives being valued? (priorities, goals, methods, outcomes) Are we seeing effective local communication of evidence, practices and values? Are we seeing organisations better able to collaborate around shared goals? (aligning resources, cooperating on shared projects)	Community self-determination Communities defining issues and solutions Systems practice	Outcome narratives, media reports, interviews	Long term conditions — adult (diabetes, ischaemic heart disease, chronic pain, asthma, arthritis) Cardiovascular risk factors (high blood pressure, cholesterol) Long term conditions — children (asthma,) Mental health — adult Mental health children Access to healthcare (unmet need, ED utilisation, immunisation status) Household ownership Self-rated health	NZHS NZHS NZHS NZHS, NZHS, B4SC NZHS, B4SC NZHS NZHS
Toiora — Healthy Lifestyles "Too many Māori, young and old, are trapped in risk-laden lifestyles	Are we seeing evidence for change towards healthier practice, and access to healthier	Change in health promoting environments	Outcome narratives, local data	Tobacco use Alcohol use Physical activity Body weight (BMI)	NZHS NZHS NZHS NZHS

and as a consequence will never be able to fully realise their potential." "Risks are highest where poverty is greatest".	options, among individuals and organisations?			Oral health	NZHS, B4SC NZHS, B4SC

Te Pae Māhutonga	Signs of a strengthening prevention system	Qualitative indicators		Quantitative indicators	
	High level indicator questions	Indicator topics	Data sources	Indicator topics	Data sources
Ngā Manukura — Community Leadership	Are we seeing local perspectives being valued? (priorities, goals, methods, outcomes) Are we seeing a shift towards greater local control? (decision-making resources and actions) Are we seeing effective local communication of evidence, practices and values? Are we seeing leadership at multiple levels become more joined up and responsive? (leader participation, leader access, leadership training, mahi influencing leaders) Are we seeing evidence and reflective, learning practices valued? (priorities, goals, methods, outcomes)	Leadership Funding and contracting practices that support prevention	Performance Management Reports, outcome narratives, interviews		
Te Mana Whakahaere — Autonomy	Are we seeing a shift towards greater local control? (decision-making resources and actions) Are we seeing Te Tiriti upheld? (priorities, goals, methods, outcomes) Are we seeing organisations better able to collaborate around shared goals? (aligning resources, cooperating on shared projects) Are we seeing systemic change — at multiple levels and/or at higher levels? (levers, outcomes)	Leadership	Info from PMRs on SLG process, interviews, stakeholder survey	High sense of control over life Higher than average sense of trust in institutions	Te Kupenga 2018
		Systems practice	PMRs, outcome narratives, interviews		

Appendix C: Prevention Action Framework for Aotearoa New Zealand

A key outcome we are exploring through the evaluation is how and to what extent the prevention system has been influenced by the activities of Healthy Families NZ. To help frame our understanding of what 'quality' looks like, we are utilising Donella Meadows' work on system change (Meadows & Wright, 2009) as well as Sir Mason Durie's framework for action on health
Te Pae Māhutonga (Durie, 1999, 2004).

We conducted a literature review, compiling a summary of prevention system factors from existing relevant literature and other frameworks then drawing on those most relevant to Healthy Families NZ and the Aotearoa New Zealand prevention system (Baugh Littlejohns & Wilson, 2019; Chandra et al., 2017; Kania et al., 2018; Malhi et al., 2009; McIsaac et al., 2019; Oetzel et al., 2017; Plough et al., 2018). We have also compared and contrasted these findings with data from the first phase of the evaluation (2014-2018) where we asked interview participants about their view of what the prevention system encompassed.

Table C.1 shows the Prevention Action Framework that we developed for this evaluation.

Table C.1 Draft Prevention Action Framework for Aotearoa New Zealand

	Suggested factors for action in the NZ prevention system
1. Paradigms, values and goals *1,2 Paradigms: knowing they exist/ transcending them* *3 Goals: the purpose or function of the system (also, what the system upholds, despite intent)*	**Norms, beliefs and values** Values (Values for a prevention system include shifting towards health and equity lenses, holistic/ interconnected responsibilities, valuing the local perspective, indigenous worldview shaping the system) Intention to uphold Te Tiriti (mana motuhake, active protection, participation and partnership) Support for prevention (evident at community, government and commercial levels) Social norms and the cultural beliefs and practice underpinning them (space is created for different cultural beliefs to have legitimacy; norms perpetuated among community groups support wellbeing)
	System goals Priorities/what is valued (Pivot from commercial interests/ economic growth as a default, towards equity, community health and wellbeing)

	Systemic change (changes throughout the whole system from policy, regulation to access to healthcare or affordable fruit and veg. Real devolution of power and resources. Shared goals between different systems (towards equity and wellbeing). Being mindful where goals exist in conflict. Maintaining or disrupting systems of power.
2. System structure, regulation and interconnection *4 Structure of the system: Self-organisation — power to evolve* *5 Rules: incentives, punishments and constraints*	**System structure** A well-connected system (intensely local, recognising diverse perspectives, multi-level, cross-sector collaboration with resources, goals, understandings) Sustainable, adaptive organisational structures that support prevention (i.e. are able to continue despite changes in organisations, personnel, governments. Things set up with consideration for longer timeframes and future sustainability) System structure enables the sharing of power
	Rules and incentives Policy and regulatory environment. A government funding system that incentivises prevention, wellbeing focus (for health and all other sectors), and longer-term planning Regulations, organisational practices and agreements (contracts) that support prevention (and enforcement of these) Te Tiriti o Waitangi principles upheld in regulatory system Social norms, mores, sanctioning and punishing practices and behaviour.
3. Information, feedback and relationships *6 Information flows: the structure of who has access to information* *7,8 Feedback loops — reinforcing, adaptive* *9 Delays — response times*	**Information/ access** Community voice and knowledge (showing that this is valued by decision-makers/ that communities are decision-makers; evidence of co-design processes that enable communities to shape priorities) Indigenous knowledge and values (incorporated into planning and practice) Evidence informing action (and vice versa — reflexive, adaptive use of information to plan actions — developmental evaluation principle) Strong information, communication and delivery systems (information and resources getting to the people who need it)
	Feedback and influencing relationships Contracting (timeliness and responsiveness; including feedback that enables adaptation) Policy process (responsive to local priorities, including non-health organisations in prevention goals) Making new connections between agencies, sectors, people;

	Sharing examples to support practice Whole of government and intersectoral approaches evident in development of policies and initiatives Local perspective influencing national and local policy process Relationship between local and national policy in key (community health-related) areas Health in all policy approaches Leadership: Distributed leadership across the whole system, sharing of authority to make changes; emergence of champions for health and prevention (local and national, cross-sector)
4. Structural elements, resources and actors *10 Material stocks and flows: physical system, actors* *11 Buffers* *12 Parameters, numbers, constants*	**Material influence** Physical environments that encourage health Healthy settings — education, workplaces, sporting Organisations selling healthy products and foods. The supply system. Health and community organisations — increase in the level of collaboration, sharing goals and aligning resources. System thinking and acting workforces.
	Buffers Contingency planning for changing circumstances — enough resources, enough flexibility
	Numbers and counts Socioeconomic position, remoteness Local employment opportunities Availability of skilled workforce Locally relevant data showing change Participation/ access/ behaviour Budget allocation Workforce (quantity, stability, quality/ systems thinking and acting)

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Appendix D: Outcome Narrative (ON) template

Purpose

All Healthy Families NZ location teams are being asked to contribute narratives about outcomes in their local prevention system. The evaluation team will then use this information to look at:

- types of outcomes achieved,
- effectiveness of interventions,
- strength of evidence for change,
- levels of the prevention system being intervened in, and
- links between activities and prevention system outcomes.

The outcome narratives are intended to show the location teams' perspectives about the most important contributors to prevention system outcomes – rather than the evaluation team creating these stories based on second-hand information sources and potentially missing the cultural nuance or context. At the same time, the template is to help information be collected systematically, so it can be presented in a consistent format and analysed.

How to fill out the template

When choosing outcomes to report on, consider positive changes that you can show in the local prevention system.

Examples could be in sports clubs, schools, marae, community events, workplaces, parks, transport or in the people (or organisations) involved with health promoting activities. These might be changes in policy and practice, scaling up and production of trialled ideas, results from new collaborations and leadership initiatives, or changes in the provision of healthy options in the environment.

Around 10 outcomes (minimum of 6, maximum of 20 in bigger locations) are to be filled in by each location by 10 December 2021.

The general guideline for length of narratives is that each box should be able to be filled in with a page, maximum two pages, of information — however this is not a strict guideline, should you find that you need to show more information to tell your story.

1. What is the outcome? *Describe a positive change*

2. How was the outcome achieved?
What were the steps, activities or actions? For example, was there codesign, prototyping, advocacy, fundraising, championing, identification of needs and solutions? If relevant – were culturally-specific processes or tikanga followed? *Who was involved/ Who was responsible for what?* *What factors enabled success/ what challenges were overcome?*

3. What was your Healthy Families NZ team's role?
How did they support or contribute to the outcome? Did your team initiate or support activities leading to the outcome; did you have a role in connecting others to achieve the outcome? Were you involved in identifying where to intervene in the system, leveraging resources, making connections? Consider the value of your team's role, or, how much your team's contribution led to the outcome.

4. What other organisations were involved?
Who led, who supported — whose input was critical to the outcome? (Where appropriate, label the critical/ core relationships first, then list the more peripheral ones) (Optional: And how did the work leading to this outcome link with other work underway in the area?)

5. What evidence do you have of this outcome being achieved?
Think broadly about evidence: What have we heard, what have people said, what have we seen or observed. What has changed — what do we see more of, or less of? How have the examples (evidence) been recorded documented or captured? *Evidence could be data from service providers, counts of events and participation in programmes, participant surveys, pictures and records of new features in the local environment, links to media, records of new collaborations…* *Please ensure that you specify the source of evidence that you quote.*

Appendix E: Qualitative thematic summary of Healthy Families NZ location case studies

This appendix presents summaries of overall themes from the findings in the combined nine location case studies (available at Appendix J), along with selected responses from national/ Ministry of Health interviewees. It begins with an overview of the methods used for qualitative data collection in this evaluation phase.

1. Methods

Introduction

This section details the methodological approach to case study design, qualitative interviews and Outcome Narratives (ONs). There are brief discussions of how tools and products were adapted for this phase of the evaluation, and likely limitations.

Case study design

This is the third round of case studies conducted for the evaluation. Case studies draw on multiple data sources to tell a detailed story about how the initiative has been implemented and what has changed (for whom, and why). Case study design recognises that differing outcomes relate to interactions between many elements in each case (Byrne, 2013). Grouping different data sources together is a way of showing the boundaries of what data we have gathered for the cases, while acknowledging there will be relationships between the findings from these sources of data (Matheson et al., 2017).

Case studies firstly provide rich contextual information that shows how the initiative has developed over time and how it is meeting the objective of strengthening the prevention system. They are used as a core part of the QCA and overall comparative analysis process to identify combinations of factors that have contributed to the outcomes.

The case studies present findings from key informant interviews (between four and seven per location), Outcome Narratives (between eight and 15 per location) and stakeholder surveys, along with quantitative health survey and demographic data.

Adaptation

This time, the case studies still featured local contextual data about demographics and change in health and equity issues. However, this data was presented less prominently to acknowledge its place as more contextual than explanatory information. The findings presented focused more on ways in which the (more qualitative) data could address evaluation indicators.

Interviews

Purpose and adaptation

This was the third set of key informant interviews in the evaluation so far; the first two covered the initiative's setup (2015-16) and how its first phase had gone (2017-18). This time we were looking at how the initiative was progressing and evolving in the different locations during its second phase.

Interviewees

We requested to interview a maximum of six people in each of the nine Healthy Families NZ locations. These included the Manager and Chair of the Strategic Leadership Group (SLG) in each location, Māori and Pacific members of the SLG if appropriate, and other nominated people from the team, SLG or community partners who might be informative.

We carried out 53 interviews with key contacts in the nine locations and the Ministry of Health between August and October 2021. The numbers of interviews conducted for each location are shown below.

Table E.1 Number of interviews in each location

Location	*Interviews*
Far North	5
Waitākere	5
South Auckland	5
East Cape	4
Rotorua	6
Whanganui, Rangitīkei, Ruapehu	4
Hutt Valley	6
Ōtautahi Christchurch	5
Invercargill	7
National/ Ministry of Health	6

Adaptation

The number of interviews was fewer than in the previous phase. While during the previous phase we had gathered a lot of perspectives about people's understanding of and implementation of this systems thinking initiative, this time we aimed to focus more as we did not have the time allocated to interview and analyse responses from the entire teams.

Comment

It is fair to say that most interviewees were talking from the point of view of wanting the initiative to succeed and be well-represented, so the findings are biased towards this point of

view.
A range of views about the initiatives strengths and challenges were expressed however, and some interviewees, particularly those less embedded in the initiative, were able to describe more about how Healthy Families NZ's achievements were viewed from the outside.

Questionnaire content

We developed questionnaires based on our previous evaluation phase, but focused them more on the Prevention Action Framework and indicators that we had already developed for this phase. The questionnaires covered:

Role, team and context

Systems thinking and work approach

Community collaboration

Equity and Te Tiriti

Observations of change in the wider system

Significant changes, successes and challenges,

Interview method

Adaptation

We initially scheduled interviews to be a mixture of in-person and online. However, after the first set of in-person interviews in Invercargill in August 2021, the country went into another COVID lockdown. We switched to conducting all other interviews via Zoom between August and November 2021. We saved audio recordings from these Zoom sessions to be transcribed.

Comment

Interviewing online has benefits: it is cheaper, easier to schedule, allows both interviewers and interviewees to work flexibly when unable to travel, and tends to take less time. On the other hand, we had found with previous phases that interviewing in-person allowed for a lot more personal connection, incidental observation of the context that interviewees were telling us about, and more familiarity with how and where they worked. We have missed that level of contact this time around, but intend to make time to talk with Healthy Families NZ location contacts in-person later in 2022 to discuss this report among other things.

Analysis method

We analysed transcripts using thematic coding that aligned with the different sections of the case studies (which themselves are aligned with the evaluation indicators). We collected coded excerpts of data (quotes from the interviews) in tables arranged by the report section heading they correspond to. Codes are specific: a single label for a segment of the text in the transcript. Themes come later: they are the recurring patterns that we notice in the dataset — within each case study initially, and then across the case studies.

From these collections of coded excerpts, we decided on the themes to be subheadings under each indicator. We then wrote up summaries of these findings, to form part of the case studies. In this process we acknowledge our positionality as researchers: we bring our pre-existing understandings of the initiative, its history and its purpose to the data, and this influences what we see as significant to comment on (Braun & Clarke, 2019).

Our approach to coding could be described as more deductive (adhering to a pre-existing template of codes) than inductive (purely data-driven) (Fereday & Muir-Cochrane, 2006). That we are looking for how the research findings fit into a theoretical framework we have already developed. We had some codes in mind before starting coding, based on what we already knew about the indicators we were looking for and topics we were covering. However, the final list of codes was also driven by the data and included ideas that came up as we went through the transcripts.

Adaptation

This coding practice was still iterative (key codes became obvious as we went along, while some suggested codes did not fit as well), but was somewhat more focused than the multi-level coding done in previous phases of the evaluation. We aimed to focus content on what would need to be reported on to address evaluation indicators in each location, but also made note of overarching ideas that could relate to the whole initiative.

Comment

There is always a danger, when conducting this type of coding over multiple datasets, that over time inconsistencies will creep in regarding the number and types of quotes chosen, and the number of codes applied. The order in which location datasets were coded may have influenced the most common codes chosen to apply to later datasets. This limitation is common in qualitative analysis regardless of the coding tools used. We reviewed the coded data with an eye to writing about them by themes relevant to the evaluation, thus outlying or inconsistent codes should become less of a problem.

Outcome Narratives

Purpose and adaptation

The Outcome Narratives (ONs) are a new data collection tool for this phase of the initiative and evaluation. These reports are produced by the Healthy Families NZ teams using a template developed with the evaluation team in late 2019. A total of 98 ONs were analysed for the evaluation.

ONs show the teams' chosen examples of significant activities and achievements. The reports give us a view of what the teams see as most important, and of the roles they take in designing and supporting activities aimed at changing local systems. They can tell us about implementation, changes in the prevention system and in some cases making a difference to Māori and Pacific health and equity.

Adaptation

In the previous phase, we collated information about outcomes and activities that the teams were involved with, by going through their listed achievements in their six-monthly Performance Monitoring Reports. This process was not efficient and may have missed nuance about which changes were the most significant. This time we decided to get the location teams' perspectives on what the most significant outcomes in their area had been.

The ONs are intended to show the location teams' perspectives about the most important contributors to prevention system outcomes – rather than the evaluation team creating these stories based on second-hand information sources and potentially missing the cultural nuance or context. At the same time, the template is to help information be collected systematically, so it can be presented in a consistent format and analysed.

Report content

Teams were asked to choose positive changes that they could show in the local prevention system. The report guidelines included: "Examples could be in sports clubs, schools, marae, community events, workplaces, parks, transport or in the people (or organisations) involved with health promoting activities. These might be changes in policy and practice, scaling up and production of trialed ideas, results from new collaborations and leadership initiatives, or changes in the provision of healthy options in the environment."

The ONs include five sections, in which teams enter information to answer the following questions:

1. What is the outcome?
2. How was the outcome achieved?
3. What was your Healthy Families NZ team's role?
4. What other organisations were involved?
5. What evidence do you have of this outcome being achieved?

Analysis

The ONs have provided an interesting and insight-rich resource. To utilise this, we carried out a content analysis. The first round was summary analysis within excel, followed by a second round where we coded the activity data for comparability. We then carried out a thematic coding exercise to report on recurring themes in the narratives about how Healthy Families NZ locations were working on contributing to change in their local systems.

For the final analysis (contributing to the case studies and QCA analysis) between late 2021 and early 2022 we had 98 narratives, as shown in Table E.2.

Table E.2 Number of Outcome Narratives provided per location

Location	Outcome Narratives
Far North	9
Waitākere	14
South Auckland*	15

East Cape	10
Rotorua	8
Whanganui, Rangitīkei, Ruapehu	8
Hutt Valley	13
Ōtautahi Christchurch	11
Invercargill	10

Comment

When using the ONs as evidence, it is important to note that some teams have greater capacity for communications and reporting than others, so the amount of evidence provided may partly reflect the teams' ability to report on all outcomes, rather than their actual contribution to outcomes.

2. Summary of Themes

The summary collates and compares responses on three main topic areas: implementation, system change outcomes, and overall comments. The focus is on overall predominant themes, along with some descriptions of responses that were specific to each location.

Implementation

This section covers:

- Systems theories and methods
- Themes in how system practice is described
- Approach to collaboration
- Community ownership
- Leadership
- Disruption, and
- Ministry of Health contracting relationship.

Systems theories and methods

In terms of theory behind the systems methods, the Six Conditions of Systems Change (Kania et al., 2018) were being used widely by the Healthy Families NZ location teams, who found this framework very helpful for deciding on and articulating their priorities. Some locations used system theories, which were seen as coming from a Western perspective, alongside and in combination with matauranga Māori perspectives. These ideas and knowledge systems were largely seen as overlapping or complementary, but with some notable differences particularly as it came to the type of evidence needed. The indigenous approaches were seen as explicitly

taking humans' relationships to the environment into account and also, in some areas like Rotorua in particular, to refer to the Maramataka for work planning.

Most locations also referred to system thinking tools for planning, such as creating Theories of Change, logic models and Roadmaps. The most commonly mentioned systems change methods in the ONs, ordered by frequency of mentions across locations, were:

- Co-design methods
- Systems Change tools and methods
- Leadership, championing, advocacy
- Prototyping and experimenting
- Explicit focus on collective impact
- Scaling/spreading Activity.

Themes in how the teams' "systems practice" is described

Table E.3 shows the themes in how teams talked about their implementation practice. Most of the themes related to all locations. Those that were only mentioned by some have those locations' codes written alongside.

Table E.3 Themes in descriptions of implementation practice

Practices/ principles	Themes
Use of systems theory in combination with Matauranga Māori	Complementary approaches. Requires valuing/ hiring for specific expertise, and working with Māori leadership. Valuing local traditional knowledge, fosters connection to culture and environment.
Use of systems tools Associated use of data	Mapping, prototyping, co-design, theories of change Data from official sources and community voices given equal weight Evidence helps with focus on equity
Māori autonomy/ Te Tiriti	Shifting decision-making and power to Māori stakeholders Explicit focus on Māori communities Tikanga in relationship approach
Changing narratives	More positive, locally-driven, wellbeing-centering stories about change Storytelling for change and influence Practical examples to show change is possible
Community ownership	Not taking credit for community ideas Encouraging rangatahi champions Celebrating community leadership of initiatives
Power-sharing	Identifying champions, not taking over Focus on raising the voices of those with less power Equity focus
Co-design and community insights	Supporting communities to identify what works for them — acknowledging no one-size-fits-all Adaptability: changing focus to reflect community concerns Strengthens trust and longer-term relationships
SLG and other leadership partners	Advice on spheres of influence, bringing HF ideas to decision-makers *NOTE: SLG no longer the key leadership group in some locations.* Increasing focus on identifying leaders at different levels (distributed leadership)

Spreading knowledge about systems change and Matauranga (WAI, ROT)	Seminars, less formal on-the-job learning Sharing best practice between organisations
Collaborations	Multi-stakeholder, multi-level Collective impact, system strengthening Providing a link between funders and community partners Tikanga processes build strong collaborations Identifying gaps in leadership and helping to fill them
Cross-location knowledge sharing	Some examples of locations adapting each others' prototypes Knowledge sharing around kai systems Sense that more sharing and connection across teams is desired — COVID has not helped.

Use of information

A common theme was that while teams made use of many mainstream quantitative data sources, they equally prioritised community insights to add another important angle on what was happening and what was needed. Gathering these insights was part of building relationships and getting community voices heard, so had an advocacy function as well as helping to decide priority activities for the team to focus on.

Storytelling

Beyond just communications, storytelling was mentioned as a core activity in many locations, and supported by expertise from the national team. Storytelling was seen as partly about engagement and partly about shifting narratives around health issues and solutions in the locations. Shifting narratives could in turn lead to systems change and better prioritisation of system-level interventions, indigenous knowledge models and strengths-based approaches.

Approach to collaboration

Adapting approaches to partners

ONs described collaboration approaches as intentional, recognising the need to bring people in different parts of the system together, to build trust and understand partners' priorities.

The collaboration approach showed adaptability, changing along the way to find approaches that worked best for partners. It was important for the teams to know when to step back and let others take credit; this had been challenging at times but was appreciated by stakeholders when they got it right. A common theme was that teams were seen to approach others to learn about and help with the outcomes they were looking for, rather than looking to own the project.

A mandate to connect others

In Waitākere several participants talked about Healthy Families NZ having the capacity and, increasingly, the community-approved mandate, to take a convening (or "backboning") role to bring people together. This was echoed in comments in Far North, Rotorua, East Cape, Whanganui Rangitīkei Ruapehu, Hutt Valley and Invercargill about the role that Healthy Families NZ teams took to engage respectfully and to strengthen others' collaborations. There was some concern that without Healthy Families NZ, there might not be another obvious organisation that would take up this backboning role.

Community ownership, co-design and communities identifying priorities

Although this information was likely biased by the respondents, most interviewees and ONs reported that community groups who had taken part in co-design and other such planning initiatives facilitated by Healthy Families NZ teams were very enthusiastic about the experience. Some mentioned having not enjoyed co-design before working with Healthy Families NZ.

These processes were often credited with dual outcomes of shifting power to get communities more involved with specific issues that mattered to them, and also getting communities to see Healthy Families NZ teams as contacts they wanted to continue to ask for support. Through these strengthened relationships, Healthy Families NZ teams could help community contacts with advocating for their priorities.

Leadership

Overall there was a trend during this phase towards teams embracing a more flexible style of engaging community leadership, and encouraging distributed leadership at different levels. This could mean a change of focus from getting specific high-level leaders to activate spheres of influence (ie the SLGs) towards more behind the scenes leadership. A key theme is therefore leadership that includes and empowers more people (eg rangatahi, people with less structural power).

Healthy Families NZ teams as leaders

Interviewees spoke of the Healthy Families NZ teams' leadership abilities particularly relating to their ability to promote and support the leadership of others in the community. This role requires the Healthy Families NZ teams to avoid looking like they want to claim credit for others' projects, something which had been an issue at times according to some community partners, but it appeared that overall they were succeeding in building up partners' confidence and ownership of local initiatives. Information in the ONs supported this idea.

In the more Māori-led locations, teams were taking the lead in their wider community networks on promoting Kaupapa Māori, Matauranga Māori and the use of traditional knowledge such as Maramataka.

Strategic Leadership Groups

The Strategic Leadership Group (SLG) format had continued to work well in some Healthy Families NZ locations, who were still holding regular meetings and reported that the teams and leaders found these valuable. However, a number of location teams had found that it was increasingly difficult to get their SLGs together. In response, they had developed different ways of engaging their SLG members, either via smaller subgroups who could contribute on specific topics, one-on-one engagement with location managers, or in one case, an unofficial disbanding and cessation of meetings.

Views were mixed on how effective the changes in SLG approach were. Some national team members saw the changes as a positive example of how teams were able to, in consultation with the Ministry, change their approach to better suit their local context. In Waitākere, the change to topic-focused meetings inviting people with an interest in that area seemed to be well-received.

In Christchurch, smaller and more focused meetings were working better than big SLG meetings; a change to one-on-one meetings had been seen as a reasonable idea in theory but had been harder to keep up regularly and had led to SLG members feeling quite disconnected. In East Cape, a switch to a mixture of one-on-one and more structured group meetings was seen as an improvement. In South Auckland, former SLG members appeared confused about what had happened to the group. In Whanganui Rangitīkei Ruapehu, the core SLG was not entirely functioning but the team had decided to draw on expertise of other partners instead.

Disruption to implementation: COVID and other

Discussions about the COVID lockdowns and their effect on progress were split into two themes. One was that the pandemic had disrupted collaboration, stalled projects and diverted resources. The other side was that it had been an opportunity for location teams to take stock of what was going on their local system, to build relationships while helping partner / community organisations with practical response work, and to connect others in the community in a way that had potential to strengthen collaborations longer-term.

The major type of disruption other than COVID was workforce recruitment issues: some locations, particularly those who had changed lead provider, had taken some time to recruit a full team again. One location (Whanganui Rangitīkei Ruapehu) had lost opportunities to progress in the earlier part of this phase due to losing their manager, but had regained a lot of momentum since
a specialist contractor agreed to take on the Manager role.

National—location relationships

The location teams and leaders were almost all of the view that the relationship with the Ministry of Health national team was unusually strong for a contracting relationship. Keywords used were: close, responsive, trusting, open, supportive.

Location managers felt no fear around admitting failure or difficulty to their portfolio managers, and were able to raise new suggestions confidently. The national team concurred, and also noted that they were now working well with national-level stakeholders and finding more support for Healthy Families NZ at that level. Healthy Families NZ was held up by some as an example of a contracting approach to emulate.

System change outcomes

This section presents themes about how Healthy Families NZ location teams are seen to have contributed to changes in the prevention system, including location-specific contributions to change. Their contribution to promoting Māori and Pacific health and equity is then discussed. The section finishes with a brief overview of the areas that activities focused, and outcomes that these activities achieved, according to the ONs.

Changes in the prevention system, and contribution of Healthy Families NZ to these.

In general interviewees felt the system had been strengthened although it was not always easy to prove this. There was also a common impression that system change in the current phase of Healthy Families NZ was partly due to shifts in government priorities, with more overt emphasis on collaboration between organisations and wellbeing outcomes.

Themes about Healthy Families NZ teams' contribution to prevention system strengthening follow.

Improved opportunities for community groups to influence local government

The ability of Healthy Families NZ teams to leverage relationships in council organisations, and to help communities express their priorities, had led to influencing policy change. This particularly related to food, active transport, smokefree spaces, urban design and play opportunities.

Collaborations

The ONs in particular detail examples of how collaboration on one project can lead to partners accessing resources for more sustainable support, and finding opportunities to expand projects further or work more closely in future. Collaborations were seen as empowering community partners and will be key to the sustainability of prevention system changes. As noted earlier, Healthy Families NZ teams were credited for their approach to backboning these collaborations.

Communications

Those teams who had capacity were supporting others with communications and storytelling. Public communications about systems change work were helping to increase knowledge around system change, and enthusiasm for getting involved.

Leveraging resources

Teams helped community partners identify resource gaps and to apply for funding. In terms of leveraging resources, the ONs show that teams contributed in the following ways:

- Helped partners to apply for funding for community initiatives.
- Identified gaps and inequities in resourcing.
- Identified ways that existing funding models make collaboration harder.
- Connected local and national organisations to secure (more sustainable) resourcing.

- Encouraged funders such as local government to prioritise health promotion in funding processes.

Māori systems ideas

Local and national systems were being influenced by Healthy Families NZ's championing of Matauranga Māori. The progress towards Māori systems return could be empowering for those communities who were becoming more involved.

Increasing understanding of systems thinking, and awareness that non-health-sector players can contribute to prevention system change

Compared with when Healthy Families NZ began in 2014, there was a sense that the social and political climate was more welcoming to the values and paradigms underpinning the initiative. Therefore there were more opportunities for changing values, goals and paradigms at the high level of the prevention system. Part of this change was happening regardless of Healthy
Families NZ.

At the national level, new approaches to local-based contracting were already of interest and Healthy Families NZ was being referenced as an example of how this could be done. There was some tension about this: although some people were showing Healthy Families NZ as an ideal model for better contracting, not all accepted this and actual changes in practice were slower to come.

In most locations interviewees and evidence from ONs showed that stakeholders felt Healthy Families NZ teams were playing a part in getting their communities and their national-level contacts familiar with system thinking ideas, and more open to playing a part in prevention system change to make their social and physical environments healthier.

Location—specific contributions

These are the most notable other factors mentioned, in interviews and ONs, relating to Healthy Families NZ contributions to change in each location's prevention system.

Far North: Co-design and collaboration processes, helping council to think differently.

Waitākere: Focus on settings to scale up existing initiatives, changing mindsets.

South Auckland: Success: policy work: bringing community influence to local government policy change, leveraging resources and relationships for healthier council policy. Challenge: alcohol and fast food industry influence making it harder for communities to .

Rotorua: Engaging and empowering the community through Maramataka work, and working on relationships to help scale up prototyped kai initiatives.

East Cape: Efforts to get community voices heard in decision-making.

Whanganui Rangitīkei Ruapehu: Promoting Maramataka, empowering new leaders in the community (men's wellbeing, rangatahi voice).

Hutt Valley: Leveraging council and government relationships, supporting community groups to advocate, providing communications support.

Christchurch: Beginning to influence council, definitely influencing the sports trust, bringing more of an equity lens to collaborations relating to play opportunities.

Invercargill: Co-design, supporting community advocacy for town planning change, identifying gaps in leadership and funding opportunities.

Māori and Pacific health and equity

The following are the main themes regarding the Healthy Families NZ teams' involvement with promoting Māori and Pacific health and equity in the locations. Most of these examples also relate to implementation practice.

Leadership in applying Kaupapa Māori principles

In the more Māori-led locations, teams were taking the lead in their wider community networks on promoting Kaupapa Māori, Matauranga Māori and the use of traditional knowledge such as Maramataka. The teams in non-Māori lead providers had all made more obvious effort in this phase to integrate Te Ao Māori into their practice, and to work on deeper connections with local Māori stakeholders.

Having Māori and Pacific people well represented among the teams and leadership groups was one indicator of the initiative recognising its Te Tiriti responsibilities, particularly when these people were able to bring their expertise to influence their Tangata Tiriti colleagues' approaches to the work. Even those teams with less natural connection to mana whenua due to their population base were seen as making a good effort (Invercargill was singled out more than once by national interviewees).

A typical observation about a Māori-led location:

I guess my observation in a Kaupapa organisation is they live and breathe those fundamentals you know they are protecting the health and wellbeing of Māori, yeah I think they're completely embedded and probably teach us all how to apply those principles. WRR004

A typical observation about the support provided by Healthy Families NZ to non-Māori-led lead providers:

Healthy Families NZ has added a whole lot of value around Te Tiriti. So we've embarked in the last twelve months on a significant cultural competency journey. To do two things: one is to obviously develop our own capability but to be more relevant to the communities that we support… So are we there yet, no. Are we committed to being better in that space, absolutely." CHCH002

Referring to Matauranga and Te Ao Māori concepts to explain activities

Engaging with Matauranga Māori as a way of connecting to the environment and identifying the spiritual dimension of environmental health concerns, such as the sacredness of wai. This focus could be empowering for communities and show respect for local matauranga.

Working with community partners to promote Māori leadership through engaging with the principles of Te Ao Māori practices.

Tikanga approaches to collaboration and partnership

This quote from the Far North about relationship approaches was echoed by some in East Cape, Whanganui Rangitīkei Ruapehu and Rotorua:
That's something that probably isn't commended enough, the way that they do that, that they go into communities, but they go into them respectfully. Again, that's the benefit of coming at it from a te ao Māori perspective as opposed to perhaps a more Europeanised perspective. FN002

A lesson mentioned in the Hutt Valley was that relationships improved markedly when they started showing up to the local marae to help out without having an agenda related to their own work.

Tikanga was also becoming increasingly important in all locations' practice, as this example from an East Cape ON illustrates:

Tikanga of Healthy Families East Cape has been set to include mihimihi, karakia, Māramataka, whakawhanaunga and reo Māori wherever possible in each engagement with stakeholders, community, Strategic Leadership Group and whanau, including karakia and where requested, a digital copy of our maramataka which has been shared with stakeholders and community, organisations & providers. (ECON06/09)

Outcomes in the local prevention system

Following are themes about the teams' main activity areas and the outcomes they observed from these activities.

Key activities and focus :

In ONs, the most frequently mentioned activity areas were in Māori systems (37) and Food/ kai systems (30), followed by physical activity and play (23) and health promoting education (20) in most but not all locations. Some locations focused on policy change and the physical environment, but some did not mention these at all.

A list of the notable achievements mentioned throughout the case studies, via interviews and ONs, in each location, has been incorporated in Appendix H (economic evaluation, cost-consequence analysis). This list gives a sense of the focus each location team had.

Changes in health promoting environments

The most commonly mentioned changes to health promoting environments were, in order of frequency across locations:

- Kai system/ sovereignty initiatives
- Community gardening
- Water in public spaces
- Play/ recreation opportunities
- Urban design/ influencing council plans
- Transport/ active transport planning

- Water in schools
- Education setting wellbeing
- Changes to healthier incentives and events policy
- Maramataka promotion/ education
- Māori systems return
- Smokefree spaces/ policy
- Suicide prevention/ mental wellbeing
- Workplace wellbeing

Outcomes from Healthy Families NZ activities

Table E.4 below shows outcomes identified by Health Families NZ teams in their ONs, in order of mentions. The largest emphasis was on outcome activities that gathered and shared information, strengthened relationships, and developed or provided resources.

Five of the nine locations saw policy changes, and four of the nine saw physical environment changes. This is consistent with the observation about the teams' focus activity areas, as several did not mention any work on policy or physical environment in the ONs they chose to report.

Table E.4 Outcomes in the local prevention system, according to Outcome Narratives

Outcomes	FN	WAI	SA	ROT	EC	WRR	HV	CHC	INV	Total
Learning events/ Insight gathering	7	6	6	2	8	7	7	5	5	53
Relationships strengthened	5	4	2	3	9	5	6	4	7	45
Education/Knowledge sharing		5	7	2	2	2	5	3	2	28
Resource development	1	2	4	2	4	3	2	4	3	25
Provision of tangible resource	2	3	3	2	1		5	4	2	22
Collaborative group organised		4		1	6	3	1	1	2	18
Policy Change	3	1	4	2			5	1		16
Norm/paradigm changing		1	3		1	2	1	1	2	11
Physical Environment change	1	3	2				4			10

Community Event Held		1	1				2	3	3	10

Overall Outcomes

This section covers themes about key successes (not otherwise mentioned), challenges, and hopes for the future of Healthy Families NZ.

Key successes

Themes about key successes of Healthy Families NZ in the locations are arranged firstly by initiatives and activity areas referred to, and then by successes relating to the teams' implementation, influence and relationships.

Initiatives

In terms of activity areas, initiatives focusing on food, the kai system and kai sovereignty were far and away the most commonly mentioned successes. Those working in Māori-led areas also felt Māori systems return and Maramataka initiatives were most significant, while those in sports trusts all had examples about initiatives developing play and recreation opportunities.

Other success areas included community gardening, active transport planning, healthier outdoor spaces, workplace wellbeing, promotion and provision of drinking water (in schools and public spaces), and urban design. Successes mentioned in just one or two locations included mental health and suicide prevention initiatives, social enterprise, education setting wellbeing and changes to healthier incentives and events.

Implementation, influence and relationships

In most locations, people felt they had had successes in increasing their community's capacity for leadership, understanding of system change, design capability and/or knowledge about Māori systems. More than half of the location teams were seen to have had success in shifting mindsets, increasing collaborations and influencing local government policy.

The teams themselves were seen as key successes for their skills, influence and achievements.

The successes mentioned in interviews, specifically related to the teams' implementation and relationship practices, are shown below in order of how commonly they were mentioned across locations.

- Shifting mindsets/ culture change
- Leadership/ expertise in Māori systems/ Kaupapa Māori
- Backboning collaborations/ connecting
- Workforce: skilled teams
- Influencing local govt policy through engagement
- Growing community leadership capacity
- Elevating community voice/ empowering
- General community relationships
- Developing prevention/ design capability in community

- COVID response and collaborations
- Producing evidence/ reports/ analysis
- Upskilling lead provider/ changing way of working, and
- Getting partners to understand Healthy Families NZ approach.

Most notable challenges for implementation of Healthy Families NZ

Deciding on areas of work focus.

With limited resources and big goals, the teams were frequently observed to have too many potential activities they could work on, so they had to prioritise. There was some concern that the smaller teams in particular could be drawn in too many directions. There was also some disagreement about how much energy should be directed towards national-level policy and advocacy. A recent directive from the Ministry of Health was that the teams should focus back more on local impact.

Uncertainty and workforce recruitment

Health Reforms were a great cause of uncertainty (particularly at the time of interviews in late 2021), although many noted potential for Healthy Families NZ to have a positive role to play as the health sector reformed.
One theme that was alluded to in most locations was that teams could always benefit from more resource to bring in more expertise. They were generally seen as doing a good job with what they had, but could always identify more opportunities for activity areas that they did not have capacity for. The smaller teams also lacked some specialist capacity.

Another theme was the potential lost resource caused by the uncertainty around the locations' contracts being renewed: it was harder to recruit skilled team members when a job could not be guaranteed beyond the upcoming end of a contract, and uncertainty could lead to staff turnover and teams needing to be reformed and upskilled once a new contract was put in place.

Relationships

In most locations there were longstanding challenges in certain sector relationships, particularly the health sector. The overall trend in commentary was that these situations were improving during the second phase of Healthy Families NZ. Tensions included:

- difficulty in understanding or appreciating the Healthy Families NZ systems approach, both at the community and national level (although this was improving in many areas),
- teams in less Māori-oriented lead providers having weaker ties with iwi and mana whenua groups,
- politics and rivalries between potential community partners, sometimes exacerbated by the funding and contracting system, and
- the fact that systems change requires long-term commitment, and in many areas key leaders appear overcommitted or difficult to bring together consistently.

Main other challenges mentioned in specific locations

Far North: Encouraging policy-makers to be more open-minded about systems change approaches.

Waitākere: Difficulty explaining impact of their work.

South Auckland: Being an area with longstanding ineffective approaches to social investment, and the associated scepticism among some partners.

Rotorua: Learning how to implement system change while working within a dominant health contracting system that constrains systems-style collaborations.

East Cape: Working out how to get the best value from the SLG.

Whanganui Rangitīkei Ruapehu: Finding staff (particularly communications specialists, and the team also went also some time without a manager).

Hutt Valley: Integrating into a council organisation while working under a different style of contract.

Christchurch: Clarity with stakeholders; cultural burden on few Māori staff.

Invercargill: Managing relationships: how much to take ownership versus prompting others, how to engage with newer communities.

Hopes for the future of Healthy Families NZ

Themes about hopes for the future of the initiative were mostly about increasing what it already had:

- more resources,
- more expertise in the teams,
- more collaborations with different sectors,
- more influence at local and national level,
- more ability to take risks, and
- continuing to use storytelling to contribute to shifts in attitudes around prevention.

Hopes relating to the future following health reforms included:

- Continuing to bring community priorities to policy makers.
- Keeping Healthy Families NZ as a nationally-connected programme in local areas. Enabling staff to share ideas and not letting teams become isolated. Similarly, more opportunities to connect in-person.

There was split between those who hoped for more focus on fewer or local things, and those who wanted more activities and more national-level influence and involvement.

Hopes for the wider community and system

Themes about hope for the future that were not just about Healthy Families NZ tended to centre around paradigm shifts. In particular, the idea that systems thinking or health considerations would become core to more organisations. These included:

- communities leading more change,
- more partner organisations embracing systems thinking and action,
- more respect for Te Ao Māori, and
- non-Western thought models becoming mainstreamed.

Appendix: Interview questionnaire

Interview Schedule — Managers & team

Third View Healthy Families NZ evaluation, 2021

1. Role, team and context

Tell me about your role (prompt: How long have you been in it? Where is most of your energy going? Has it changed?)

Could you describe your/ your team's relationship with the Lead Provider organisation? (who are they?)

Can you describe your relationship with the Ministry of Health national team? (personal, contractual, reporting?)

Does your team have the right mix of workforce roles to be effective? (prompt: if you had an additional FTE, what role/skill set would they be? How easy was it to recruit suitable team members?)

Have you had a role in defining the nature of the workforce? Ie titles, job descriptions

Can you describe how the Senior Leadership Group has been operating? (What has been its contribution to the work of Healthy Families NZ? What successes has it contributed to? What challenges have there been to the SLG operating effectively?)

2. Systems thinking and work approach

How do you determine priorities for your work programme?

How do you use evidence to inform your work programme? (Prompts: gaps, challenges?)

What does a systems approach look like for you in your daily practice? (Prompt: Has systems thinking been useful to you? What methods and approaches have you been using? How has your understanding and practice of systems thinking evolved over time?)

What happened for the Team during the Covid emergency? (Prompt: How did your team adapt your implementation and priorities to the COVID lockdown situation? Have changes made then (eg relationships, practices) continued to influence the way your team works?

3. Community collaboration

How would you describe the relationship between Healthy Families team and your local communities? (prompt: who do you see as the local community?)

How are you supporting local communities to define their own issues and solutions? (Prompt: What methods are you using? Eg "Community co-design, insight gathering": (Prompt: what has worked? What have been the challenges? Have approaches and expectations evolved? Who

are you reaching? Who are you finding difficult to reach? How have you engaged with mana whenua/Pacific communities?)

Do you think the communities within your area feel adequately able to influence local decision-making? (Prompt: different for different groups? Other avenues for influencing local actions? Ie local council how has Healthy Families X been able to help (or not)? How do you know this?)

To what extent has the SLG and Healthy Families X contributed to empowering the local community?

4. Equity and Te Tiriti

How have you considered equity in the work of Healthy Families? Ie What are the significant equity issues encountered in your work? And in the local area? (prompt: examples?)

Can you describe how Te Tiriti o Waitangi is considered in your work? [Prompt: supporting Māori-led initiatives; incorporating Te Ao Māori? Examples?]

Can you identify Māori led health and wellbeing initiatives and collaborations in your local area? How has Healthy Families X been involved?

Can you identify Pacific led health and wellbeing initiatives and collaborations in your local area? How has Healthy Families X been involved?

Can you identify anything that would help your team to address issues of equity more effectively?

5. Observations of change in the wider system

In terms of health and wellbeing (prevention or health promotion) – what other significant activities have been going on in your local area? (Prompt: other community initiatives, determinants of health (housing, benefit changes), economic (regional development fund)

Do you think there has been an improvement over time in organisational collaboration for health and wellbeing in your local area? If so why and how? If not why?

6. Significant changes, successes and challenges

Has Healthy Families [location] contributed to prevention system strengthening/improved health and wellbeing? If so how? If not why not?

What would be your top 3 significant successes from the initiative that you can identify?

What would be the top 3 challenges the initiative has faced?

If Healthy Families NZ was not continued past the current contract what do you think would still be in evidence in 5 years time?

If Healthy Families [location] had not existed – what activities and outcomes would not have occurred?

Looking into the future, what would Healthy Families NZ look like if it were to be even more successful?

Anything else you would like to add?

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Appendix F: Longitudinal analysis of quantitative health and wellbeing status indicators

This appendix covers the use of the quantitative indicators in the evaluation. There are three parts to this appendix:

1. Methods
2. Results of quantitative indicators of health and wellbeing
3. Indicator definitions

1. Methods

Introduction

This section describes the selection, analysis and use of a set of quantitative indicators about health and wellbeing, plus the socio-demographic indicators, for geographical areas aligned to Healthy Families NZ locations. These indicators were used to provide context to the Healthy Families NZ initiative and are analytical type indicators (ie Used in combinations to aid understanding of why outcomes achieved or not). These indicators also formed the basis of several QCA analytical conditions (see Appendix G) and were used in part of the cost-consequence analysis (see Appendix H).

For this evaluation round, we made two major inter-related adaptations to our use of quantitative indicators. Firstly, we altered the role of the indicators of health status over time from outcome indicators to using the indicators as important contextual information to understand the initiative. It was clear from the previous evaluation round that it was unreasonable to expect Healthy Families NZ to create a measurable impact on health status and nearly impossible to untangle the contribution of Healthy Families NZ to such impact. As noted by Nobles et al (2021), changes to health status (viewed as the consequence of complex adaptive systems) will only occur when complex systems are reorganised, which takes time, and therefore evaluation should focus on contribution and whether actions contribute to change within the system. Secondly, we expanded the scope of the health indicators from the original five health risk (and protective) factors of chronic disease to health and wellbeing more broadly.

Indicator selection

Health and wellbeing indicators

We chose a conceptual model to represent health and wellbeing, in line with best practice indicator development. The evaluation team used the Māori framework for action on health and wellbeing, Te Pae Māhutonga (Durie 1999). This framework guided the selection of quantitative indicators of health and wellbeing, and identification of gaps in the indicator set.

The data sources identified for obtaining indicators were the New Zealand Health Survey (NZHS), B4 School Check (B4SC), and Census of Population and Dwellings (Census). These datasets were known to be capable of providing meaningful information, over time, at the level of Healthy Families NZ locations, for a range of health and wellbeing topics.

A variety of indicators for adults and children were selected. The selected indicators covered topics such as oral health, tobacco use, long-term conditions, body size, access and use of health care, home ownership, mental health, self-rated health and physical activity. We used **41** indicators from the NZHS and **6** from B4SC.

Indicator selection was based on a) criteria about the data source and b) criteria about the relevance of the indicator given its intended use.

The key selection criteria from a data source perspective were:

- the availability of data before and after the implementation of Healthy Families NZ
- potential sensitivity to detect change over time
- removing or discarding indicators with quality or validity issues in their measurement

The key selection criteria from a relevance perspective were:

- achieving coverage of a diversity of aspects of health and wellbeing
- reflecting the dimensions of Te Pae Māhutonga given the data sources.

We excluded some indicators due to data quality issues or changes in the indicator measurement. Due to data quality issues with the 2018 Census, most of the possible indicators based on Census data could not be produced over time at the Healthy Families NZ location level. These exclusions were indicators of tobacco use, use of te reo Māori, active transport and household crowding. Furthermore, several indicators from the NZHS could not be used due to changes (improvements) in the survey questions and consequent break in the time series. These improvements impacted on harmful alcohol use, nutrition, and physical activity (TV/screen watching).

There were gaps in the indicators for the three Te Pae Māhuonga dimensions of Mauriora — Cultural identity andaccess to Te Ao Māori, Waiora – Physical environment, and Ngā Manukura — Community. To partially full these gaps for Māori, we used Te Kupenga Survey of Māori Wellbeing (Te Kupenga). However, sufficient data was only available at the level of Healthy Families locations for one time point, Te Kupenga 2018. We developed **nine** indicators from Te Kupenga based on the published survey results by Statistics New Zealand.

Generally, indicator definitions are aligned with those used elsewhere (eg, by the Ministry of Health, Statistics New Zealand) or were derived from existing indicators. A detailed list and definitions of the indicators by Te Pae Māhuonga dimension is included in this Appendix (see section 3, Indicator definitions).

Socio-economic indicators

We revised the Census socio-geographic indicators from the previous evaluation round and updated them with 2018 Census data, being mindful of the data quality issues with the 2018 Census.

Data sources

The New Zealand Health Survey

The NZHS is an annual survey of approximately 14,000 adults (aged 15 years and over) and 4,000 children (0-14 years). The survey "has a multi-stage sampling design that involves randomly selecting a sample of small geographic areas, households within the selected areas, and individuals within the selected households. One adult aged 15 years or older and one child aged 14 years or younger (if any in the household) were chosen at random from each selected household. Survey respondents were selected from the 'usually resident' population of all ages living in private dwellings, aged-care facilities and student accommodation (99% of the usually resident population)." (Ministry of Health 2021).

The NZHS has a high response rate, at around 80%. The sample design uses an approach to increase the sample size for Māori, Pacific peoples, and Asian ethnic groups (Ministry of Health 2019).

We obtained unit record data for the nine survey years 2011/12 to 2019/20 for the adult and child datasets. The survey year is the financial year from July to June of two separate years. We used the revised set of survey weights recently created by the Ministry of Health, updated with 2018 Census population benchmarks (Ministry of Health 2021a).

B4 School Check

The B4 School Check is an administrative data source containing various details about the health and development of four-year-old children. The B4SC is a comprehensive assessment available free to all four-year-olds before they start school, covering vision and hearing screening, oral health screening, identification of behavioural problems and developmental issues, height and weight measurement, and provision of a range of advice on child development (Ministry of Health 2008a). The population coverage of the programme has increased since inception and reached 80% in 2011/12 and 90% in 2013/14 (Stats NZ 2017). Coverage rates for Māori are around 4% lower and Pacific 5% lower (Virtual Health Information Network 2020). Nonetheless, it is one of the most complete and wide-ranging databases available for children in New Zealand, with a large sample size.

We obtained unit record data for the financial years (July to June) 2011/12 to 2019/20 in line with the NZHS, based on the date the check was considered completed and closed.

Te Kupenga Māori Survey of Wellbeing 2018

Te Kupenga Māori Survey of Wellbeing in 2018 involved a sample of over 8,500 Māori from the 2018 Census, aged 15 years and over who identified as of Māori ethnicity or descent on their census forms and lived in occupied private dwellings (Stats NZ 2018). "The survey provides key statistics on four areas of Māori cultural well-being: wairuatanga (spirituality), tikanga (Māori customs and practices), te reo Māori (the Māori language), and whanaungatanga (social connectedness)" (Stats NZ 2018). The response rate was 73.4% (Stats NZ 2020).

We were able to use results from this survey for the Healthy Families NZ locations because the sample size was increased in 2018 from the 2013 survey and Healthy Families NZ locations tend to have a high percentage of Māori. Furthermore, the sample design was devised to help ensure representation of regions (Stats NZ 2020).According to Stats NZ, there was some bias in the Te Kupenga sample frame, in particular a slight under-coverage of males and young people, as a result of the lower response rates for Māori in the 2018 Census. "However, the bias is low level and it has been possible to mitigate its effects on the final survey data using adjustments to the survey weighting" (Stats NZ 2020).

2018 Census of Population and Dwellings

The New Zealand Census of Population and Dwellings (the Census) is the official count of how many people and dwellings there are in New Zealand. The most recent Census was held in March 2018. There were issues with data collection using the on-line forms resulting in a lower than expected overall response rate and even greater under-coverage for certain population subgroups ie, Māori, Pacific peoples (2018 Census External Data Quality Panel 2020). Consequently, Stats NZ employed a number of techniques to improve the completeness of the dataset such as using other administrative datasets and imputation. Each Census variable has its own data quality issues. Therefore, we assessed each potential Census indicator individually for use in the evaluation.

Analysis

Overview

We explored the improvement (or worsening) of the health and wellbeing indicators over time from two perspectives: change over time within each geographical location area, and change over time compared to the rest of New Zealand. We grouped the data over multiple years to improve the reliability of the results and detection of change over time. For each data source, we used the most recently available data (B4SC data was aligned to the availability of NZHS data). Results from 2018 Census and 2018 Te Kupenga are for a single year and time point only.

The NZHS and B4SC were analysed using SAS 9.4 with a SUDAAN plug-in for the NZHS analysis. Survey weights were applied according to the CURF guidance document (Ministry of Health 2016). All results were calculated as percentages.

Geographic definition

We reviewed and altered the geographic definitions of the location areas to reflect geographic evolutions of the initiative that had been in place for a few years. Thus, Spreydon-Heathcote became Christchurch City territorial authority in 2016. However, we did not include Upper Hutt for Hutt Valley as the expansion to include Upper Hutt City territorial authority only occurred in late 2018, with activities involving Upper Hutt starting even later than this. So, the Rest of New Zealand was defined as all of New Zealand excluding all of the Healthy Families NZ locations but including Upper Hutt. This situation reflected the bulk of the time-period covered by analysis. Plus, we separated South Auckland into Manukau and Manurewa-Papakura (the two original locations) because we found these areas had different patterns of health status in the

previous evaluation round and the location has a team for each area. Therefore the geographic areas for quantitative indicators differ slightly from the current Healthy Families NZ locations and are referred to as 'location areas' or 'areas'.

We originally defined our ten location areas by meshblock using 2014 statistical boundaries by territorial authorities and/or electoral wards based on the location's descriptions. This definition was used to create a consistent geographic area over time. For the NZHS, meshblock 2006 was used to create the geographic location areas. For B4SC, both meshblock 2006 and 2013 were used. Meshblock data for each child in B4SC was obtained from the PHO enrolment database by the Ministry of Health using a date in the PHO enrolment database that was closest to the date the B4SC was carried out. Meshblock 2013 was used from 31 October 2015 onwards in the PHO enrolment database and meshblock 2006 prior to this. The use of meshblock 2006 required allocating a small number of meshblocks for Manurewa or Manukau-Papakura areas to either one of the areas or to the Rest of New Zealand. This was done based on land area. For both 2018 Census and Te Kupenga data sources, we used 2018 territorial authorities and electoral wards to request location area level results from Statistics New Zealand. There was no change in meshblock boundaries for our location areas between 2014 and 2018[1].

Longitudinal analysis of health and wellbeing indicators

The time period for measuring change before Healthy Families NZ began is the four-year period from July 2011 up until June 2015[2] (pre-period). This time period is compared to the most recent time period possible after Healthy Families NZ implementation, from July 2016 to June 2020 (post-period). There are four years of NZHS and B4SC data in both the pre and post Healthy Families NZ periods. The 2015/16 survey has been treated as a transition year and was excluded from analysis.

We also performed a comparison of location area results to the Rest of New Zealand, using a difference-in-differences analysis. The difference-in-differences analysis compares the difference in the trend in an area with respect to the trend in the Rest of New Zealand. The trend refers to the change in results between the pre-period and the post-period.

The difference-in-differences analysis is a statistical technique that mimics the use of a control and attempts to reflect the influences of background time trends. This helps to provide additional context for the individual indicator results at the level of each area.

Population groups

In addition to looking at results for the total population in each area, we analysed the health and wellbeing indicators separately for Māori and Pacific peoples. We based our ethnic group analyses on the published approach to age-standardisation for Māori (Ministry of Health 2018) and recent discussion of the monitoring of inequities from the Ministry of Health (Ministry of Health 2019b, Ministry of Health 2020).

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[1] There were substantial changes to electoral wards in Christchurch City in 2016, including to Spreydon-Heathcote. However, with the expansion of the initiative from Spreydon-Heathcote to Christchurch in 2016, these changes did not complicate our geographic definitions and consistency of the definitions over time.

[2] Mid-2015 is treated as the starting point from which Healthy Families NZ was up and running for the purpose of analysis. This aligns with the date by which all locations had contracts and managers in place as well as the end of a complete year of NZHS data.

We looked at the indicators for Māori in all areas and for Pacific peoples in South Auckland broken down by Manurewa-Papakura and Manukau areas. We used total response ethnicity so some people may be included in both the Māori and Pacific analyses.

Equity

We examined inequities in indicators of health and wellbeing for Māori in all areas and for Pacific peoples in South Auckland. This involved separate analysis for Māori and Pacific peoples and comparison with non-Māori non-Pacific. Non-Māori non-Pacific is also the preferred comparator for Pacific peoples health and equity (Ryan et al 2019). Non-Māori non-Pacific was defined as anyone who did not identify as Māori or Pacific for any of the possible multiple ethnicity responses in each dataset.

To examine changes in inequities over time for each indicator, we calculated rate ratios (Māori or Pacific result vs non-Māori non-Pacific result). The rate ratio is a relative measure of inequity and provides information as to how many times larger or smaller the inequity is for a given indicator. Rate ratios were calculated for the pre-period and post-period for indicators from NZHS and B4SC. We analysed the rate ratios over time in the same way as for the population groups, ie, using a difference of a differences analysis compared to Rest of New Zealand.

Age-standardisation

We used the age-adjusted (age-standardised) results for comparisons using NZHS data. The age-adjusted results account for changes in the age-structure of the population over time and between ethnic groups. It removes population age structure as a non-modifiable contextual influence on observed differences over time and between ethnic groups.

We calculated the age-standardised results using direct standardisation. For the total population and Pacific peoples population we used the World Health Organisation standard population However, we used the 2001 Māori Census population for age-standardisation of results for Māori, in line with recommendations from the Ministry of Health (Ministry of Health 2018). We used 10-year age groups for adults (15+ years) and 5-year age groups for children (0-14 years).
The appropriate standard population was applied to the non-Māori non-Pacific comparison groups depending on whether the focus was Māori or Pacific peoples.

For the B4SC data of four-year olds, we used the unadjusted results as there was no need to standardise by age. Te Kupenga Survey 2018 and Census 2018 results provided by Statistics NZ were also unadjusted.

Statistical testing

The statistical significance testing of change over time for each indicator, and for comparisons with the Rest of New Zealand was done using the z-test. Standard errors for the NZHS data were calculated using jackknife replicate weights. For the B4SC, standard errors were calculated using a normal approximation formula for binomial data (Kirkwood 1998). The statistical significance of rate ratios being different from 1.0 (ie no difference between ethnic groups) was based on whether the 95% confidence interval included 1.0 in the interval. The 95% confidence interval for rate ratios was calculated according to the method described in Rothman and Greenland (2021)).

Te Kupenga survey results provided by Stats NZ included an absolute sampling error (ASE), which is the full width of a 95% confidence interval. These ASEs were used to calculate 95% confidence intervals. As Te Kupenga results were calculated and provided by Stats NZ, comparisons of location results with the Rest of New Zealand used the informal and conservative approach
of comparing for non-overlapping confidence intervals.

Missing and unknowns

Missing data was excluded for each indicator from both the NZHS and B4SC datasets. We used all valid data available for each indicator within both the NZHS and B4SC datasets. There was only a small amount of missing ethnic group data. Similarly, there were a small number of people excluded from analysis as they could not be matched to a location area in the NZHS and B4SC datasets. All Census results were calculated using Total Stated and excluded the categories of Unknown, Missing, Not elsewhere included, and Unidentifiable counts.

Suppression of results

Some results are suppressed for reliability and confidentiality reasons and consequently were not used for the evaluation (Ministry of Health 2016). The impact of the suppression of results varies from area to area but impacts most heavily on mental health indicators for children from the NZHS. Results are suppressed when:

- The total number of observations was < 30
- The numerator was < 5 (for unadjusted rates)
- The numerator was < 20 (for age-adjusted rates)
- The relative sampling error (RSE) was ≥ 50% (unadjusted RSE for unadjusted rates and adjusted RSE for adjusted rates)

Results with a relative sampling error of 30-50% were noted to be used with caution.

Impact of COVID-19 on data collection in 2020

NZHS

According to the NZHS website "The survey results for the 2019/20 New Zealand Health Survey are based on the data collected in the first three quarters of the year only. No adjustments or imputations have been done to account for the impact this has had on the 2019/20 data. This results in reduced sample sizes and in some cases, lower precision of the estimates." (Ministry of Health 2021b). Some indicators are also subject to seasonal variation, including some or the indicators in this evaluation such as physical activity, body size, fruit intake, and mental health in children (Ministry of Health 2021b). However, impacts on precision are considered less noticeable when combined with multiple years of data as was done for this evaluation.

B4SC

During COVID-19 alert level 3 and 4 in the first half of 2020, restrictions on in-person contact meant the complete B4SC check could not be delivered as usual. The overall completion rate for 2019/20 was only 73.1 percent of eligible four-year-olds (Witten 2021), lower than other years.

Overall, for this evaluation, COVID-19 impacts on data collection in March to June 2020 represent around a quarter of one year of data amongst four years of data. Thus, the impact is likely to be minimal and it also means that the results are only slightly influenced by data collected during the pandemic, allowing a pre-COVID lens on the results.

Using the results

Overview

We assessed the overall improvement (or worsening) in health and wellbeing indicators over time from three perspectives:

- total population,
- Māori and Pacific peoples populations
- inequity as measured by rate ratios for Māori and Pacific peoples.

The socio-demographic indicators were used in the case studies and population demographic indicators were used for QCA conditions and in the cost-consequence value-for-money analysis.

Improvement or worsening over time (NZHS, B4SC)

For each area, the number of indicators showing improvement and the number showing worsening was counted. This was done for the total population, for Māori, and for Māori versus non-Māori non-Pacific rate ratios. In addition, for South Auckland, this counting was done for Pacific peoples and Pacific versus non-Māori non-Pacific rate ratios. The percentage of indicators showing improvement out of all the indicators showing change was calculated and used to rank and categorise the areas. The three categories used for ranking were:

- >50% (Majority of indicators improving)
- 25-50% (Some indicators improving)
- 0-24% (Few indicators improving)

An improvement (or worsening) in an indicator for an area is identified in one of two ways. Firstly, there may be a statistically significant change over time in the area indicating improvement (or worsening). (This may be complemented by also improving more than in the Rest of New Zealand). Secondly, there may be no statistically significant change in the area for an indicator, but when the magnitude of the change is compared to the magnitude of the change in the rest of New Zealand, these 'difference in differences' results may be statistically significant, showing the area is doing better (or worse) than the Rest of New Zealand on balance.

For the NZHS results, comparisons over time with a p-value < 0.05 were interpreted as showing evidence of statistical significance, and comparisons with a p-value < 0.10 as showing weak evidence of statistical significance. However, due to the larger sample size of the B4SC dataset, only a p-value of < 0.05 was used as evidence of a statistically significant comparison.

We also used indicators of alcohol-related harm limited to the post period to help describe current inequities.

Given the large number of statistical comparisons involved in this analysis and evaluation, our focus was on the over-arching patterns of results both within areas and across areas, not individual indicator results, which were more likely to occur by chance with this many comparisons. We commented on the overall balance of improving and worsening indicators across areas, and on improving (and worsening) aspects of health and wellbeing represented by the indicators. Indicators from B4SC strongly influenced our assessments of the overall patterns, due to the higher number of observations and associated sensitivity to detect change in these datasets.

Use of 2018 Te Kupenga and Census 2018 results

Socio-demographic indicators were described for each location area as part of the case studies. We presented socio-demographic results for Upper Hutt as well as Lower Hutt to align better with qualitative data collection and reflect the more recent socio-demographic context for Healthy Families NZ activities. We used logical bounds to present certain Census 2018 socio-demographic variables with lower data quality, particularly household level indicators. Logical bounds give the lower and upper bounds of what the percentage could be, allowing for the missing data due to issues with the 2018 Census.

Te Kupenga results were described for each area and compared to the Rest of New Zealand in the case studies. Variation in the results for each indicator from Te Kupenga across the areas was also examined.

In addition, population indicators for Māori, Pacific, and living in NZDep deciles were used to create QCA conditions (see Appendix G) and in the cost-consequence analysis of the Value for Money section (see Appendix H).

Strengths and limitations

Strengths

- All of the quantitative datasets we used could be adapted to different geographic boundaries and thus provide results aligned to the Healthy Families NZ locations, even if the boundaries had changed.
- We had access to more years of data than previously, improving the ability to detect change over time before and after the initiation of Healthy Families NZ.
- Both the NZHS and B4SC data sources provided a range of health and wellbeing indicators.
- Most locations have a sizeable Māori population, which made obtaining results from the 2018 Te Kupenga Māori Social Survey feasible, to help address gaps in the health and wellbeing indicators.

Limitations

- While the datasets used provide a good array of indicators to track change over time at the level of location areas, nonetheless they are limited in the picture of health and wellbeing they can provide. The Te Pae Māhutonga framework revealed clear gaps in the indicators available, and the indicators only reflect two (of five) dimensions of Māori health and wellbeing. Also, the indicators may not align particularly well to the diversity of activities and priorities on which current Healthy Families NZ locations are focused.
- Improvements to questions and data collection impacted the ability to track change over time in key areas. Specifically, there were changes to data collection for nutrition, alcohol use, and screen time in the NZHS. Nutrition indicators are especially relevant as all locations are working on healthy kai systems. Furthermore, problems with Census 2018 data collection limited the use of the Census to look at indicators over time for active transport, tobacco use, use of te reo Māori, and household crowding. This loss of indicators further limited our view of health and wellbeing over time.
- Despite the additional years of data, small numbers of NZHS respondents at the location area level still limit the ability to detect statistically significant change, especially for indicators with a low prevalence. This impact is uneven and affects areas with smaller populations more eg, East Cape, Invercargill. This issue also limits the ability to track health and wellbeing over time in Māori, and especially Pacific peoples, in the areas. It also tends to impact the reliability of indicators for children more than adults, particularly for mental health in children.
- Data was only available until 2019/20, so the results do not reflect the most up-to-date view of the health and well-being of theareas' populations. However, this does allow the results to be viewed through a pre-COVID lens.

Where can further information be obtained?

Further information about the individual indicators can be found in the Indicator Definition section in this appendix, and further information about the data sources can be found here:

Data source	Further information
New Zealand Health Survey (NZHS)	https://www.health.govt.nz/publication/annual-update-key-results-2019-20-new-zealand-health-survey
Before School Check (B4SC)	https://www.health.govt.nz/our-work/life-stages/child-health/b4-school-check
Te Kupenga MāoriSurvey of Wellbeing 2018	https://www.stats.govt.nz/methods/differences-between-te-kupenga-2013-and-2018-surveys/
Census 2018	https://www.stats.govt.nz/2018-census/

2. Results of quantitative indicators of health and wellbeing

This section of Appendix F presents results of change over time for the quantitative indicators of health and wellbeing from the New Zealand Health Survey (NZHS) and B4 School Check(B4SC). There were **41** indicators from the NZHS and **6** from the B4SC encompassing oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity[3]. These findings are supplemented with results from **9** indicators from Te Kupenga Māori Survey of Wellbeing 2018 for Māori. The measurement of *equity* used was a rate ratio of Māori (total response ethnicity) versus non-Māori non-Pacific, and for Pacific peoples (total response ethnicity) versus non-Māori non-Pacific.

In most cases, the geographic location 'areas' used for analysis and discussion align with the current Healthy Families NZ localities with two exceptions. Results for South Auckland are broken down by Manurewa-Papakura and Manukau team areas, while results for Hutt Valley are limited to the Hutt City territorial authority area (the original area for Hutt Valley). The term 'location area' or 'area' is used to refer to these geographic definitions. Change over time refers to the four-year time point (2011/12 – 2014/15) before Healthy Families NZ, and the most recent four-year time point (2016/17 - 2019/20) following initiation of Healthy Families NZ. These results reflect the health status trends in the areas prior to the COVID-19 pandemic.

Disclaimer: The results from the New Zealand Health Survey are the work of the evaluation team, and the analysis of the New Zealand Health Survey has *not* been undertaken on behalf of Health and Disability Intelligence, Ministry of Health.

Total Population

How are the different location areas doing overall?

Hutt Valley (Lower Hutt) showed the most improvement in health and wellbeing, followed by East Cape across the total population (Table F.1). Both of these areas had a greater number of indicators showing improvement than worsening (within the areas and/or in comparison to the Rest of New Zealand)[4]. Waitākere showed the least improvement, followed by Invercargill.

More specifically, improvements were seen in child health, particularly in body size and up-to-date immunisations, along with tobacco use in adults. Aspects of health and wellbeing that showed deterioration were mental health, cardiovascular-related indicators, and unmet need for primary health care. Changes in physical activity and oral health varied across the areas.

[3] It was not possible to examine key indicators of nutrition, harmful alcohol use, and screen time from the NZHS due to breaks in the time series following improvements to the questionnaire.

[4] 'Rest of New Zealand' refers to all people living outside of Healthy Families NZ locations, including people living in Upper Hutt.

Table F.1. Number of indicators¥ showing change (improving or worsening) over time (2011/12 – 2014/15 to 2016/17 – 2019/20), by location area, total population

Area	Number of indicators improving* over time			Number of indicators worsening* over time			Total number of indicators with change over time	Percent of indicators improving **
	In area	And/or Compared to Rest of NZ	Total	In area	And/or Compared to Rest of NZ	Total		
Far North	2	2	3	3	1	4	7	43%
Waitākere	0	1	1	13	11	16	17	6%
Manurewa-Papakura (South Auckland)	4	4	5	10	7	11	16	31%
Manuakau (South Auckland)	4	5	7	8	6	11	18	39%
East Cape	6	4	7	5	2	6	13	54%
Rotorua	3	4	4	5	3	5	9	44%
Whanganui Rangitīkei Ruapehu	3	4	4	9	10	11	15	27%
Hutt Valley (Lower Hutt)	10	7	10	5	1	6	16	63%
Christchurch	5	8	7	6	2	11	18	39%
Invercargill	0	1	1	9	7	9	10	10%

Key: Red (0-24%) Few indicators improving, Orange (25-50%) Some indicators improving, Green (>50%) Majority of indicators improving

Notes: *Improving or worsening over time — either in an area, and/or when compared to Rest of New Zealand. ** Percent of indicators improving is the number of indicators improving out of the total number of indicators with change over time. Indicators encompass oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity.

What is happening with specific aspects of health and wellbeing across the location areas?

The majority (8 out of 10) of geographic location areas were improving or at least doing better than the Rest of New Zealand with four-year-olds being up-to-date with their immunisations. This finding contrasts with the decrease in up-to-date immunisations in four-year-olds in the Rest of New Zealand.

Improvements were seen in indicators of body size (obese, overweight) for children. Half of the areas showed decreases in body size in four-year-olds, consistent with the decrease in the Rest of New Zealand, and some areas did better than the Rest of New Zealand. Plus, East Cape also showed improvements in body size for children aged 2-14 years. Nonetheless, two areas (Waitākere, Manurewa-Papakura) showed worsening over time in indicators of body size in children aged 2-14 years and no change for four-year-olds. Furthermore, the only areas to show any change in indicators of adult body size were Lower Hutt and Whanganui, where rates worsened.

Half the areas showed improvements in tobacco use, consistent with the decrease in the Rest of New Zealand, while the rest showed no change.

Most areas showed changes in physical activity indicators. These changes varied across the areas, with Manurewa-Papakura and Whanganui showing improvement, but six areas showed worsening in contrast with the Rest of New Zealand. Changes in oral health indicators also differed across the areas. Half of the areas showed worsening oral health in juxtaposition to the Rest of New Zealand, while four showed improvements. Findings of change in oral health are based largely on assessment of healthy teeth and gums in four-year-olds However, the few changes in rates of recent teeth extraction for decay in adults or children (2-14 years) were consistent with the oral health findings in four-year-olds within the same areas.

All areas, except Manurewa-Papakura, showed a worsening of adult mental health in one or more indicators[5]. This is consistent with the pattern in the Rest of New Zealand, although in several areas mental health worsened to a greater extent than the Rest of New Zealand. In addition, many of the areas showed a worsening of self-rated health (subjective well being), also consistent with the Rest of New Zealand. Again, in some areas, subjective wellbeing worsened to a greater extent than the Rest of New Zealand.

The majority of areas (8 out of 10) showed a worsening of unmet need for primary health care in adults, which corresponds to the increase in the Rest of New Zealand.In some areas unmet need worsened more than in the Rest of New Zealand. However, Lower Hutt showed an improvement in unmet need for primary health care in children.

At least one cardiovascular related indicator[6] worsened in half the areas. Lower Hutt was the only area to show an improvement in any of these indicators, namely a decrease in ischaemic heart disease. Of note, rates of chronic pain also worsened in half the areas, consistent with the Rest
of New Zealand.

Areas in the Auckland region and Christchurch showed worsening rates of adults living in a home that is owned, often to a greater extent than the decrease in Rest of New Zealand.

[5] Diagnosed mood and/or anxiety disorder, psychological distress
[6] High cholesterol, high blood pressure, diabetes, and ischaemic heart disease

Māori

Indicator results are presented by the dimensions of Te Pae Mahutonga for Māori and include results from Te Kupenga Maōri Survey of Wellbeing 2018. These results reflect the health status for Māori prior to the COVID-19 pandemic.

How are Māori doing overall in the location areas?

On balance, Māori living in Lower Hutt, East Cape, and Far North, experienced improvements in health and wellbeing with the majority of indicators showing improvement over time (within the areas and/or at least in comparison to the Rest of New Zealand) (Table F.2). Improvements in these areas came from improvements in health and wellbeing in Māori children. Māori living in Waitākere, Manukau and Invercargill experienced the least improvement in health and wellbeing (Table F.2).

More specifically, improvements tended to be seen in body size and up-to-date immunisations for four-year-olds. While it is easier to detect change using the B4SC dataset of four-year-olds this does not determine the nature of the change. Aspects of health and wellbeing that tended to show deterioration for Māori were mental health, self-rated health (subjective wellbeing), and unmet need for primary health care. The challenge of detecting change in long-term conditions makes the increases in mental health indicators for Māori noteworthy.

Table F.2. Summary of indicators¥ showing change (improving or worsening) over time (2011/12 – 2014/15 to 2016/17 – 2019/20), by location area, Māori (total response)

Area	Number of indicators improving*over time			Number of indicators worsening* over time			Total number of indicators with change over time	Percent of indicators improving **
	In area	And/or Compared to Rest of NZ	Total	In area	And/or Compared to Rest of NZ	Total		
Far North	3	3	**4**	2	2	**3**	**7**	**57%**
Waitākere	2	1	**2**	6	5	**7**	**9**	**22%**
Manurewa-Papakura (South Auckland)	4	3	**5**	7	6	**9**	**14**	**36%**
Manuakau (South Auckland)	2	2	**3**	7	7	**10**	**13**	**23%**
East Cape	4	1	**4**	2	0	**2**	**6**	**67%**
Rotorua	5	2	**5**	6	2	**6**	**11**	**45%**

Whanganui Rangitīkei Ruapehu	3	4	**5**	4	3	**5**	**10**	**50%**
Hutt Valley (Lower Hutt)	6	5	**6**	3	3	**3**	**9**	**67%**
Christchurch	4	3	**5**	5	5	**7**	**12**	**42%**
Invercargill	1	2	**2**	6	5	**6**	**8**	**25%**

Key: Red (0-24%) Few indicators improving, Orange (25-50%) Some indicators improving, Green (>50%) Majority of indicators improving

Notes: *Improving or worsening over time — either in an area, and/or when compared to Rest of New Zealand. ** Percent of indicators improving is the number of indicators improving out of the total number of indicators with change over time. ¥Indicators encompass oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity.

What is happening for Māori in specific health and wellbeing dimensions?

Mauriora — Cultural identity and access to Te Ao Māori

The four indicators of Mauriora from the *2018 Te Kupenga Māori Survey of Wellbeing* showed wide variation across the areas. The Far North, East Cape, and Manukau had the highest rates of Māori identifying the 'use of te reo in daily life' as important and 'engagement in Māori culture' as important. Christchurch and Invercargill had the lowest rates for the same indicators. Far North and East Cape also had the highest rates of 'recent visit to marae tipuna' and 'considering marae tipuna as turangawaewae' (among those who knew their marae tipuna).

Toiora — Healthy Lifestyles

Improvements were seen in body size (obese, overweight) in Māori four-year-olds. Most areas (7 out of 10) showed improvements in at least one indicator of body size in Māori four-year-olds, consistent with the improvements in Māori four-year-olds in the Rest of New Zealand. Some areas had decreases in rates of obese or overweight to a greater extent than the Rest of New Zealand.

However, changes in body size (obese, overweight) for Māori adults differed across the areas. On the one hand, both Invercargill and Whanganui Rangitīkei Ruapehu showed an improvement (a decrease in the rate of overweight Māori adults), in contrast to unchanged rates of overweight for Māori adults in the Rest of New Zealand. On the other hand, Manukau and Rotorua had worsening rates of obesity and Manurewa-Papakura had an increased rate of obesity and overweight combined.

Changes in indicators of physical activity for Māori also varied by area. Three areas showed improvements (Rotorua, Whanganui Rangitīkei Ruapehu, and Waitākere) and two showed worsening (Invercargill, Christchurch). In addition, good oral health (healthy teeth and gums) in four-year-olds showed mixed results. Four areas showed improvement consistent with the Rest of New Zealand, with Christchurch also having improvement in adult tooth extraction, while four areas had worsening oral health.

Only Rotorua demonstrated an improvement in tobacco use for Māori, consistent with decreasing rates for Māori in the Rest of New Zealand. The rest of the areas showed no change, except Waitākere, which showed a worsening when compared with the Rest of New Zealand.

Te Oranga — Participation in society

Most areas (7 out of 10) improved or at least did better than the Rest of New Zealand in Māori four-year-olds being up-to-date with their immunisations. This result contrasts with the decrease in the rate of up-to-date immunisations in Māori four-year-olds in the Rest of New Zealand.

Indicators of mental health and wellbeing worsened for Māori adults in the majority (8 out of 10) of areas, consistent with Māori in the Rest of New Zealand. Furthermore, most (7 out of 10) areas showed Māori adults experienced worsening self-rated health (subjective wellbeing), consistent with the Rest of New Zealand. There were mixed results for rates of four-year-old

children being 'happy, confident and developing well'. Both Lower Hutt and Far North showed an improvement, and Invercargill and Manurewa-Papakura showed a deterioration, diverging from the stable rate
in the Rest of New Zealand.

Only one area showed improvement in cardiovascular-related indicators for Māori; namely the Far North, which had a decrease in ischaemic heart disease. In the areas with larger populations and thus sample sizes, such as Christchurch, Lower Hutt, Manukau and Manurewa-Papakura, changes over time showed worsening rates for other long-term conditions[7]. Notably, three areas showed worsening rates of chronic pain.

Four of the areas showed Māori experienced worsening of unmet need for primary health care in either adults or children, in contrast to a decrease in the Rest of New Zealand. Of note, three areas showed worsening rates of recent ED visits in Māori children; Invercargill, Waitākere, and Rotorua, in contrast to unchanged rates for Māori children in the Rest of New Zealand. However, the areas with worsening unmet need for primary care were not the same areas with worsening rates of recent ED visits in children.

Waiora — Physical environment, environmental protection

The two indicators of Waiora from the *2018 Te Kupenga Māori Survey of Wellbeing* about the 'importance of the health of the environment' and the 'importance of looking after the environment' showed little variation across the areas.

However, rates of participation in looking after the natural environment and Māori cultural sites of importance varied considerably across the areas. The Far North and East Cape had high rates of participation consistent with their somewhat higher rates of the importance of the health of the environment and looking after it. Christchurch and Waitākere had low rates of participation consistent with their somewhat lower rates of the importance of the health of the environment and looking after it.

Te Mana Whakahaere — Autonomy

The two indicators of Te Mana Whakahaere from the *2018 Te Kupenga Māori Survey of Wellbeing* about institutional trust and sense of control showed moderate to low variation across the areas. Interestingly, Invercargill had one of the highest rates of 'high sense of control' while Lower Hutt had the lowest rate, but Lower Hutt had a high rate of 'higher than average institutional trust'. Once again East Cape had the highest rate for an indicator, this time for 'high sense of control'.

Ngā Manukura — Leadership

There are no health and wellbeing indicators for this dimension of Te Pae Māhutonga.

[7] Arthritis, medicated asthma in adults, and chronic pain.

Equity: Māori (versus non-Māori, non-Pacific)

What inequities in health (and wellbeing) do Māori experience in the location areas?

Table F.3 lists the indicators for which large inequities existed between Māori and non-Māori non-Pacific in multiple location areas in the recent four-year period 2016/17 – 2019/20. Māori experience large inequities in tobacco use and home ownership in many areas (Table F.3). For example, Māori adults are around three to six times as likely as non-Māori non-Pacific adults to be current smokers. In addition, Māori adults experience large inequities in harmful alcohol use and diabetes. In several areas, Māori children experience inequities in good oral health (Table F.3).

Table F.3. Indicators with large inequities for Māori, rate ratios > 2.5 or < 0.8 (Māori vs non-Māori non-Pacific), 2016/17 – 2019/20, in three or more location areas

Indicator	Size of inequity (rate ratio range)	Number of areas
Current smoker (adult)	2.80 – 5.72	5
Daily smoker (adult)	2.51 – 6.32	6
Hazardous drinking (adult)	2.96 – 4.53	3
Diabetes (adult)	2.50 – 3.36	4
Live in home that is owned (adults)	0.46 – 0.78	9
Obese (4-year-olds)	2.53 – 3.20	3
Healthy teeth and gums (4-year children)	0.69 – 0.77	3

Notes: The large rate ratios for smoking quit rate in six locations are not statistically significant plus they are unreliable and consequently suppressed. However, the results are consistent with the other tobacco use indicators of current and daily smoker.

While there was a tendency for Māori adults in multiple areas to be less likely than non-Māori non-Pacific adults to drink frequently (four or more times a week) this pattern of alcohol use sits in opposition to sizeable inequities in other patterns of harmful alcohol use (eg, hazardous drinking).

There was also a tendency for Māori adults in multiple areas to be less likely than non-Māori non-Pacific adults to be overweight, but this finding sits alongside high rate ratios for obesity in all areas (with rate ratios ranging from 1.52 to 2.46).

What is happening in with (in)equity over time for Māori in the locations?

Table F.4 presents a summary of the number of indicators showing change over time in equity for Māori (in the location area and/or compared to the Rest of New Zealand) and the nature of the change in each area: improving or worsening. Overall, **three** areas showed more improvement in equity between Māori and non-Māori non-Pacific than worsening, namely Far North, Christchurch, and Whanganui Rangitīkei Ruapehu (Table F.4). **Three** areas showed more worsening in existing inequities than improvements for Māori, specifically Manukau, Manurewa-Papakura and Waitākere (Table F.4).

Interestingly, Lower Hutt had **four** indicators for which equity was reached over time (ie, no difference between Māori and non-Māori non-Pacific), despite tending to have more indicators showing worsening inequities for Māori over time. In parallel, Invercargill had three such indicators.

Table F.4. Number of indicators¥ showing changes (improving or worsening) in equity over time (2011/12 – 2014/15 to 2016/17 – 2019/20), by location area, Māori versus non-Māori non-Pacific

Area	Number of indicators improving* over time			Number of indicators showing worsening* over time			Total number of indicators with change over time	Percent of indicators improving **
	In area	And/or Compared to Rest of NZ	Total	In area	And/or Compared to Rest of NZ	Total		
Far North	5	5	**6**	3	3	**3**	**9**	**67%**
Waitākere	1	2	**2**	6	6	**7**	**9**	**22%**
Manurewa-Papakura (South Auckland)	2	2	**3**	10	10	**11**	**14**	**21%**
Manuakau (South Auckland)	1	1	**1**	10	11	**11**	**12**	**8%**
East Cape	2	2	**2**	5	5	**5**	**7**	**29%**
Rotorua	1	1	**2**	5	6	**6**	**8**	**25%**
Whanganui Rangitīkei Ruapehu	2	2	**2**	0	1	**1**	**3**	**67%**

Hutt Valley (Lower Hutt)	4	3	**5**	6	5	**6**	**11**	**45%**
Christchurch	6	4	**7**	4	4	**3**	**11**	**63%**
Invercargill	4	2	**4**	4	5	**5**	**9**	**44%**

Key: Red (0-24%) Few indicators improving, Orange (25-50%) Some indicators improving, Green (>50%) Majority of indicators improving

Notes: *Improving or worsening over time — either in an area, and/or when compared to Rest of New Zealand. ** Percent of indicators improving is the number of indicators improving out of the total number of indicators with change over time. ¥Indicators encompass oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity.

What is happening with equity for Māori in specific health and wellbeing dimensions across the location areas?

In general, for individual indicators that showed change across more than four locations, there were mixed changes in equity for Māori. Locations had more diversity as to which indicators showed changes in equity for Māori than in changes for the Māori population. Results for changes in inequities are only available for the Te Pae Māhutonga dimensions of Tiora and Te Oranga.

Tiora — Healthy Lifestyles

Changes in inequity for tobacco use indicators were the most frequently seen. Three areas showed improvements in inequity for Māori in tobacco use, but four areas also showed worsening inequities. Consequently, Māori experience large inequities in tobacco use in around half of the areas (Table F.3) and moderate inequities in the remainder (rate ratios over 2.0).

Body size in adults and children (ie, obesity, overweight) was another aspect of health and wellbeing for which nearly all areas showed changes in inequity. For Māori adults, two areas showed improvements in indicators of body size, while four areas showed worsening of inequities. In Māori four-year-olds, inequities in obesity showed improvement in three areas but worsening in four locations. Lastly, for Māori children aged 2-14 years, equity for overweight or obesity combined improved in two locations, and worsened in two, with Far North improving in overweight.

Patterns of inequity over time for body size were not consistent across age groups (ie, adults, 2-14 year-olds, and four-year-olds) within each area. Accordingly, there are three area with large inequities in 4-year-old obesity (Table F.3) and moderate inequities in the all the other areas. All areas show moderate inequities in obesity for Māori adults and six areas also have moderate inequities for overweight or obese combined in children aged 2-14 years.

In three areas, Māori children experienced large inequities in good oral health (healthy teeth and gums) (Table F.3), and smaller inequities in all the rest. Three areas have improved on their equity in oral health for children and/or adults, while inequity has worsened in two areas.

Te Oranga — Participation in society

Changes in inequity for diabetes were common with two areas showing improvement but five areas showing worsening inequities. Consequently, Māori experience large inequities in diabetes in three of the areas (Table F.3) and moderate inequities in another two (rate ratios over 2.0).

Furthermore, changes in inequity were seen in at least one mental health indicators[8] for several areas. Three areas showed worsening inequities and one showed improvement, in contrast to no change in equity in the Rest of New Zealand. Therefore, half the areas have small to moderate inequities in at least one mental health indicator.

[8] Mood and/or anxiety disorder, psychological distress

Similarly, four areas showed changes in equity for arthritis, with three areas showing worsening inequities for Māori, in contrast to the Rest of New Zealand. Thus, Christchurch and Manurewa-Papakura now experience moderate inequities in arthritis, but Lower Hutt's improvement means there is no difference between Māori and non-Māori non-Pacific in rates of arthritis.

However, for up-to-date immunisations in four-year-olds , three areas showed an improvement in equity for Māori children and only one area a worsening inequity. Interestingly, where change occurred in inequities for unmet need for primary health care (adult and/or children), it was to show improvement only. Plus, in each area where this change occurred, equity appears to have been achieved between Māori and Non-Māori non-Pacific.

For the cardiovascular risk factors of high blood pressure or high cholesterol, three areas experienced worsening inequities for Māori, with only one showing improvement. There were no changes in inequity for Māori adults experiencing home ownership (ie living in a home that is owned), as reflected in Table F.3.

Pacific Peoples

Approximately two-thirds[9] of the Pacific peoples population in current Healthy Families NZ locations lives in Manukau and Manurewa-Papakura (ie Healthy Families South Auckland) so these results provide insight into the health and wellbeing for the bulk of the Healthy Families NZ population of Pacific peoples. The presentation of these results has been informed by the Fonofale Pacific model of health (Ministry of Health 2008b), particularly the four posts of the fale (Spiritual, Mental, Physical, Other) and the Environment dimension of the cocoon around the fale. These results reflect the health status for Pacific people prior to the COVID-19 pandemic. The Fonofale model has not been used in a systematic way within this phase of the evaluation, although it shares many elements with Te Pae Māhutonga.

How are Pacific peoples doing overall in South Auckland?

Both Manukau and Manurewa-Papakura areas had a mixture of health and wellbeing indicators showing improvement and worsening over time from 2011/12 – 2014/15 to 2016/17 – 2019/20 for Pacific peoples (Table F.5), reflecting their health status prior to COVID-19. On balance, Manurewa-Papakura had more indicators showing improvement than worsening, but only by a single indicator compared with Manukau.

Table F.5. Number of indicators¥ showing change (improving or worsening) over time (2011/12 – 2014/15 to 2016/17 – 2019/20), South Auckland areas, Pacific peoples (total response)

South Auckland area	Number of indicators improving* over time			Number of indicators worsening* over time			Total number of indicators with change over time	Percent of indicators improving**
	In area	And/or compared to Rest of NZ	Total	In area	And/or compared to Rest of NZ	Total		
Manurewa-Papakura	6	6	**6**	5	3	**5**	**11**	**54%**
Manukau	3	3	**5**	4	3	**5**	**10**	**50%**

Key: Red (0-24%) Few indicators improving, Orange (25-50%) Some indicators improving, Green (>50%) Majority of indicators improving

Notes: *Improving or worsening over time – either in an area, and/or when compared to Rest of New Zealand. ** Percent of indicators improving is the number of indicators improving out of the total number of indicators with change over time. ¥Indicators encompass oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity.

[9] Based on 2018 Census, there are 203,940 Pacific peoples across Healthy Families NZ locations (including Upper Hutt) and 130,233 in Healthy Families NZ South Auckland.

What is happening for Pacific peoples in specific aspects of health in South Auckland?

In terms of Physical health, both areas in South Auckland showed improvement in obesity and overweight, along with up-to-date immunisations, in Pacific four-year-olds. However, both areas showed a worsening in the use of active transport for school in Pacific children (5-14 years). Manurewa-Papakura showed an improvement in good oral health (healthy teeth and gums) in Pacific four-year-olds while Manukau had a worsening situation. Plus, in Manukau, oral health also worsened in children aged 1-14 years. In contrast to Pacific four-year-olds, in Manurewa-Papakura, Pacific children aged 2-14 years showed a worsening situation in body size. This diverge of results for body size in four-year-olds and older children is seen in other areas in other population groups.

In terms of Mental health, both areas showed an improvement in mood and/or anxiety disorder in Pacific adults, although this was based on weak statistical evidence and is dependent on access to health services and diagnosis.

Loosely related to Spiritual health, there was no change over time in good self-reported health (subjective well being), in either Pacific adults or as reported by parents for children aged 0–14 years.

South Auckland is a predominantly urban environment, with large areas classified as the most deprived areas in Aotearoa New Zealand. Both areas showed a worsening in Pacific adults living in a home that is owned. Whereas Manukau showed a worsening of unmet need for primary health care in Pacific adults, Manurewa-Papakura showed an improvement in unmet need for primary health care in Pacific children.

Equity: Pacific Peoples (versus non-Māori non-Pacific)

What inequities in health (and wellbeing) do Pacific peoples experience in South Auckland?

Table F.6 lists the indicators for which large inequities existed between Pacific people and non-Māori non-Pacific in the recent four-year period 2016/17 – 2019/20. Pacific peoples experience large inequities in obesity and living in a home that is owned in adults, and in good oral health and obesity in children. For example, Pacific adults are around three times as likely as non-Māori non-Pacific adults to experience obesity (Table F.6).

Table F.6. Indicators with large inequities for Pacific peoples, rate ratios > 2.5 or < 0.8 (Pacific vs non-Māori non-Pacific), 2016/17 – 2019/20, Manukau and Manurewa-Papakura (South Auckland)

Indicator	Size of inequity (rate ratio range)
Obesity (adult)	2.55 – 2.76
Obesity (2-14 years)	4.09 – 4.15

Current smoker (adult)	2.57
Daily smoker (adult)	2.82
Tooth removed in last 12 months (child)	3.40
Medicated asthma (children)	2.60
Live in home that is owned (adult)	0.41 – 0.57
Obese (4-year-olds)	3.31 – 3.62
Obese or overweight (4-year-olds)	2.6 – 2.84
Healthy teeth and gums (4-year-olds)	0.77

Notes: The large rate ratios for smoking quit rate in both areas are unreliable and consequently suppressed. However, the results are consistent with the other tobacco use indicators of current and daily smoker.

While Pacific adults in South Auckland tend to be less likely than non-Māori non-Pacific adults to be overweight, this finding sits in opposition to sizeable inequities in obesity.

What is happening with (in)equity over time for Pacific peoples in South Auckland?

Table F.7 presents a summary of the number of indicators showing change over time in equity for Pacific peoples (in the South Auckland area and/or compared to the Rest of New Zealand) and the nature of the change in each area; improving or worsening. Overall, Manukau had more indicators with improving (in)equity for Pacific peoples, while Manurewa-Papakura had more indicators with worsening inequities from 2011/12 – 2014/15 to 2016/17 – 2019/20 (Table F.7). For the four indicators among four-year-olds which changed in both areas, for two indicators the direction of change in equity was the same in both areas and for the other two indicators the direction of change in equity was different.

Table F.7. Number of indicators¥ showing change (improving or worsening) in equity over time (2011/12 – 2014/15 to 2016/17 – 2019/20), South Auckland areas, Pacific versus non-Māori non-Pacific

Area	Number of indicators improving* over time			Number of indicators worsening* over time			Total number of indicators with change over time	Percent of indicators improving **
	In area	And/or compare	Total	In area	And/or compared	Total		

		d to Rest of NZ			to Rest of NZ			
Manurewa-Papakura	3	3	**3**	5	5	**5**	**8**	**38%**
Manukau	3	5	**7**	5	4	**6**	**13**	**54%**

Key: Red (0-24%) Few indicators improving, Orange (25-50%) Most indicators improving, Green (>50%) Majority of indicators improving

Notes: * Improving or worsening over time – either in an area, and/or when compared to Rest of New Zealand. ** Percent of indicators improving is the number of indicators improving out of the total number of indicators with change over time. ¥Indicators encompass oral health, tobacco use, long-term conditions, body size, access to and use of health care, home ownership, mental health, self-rated health and physical activity.

What is happening with equity for Pacific people for specific aspects of health and wellbeing in South Auckland?

In terms of Physical health, both areas experienced improvements in equity for up-to-date immunisations in Pacific four-year-olds but worsening inequities for obesity and overweight combined in four-year-olds. The latter change in equity is reflected in the large inequities in Table F.6 for obesity, and obesity and overweight combined. Manukau showed an improvement in equity for body size in adults (overweight or obese) while Manurewa-Papakura showed a worsening in equity for body size in both adults and children aged 2-14 years. In addition, Manukau showed improvements in equity for cardiovascular-related indicators[10] and sedentary activity in Pacific adults when compared to the Rest of New Zealand. However, there were also worsening inequities for tobacco use in Manukau as seen in Table F.6. The areas showed different changes in equity for oral health. In Manurewa-Papakura, inequity in oral health improved for four-year-old Pacific children, while in Manukau oral health inequities worsened for both Pacific adults and four-year olds.

In terms of Mental health, equity improved for psychological distress in Pacific adults in Manukau, such that there was no difference between Pacific and non-Māori non-Pacific adults in experiencing psychological distress. However, in Manurewa-Papakura, inequity increased for Pacific four-year-olds in terms of being 'confident, happy and developing well'.

South Auckland is a predominantly urban environment, with large areas classified as the most deprived neighbourhood areas in New Zealand. Pacific children in Manurewa-Papakura experienced an improvement in inequity for unmet need for primary care.

[10] High cholesterol, diabetes, ischaemic heart disease

3. Indicator definitions

Health and Wellbeing Indicators

This sub-section presents the detailed definition of each indicator of health and wellbeing by the dimensions of Te Pae Māhutonga.

Mauriora — Cultural identity and access to Te Ao Māori

Indicator	Definition	Data source	Additional notes
Using te reo in daily life is important	Respondents who chose categories Very important or Quite important	Te Kupenga (Adult 15+)	
Been to marae tipuna in last 12 months	Been to any ancestral marae (if known) in last 12 months	Te Kupenga (Adult 15+)	Among respondents who answered 'Yes' to knowing their ancestral marae
Consider marae tipuna as tūrangawaewae	Consider an ancestral marae (if known) as their tūrangawaewae	Te Kupenga (Adult 15+)	Among respondents who answered 'Yes' to knowing their ancestral marae
Being engaged in Māori culture is important	Respondents who chose Very important or Quite important	Te Kupenga (Adult 15+)	

Waiora — Physical environment, environmental protection

Indicator	Definition	Data source	Additional notes
Health of the natural environment is important	Respondents who chose Very important or Quite important	Te Kupenga (Adult 15+)	

Looking after the natural environment is important	Respondents who chose Very important or Quite important	Te Kupenga (Adult 15+)	
Looked after Māori cultural sites of importance in last 12 months	Looked after cultural site(s) of importance to iwi, hapū or whānau (in last 12 months) eg, urupā, marae, or other	Te Kupenga (Adult 15+)	
Looked after the health of the natural environment in last 12 months	Took part in activity to look after the health of the natural environment (in last 12 months) eg, restoring waterways, tree planting, pest control, or beach clean up	Te Kupenga (Adult 15+)	

Tiora — Healthy lifestyles

Indicator	Definition	Data source	Additional notes
ADULT			
Meets adult physical activity guidelines	Adults who spent at least 150 minutes on physical activity in the past week AND did at least 30 minutes of moderate-intensity physical activity on at least five of past seven days.	NZHS (Adult 15+)	The Ministry of Health recommends that adults aged 18+ years do at least 30 minutes of moderate-intensity physical activity on most if not all days of the week. Physical activity (adults aged 15+ years) is defined as doing at least 30 minutes of brisk walking or moderate-intensity physical activity (or equivalent vigorous activity), for at least 10 minutes at a time, at least five days a week. Examples of moderate-intensity physical activity include golf, heavy gardening (such as manual lawn-mowing), heavy housework (such as cleaning windows) and occupations

			such as plumbing. Examples of vigorous activity include running, touch rugby and vigorous work such as chopping wood.
Little or no physical activity	Adults who were physically active for less than 30 minutes in the past week	NZHS (Adult 15+)	
Current smoker	Adults who are current smokers (smoke at least monthly) and who have who have smoked at least 100 cigarettes in their lives	NZHS (Adult 15+)	The 100-cigarette threshold limits the indicator to people with established tobacco use.
Daily current smoker	Adults who smoke daily and who have who have smoked at least 100 cigarettes in their lives	NZHS (Adult 15+)	The 100-cigarette threshold limits the indicator to people with established tobacco use.
Quit rate	Quit smoking in past 12 months (among daily smokers and recent quitters)	NZHS (Adult 15+)	The quit rate is the percentage of smokers who have quit smoking in the past 12 months. The quit rate was calculated by dividing the number of people who have quit smoking in the past 12 months by the number of daily smokers who are still smoking daily plus the number of people who have quit smoking in the past 12 months.

			To be considered someone who has 'quit smoking', an individual has to have smoked more than 100 cigarettes in their whole life and stopped smoking more than one month ago.
Teeth removed due to decay within last 12 months	Adults who had one or more of their teeth removed in the past 12 months, due to decay, infection or gum disease	NZHS (Adult 15+)	Excludes teeth lost for other reasons, such as injury, a crowded mouth or orthodontics.
Frequent drinking (4+ times a week) (total population)	Past year drinkers who report drinking alcohol four or more times a week, among the total number of respondents	NZHS (Adult 15+)	
Hazardous drinking (total population)	Hazardous drinkers are adults who obtained an AUDIT score of 8 or more, among the total number of respondents.	NZHS (Adult 15+)	Hazardous drinking (aged 15+ years) is measured using the 10-question Alcohol Use Disorders Identification Test (AUDIT) developed by the World Health Organization (Babor et al 2001). The AUDIT is a 10-item questionnaire that covers three aspects of alcohol use: alcohol consumption, dependence and adverse consequences. An AUDIT score is the total of the scores obtained for each of the 10 items. Hazardous drinkers are those who obtain an AUDIT score of 8 or more, representing an established pattern of drinking that carries a high risk of future damage to physical or mental health. Someone can reach a score of 8 from the

			alcohol consumption items alone. For example, someone who drank six or more drinks on one occasion, twice a week. Reference: Babor T, Higgins-Biddle J, Saunders J, et al. 2001. *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary care.* Second edition. Geneva: World Health Organization.URL: www.talkingalcohol.com/files/pdfs/WHO_audit.pdf
Heavy episodic drinking (weekly)(total population)	Drink 6 or more alcoholic drinks on one occasion - at least weekly (total population)	NZHS (Adult 15+)	Consumption of 6+ drinks on one occasion at least weekly (total population) prevalence is defined as the percentage of adults who have six or more drinks on one occasion 'weekly' or 'daily or almost daily', among the total number of respondents. A show-card was used to illustrate the number of standard drinks in various common beverages.
Obese	Adults who are obese, with a measured body mass index (BMI) of 30 or more (or equivalent for 15-17 year olds)	NZHS (Adults 15+)	These categories are based on the World Health Organization (WHO) BMI cut-off points for adults aged 18 years and over (WHO 2007). For those aged 15–17 years, BMI cut-off points developed by the International Obesity Taskforce (IOTF) were used to define underweight (or thinness in children), healthy weight, overweight, and obese (Cole et al 2000, 2007). The IOTF BMI cut-off points are sex- and age-specific and have been designed to coincide with the WHO BMI cut-off points for adults at age 18 years. References:
Overweight	Adults who are overweight, with a measured body mass index (BMI) between 25.00 to 29.99 (or equivalent for 15-17 year olds)	NZHS (Adults 15+)	

Obese or overweight	BMI of 25.0 or greater (or IOTF equivalent for 15-17 year olds)	NZHS (Adults 15+)	Cole TJ, Bellizzi MC, Flegal KM, et al. 2000. Establishing a standard definition for child overweight and obesity worldwide: international survey. *British Medical Journal* 320(7244): 1240. Cole TJ, Flegal KM, Nicholls D, et al. 2007. Body mass index cut offs to define thinness in children and adolescents: international survey. *British Medical Journal* 335(7612): 194. WHO. 2007. *Global Database on Body Mass Index*. Geneva: World Health Organization.
CHILDREN			
Active travel to and from school (5-14 years)	Children aged 5–14 years who travel to and from school by walking, cycling or other non-motorised mode such as skates.	NZHS (Child)	
Obese (2-14 years)	Children aged 2-14 years who are obese, with a body mass index (BMI) equivalent to an adult BMI of 30 (or greater)	NZHS (Child)	For children aged 2–14 years, age- and sex-specific BMI cut-off points developed by the IOTF were used to define BMI categories equivalent to those used for adults (Cole et al 2000, 2007; Cole and Lobstein 2012). The IOTF BMI cut-off points have been designed to coincide with the WHO BMI cut-off points for adults at the age of 18 years. References:
Overweight (2-14 years)	Children aged 2-14 years who are overweight, with a measured body mass index (BMI),	NZHS (Child)	

	equivalent to an adult BMI of between 25.00 to 29.99		Cole TJ, Bellizzi MC, Flegal KM, et al. 2000. Establishing a standard definition for child overweight and obesity worldwide: international survey. *British Medical Journal* 320(7244): 1240. Cole TJ, Flegal KM, Nicholls D, et al. 2007. Body mass index cut offs to define thinness in children and adolescents: international survey. *British Medical Journal* 335(7612): 194. Cole TJ, Lobstein T. 2012. Extended international (IOTF) body mass index cut-offs for thinness, overweight and obesity. *Pediatric Obesity* 7(4): 284–94.
Obese or overweight (2-14 years)	Children aged 2–14 years who are overweight or obese, with a BMI equivalent to an adult BMI of 25.0 (or greater).	NZHS (Child)	
Obese (4-year-olds)	Four-year-old children with a BMI percentile in the group of 98% to 99.6% and 99.6% and over are considered very overweight (clinically obese)	B4SC	Based on Ministry of Health B4 School Check obesity target reporting. Excludes children not aged between 48 and 60 months at time of height and weight measurement. Assessing obesity and overweight in children during the B4 School Check is done using Body Mass Index (BMI) centiles. BMI centiles for the child's sex and age in years and months are based on the WHO Child Growth Standards published in 2006. These percentile thresholds have been set for use in a clinical setting.
Overweight (4-year-olds)	Four-year-old children with a BMI percentile in the group of 91% and 98% are considered overweight.	B4SC	
Obese or overweight (4-year-olds)	Four-year-old children with a BMI percentile in the group 91% and over.	B4SC	

Te Oranga – Participation in society

Indicator	Definition	Data source	Additional notes
ADULTS			
Good or better self-rated health	Adults who rated their health as at least good (including excellent, very good or good)	NZHS (Adults 15+)	
Psychological distress	Adults experiencing psychological distress in the past four weeks, with a score of 12 or more on the K10 set of questions	NZHS (Adults 15+)	The NZHS measures psychological (mental) distress using the Kessler Psychological Distress Scale (K10). This measures a person's experience of symptoms such as anxiety, confused emotions, depression or rage in the past four weeks. People who have a score of 12 or more have a high probability of having an anxiety or depressive disorder.
Mood and/or anxiety disorder	Adults diagnosed with a mood (depression or bipolar disorder) and/or anxiety disorder	NZHS (Adults 15+)	People who reported that at some time in their life a doctor had told them they had depression, bipolar disorder and/or anxiety disorder (including generalised anxiety disorder, phobias, posttraumatic stress disorder and obsessive-compulsive disorder)
Ischaemic heart disease	Adults who had ever been admitted to hospital with a heart attack or if they had ever been diagnosed with angina by a doctor.	NZHS (Adults 15+)	

Diabetes	Adults who had ever been told by a doctor that they have diabetes.	NZHS (Adults 15+)	This does not include diabetes during pregnancy (gestational diabetes).
Medicated asthma	Adults who had ever been told by a doctor that they have asthma and if they were taking treatments for asthma (inhalers, medicine, tablets or pills, or any other treatments).	NZHS (Adults 15+)	Medication can be taken daily to prevent symptoms, or only when needed to relieve symptoms.
Chronic pain	Adults who experience chronic pain (defined as pain that is present almost every day, but the intensity of the pain may vary, and has lasted, or is expected to last, more than six months).	NZHS (Adults 15+)	This includes chronic pain that is reduced by treatment.
Arthritis	Ever been told by a doctor that they have arthritis, including gout, lupus or psoriatic arthritis.	NZHS (Adults 15+)	
High blood pressure	Adults who have ever been told by their doctor that they have high blood pressure and were currently taking medication regularly for high blood pressure (excludes pregnant women).	NZHS (Adults 15+)	
High cholesterol	Adults who have ever been told by their doctor that they have high cholesterol and were currently taking medication regularly for high cholesterol.	NZHS (Adults 15+)	
Unmet need for primary care	Having experienced one or more of the following types of unmet need for primary health care in the past 12 months: • Unmet need for a GP due to cost	NZHS (Adults 15+)	

	• Unmet need for an after-hours medical centre due to cost • Unmet need for a GP due to lack of transport • Unmet need for an after-hours medical centre due to lack of transport • Inability to get an appointment at their usual medical centre within 24 hours.		
ED visit in past 12 months	Visiting an emergency department at a public hospital about their own health, one or more times in the past 12 months.	NZHS (Adults 15+)	Proxy for acute illness, accident etc.
Live in a household that owns the home	Adults who live in a household where they, or anyone else that lives in the household, own or partly own the home (with or without a mortgage)	NZHS (Adults 15+)	The Statistics NZ definition of home ownership includes homes owned by a family trust. However, to create a consistent time-series the additional question about the home being owned by a family trust was excluded. (This question was added in 2013/14). Only a small percentage of homes are owned by family trusts.
CHILDREN			
Good or better parent-rated health (0-14 years)	Children with excellent, very good or good health, as rated by their parent.	NZHS (Child)	
Emotional or behavioural problems (2–14 years)	Children whose parents or caregivers had ever been told by a doctor that the child has depression, anxiety disorder (this includes panic attack, phobia, post-traumatic stress disorder, and obsessive-compulsive disorder), attention deficit	NZHS (Child)	

	disorder (ADD) or attention deficit hyperactivity disorder (ADHD).		
Depression (2–14 years)	Children whose parents or caregivers had ever been told by a doctor that the child has depression.	NZHS (Child)	
Anxiety (2–14 years)	Children whose parents or caregivers had ever been told by a doctor that the child has an anxiety disorder (this includes panic attack, phobia, post-traumatic stress disorder, and obsessive-compulsive disorder).	NZHS (Child)	
Medicated asthma (2–14 years)	Children whose parents or caregivers had ever been told by a doctor that the child has asthma and if they now take treatments for asthma (inhalers, medicine, tablets or pills).	NZHS (Child)	
Teeth removed due to decay (1–14 years)	Children who had one or more of their teeth removed in the past 12 months, due to decay, infection or gum disease	NZHS (Child)	Excludes teeth lost for other reasons, such as injury, a crowded mouth or orthodontics.
Children are happy, confident, and developing well (4-year-olds)	Defined as 'Percentage of children that have low (< 17) behavioural screening questionnaire (SDQ-P) scores'.	B4SC	Based on Well Child Tamariki Ora indicator 'Children's well-being and resilience is supported'. "A low score is an indication that children are happy, confident and developing well." (Ministry of Health 2021). Excludes as Unknown: Blank/missing Reference: Ministry of Health. 2021. *Well Child / Tamariki Ora Quality Indicator report*. https://nsfl.health.govt.nz/dhb-planning-package/well-child

			-tamariki-ora-quality-improvement-framework (accessed 18 June 2021).
Healthy teeth and gums (4-year-olds)	Dental decay score of 1 from the 'Lift the Lip' dental examination involving visual inspection of the teeth and gums by a Well Child nurse.	B4SC	Previously, there was a Well Child Tamariki Ora indicator '*Children with a Lift the Lip (oral health) score of 2–6 are referred'.* On this basis, healthy teeth and gums are defined as a score of 1. Excludes as Unknown: Blank/missing Reference: Ministry of Health. 2016. *Indicators for the Well Child / Tamariki Ora Quality Improvement Framework: March 2016*. Wellington: Ministry of Health.
Unmet need for primary health care (0–14 years)	Children having experienced one or more of the following types of unmet need for primary health care in the past 12 months: • Unmet need for a GP due to cost • Unmet need for an after-hours medical centre due to cost • Unmet need for a GP due to lack of transport • Unmet need for an after-hours medical centre due to lack of transport	NZHS (Child)	

	• Unmet need for a GP due to lack of childcare for other children • Inability to get an appointment at their usual medical centre within 24 hours		
Visited emergency department in past 12 months (0-14 years)	Visiting an emergency department at a public hospital about their own health, one or more times in the past 12 months.	NZHS (Child)	Proxy for acute illness, accident etc as well
Up-to-date childhood immunisations (proxy)(4-year-olds)	Up-to-date childhood immunisations is defined as an Immunisation check with the following outcomes: • Completed — Check completed, and child has already received the correct immunisations • Immunised — Check completed, and child was given one or more immunisations	B4SC	Excludes as Unknown: Blank/missing, Declined, and Referred Not up-to-date is defined as an Immunisation check with the following outcome: Completed (advice given) - Check completed, child has <u>not</u> received all of the correct immunisations, advice given

Ngā Manukura — Leadership

No indicators identified

Te Mana Whakahaere — Autonomy

Indicator	Definition	Data source	Additional notes
High sense of control over life	Gave a rating of 8, 9 or 10 based on a scale where 0 is no control at all and 10 is complete control	Te Kupenga (15+ years)	
Higher than average sense of trust in institutions	Percentage of respondents that gave a rating of trust in an institution treating people fairly, above the individual mean for each institution (on a scale from 0 to 10 where 0 is not trust at all and 10 is complete trust), for each of six institutions. Institutions of: Health, Eduction, Government, Police, Courts, Media	Te Kupenga (15+ years)	Excluded respondents who did not give a rating for all six institutions.

Socio-Demographics Indicators

This sub-section presents the detailed definition of each socio-demographic indicator used in the case studies, QCA analysis and cost-consequences analysis.

Indicator	Definition	Data source	Additional notes
Population demographics			
Total population	Total estimated population	2018 Census	Usually resident population
Age group	By 5-year age groups	2018 Census	Usually resident population
Total response ethnicity	European, Māori, Pacific Peoples, Asian, MELAA, Other	2018 Census	Usually resident population
Socio-economic			
Population by NZDep2018 decile	Number of people living in each NZDep2018 decile (decile 1 to 10)	2018 Census	Usually resident population. New Zealand Index of Deprivation 2018.
Unemployed (aged 15+ years)	Number of people Unemployed, out of Employed (full-time), Employed(part-time), Unemployed, and Not in the Labour Force	2018 Census	This definition aligns with the way official unemployment figures are reported. However, people who are not looking for work (ie Not in the Labour Force) are included in the calculation.
Household composition			

One-person household (ie living alone)	Number of households with a single person living in the household (one-person household)	2018 Census	Among occupied private dwellings
One parent with children (ie single-parent households)	Number of households with one-parent with child(ren) OR one-parent with child(ren) and other person(s)	2018 Census	Among occupied private dwellings
Multiple family households	Number of households with two-family household OR three or more family household (with or without other people)	2018 Census	Among occupied private dwellings
Households with one or more children aged 0 -14	Number of households with age of youngest child 0-14 years	2018 Census	Among occupied private dwellings
Housing quality			
Damp housing	Always or sometimes damp combined	2018 Census	Among occupied private dwellings
Mouldy housing	Mould over A4 size – sometimes or always combined	2018 Census	Among occupied private dwellings

Data source key

B4SC	Before School Check 2011/12 – 2019/20
NZHS	New Zealand Health Survey 2011/12 – 2019/20

Te Kupenga	2018 Te Kupenga Māori Survey of Wellbeing
2018 Census	2018 Census of Population and Dwellings

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Appendix G: Qualitative Comparative Analysis (QCA) indicator analysis process and findings

1. Methods

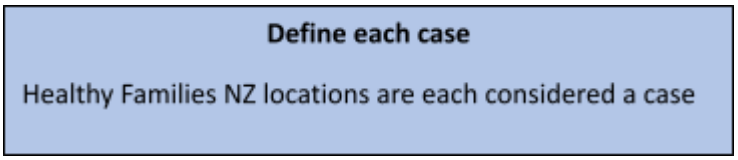
Using QCA

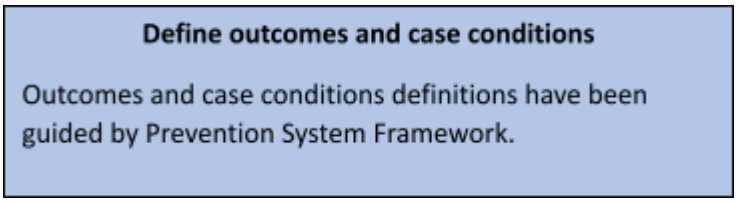
Qualitative Comparative Analysis (QCA) is an approach to looking across Healthy Families NZ locations to help understand what has been achieved, and what factors in combination supported these achievements. QCA assumes that a similar outcome can have different combinations of factors that have contributed and seeks to identify these combinations. For this reason QCA is most likely to provide insights against the evaluation questions, **What has been the quality of implementation in each location**, and **What have been the most important factors/aspects that have contributed to changes identified in the prevention system of each Healthy Families NZ location?**

QCA is recognised as one method for understanding complex causation, within complex systems (Byrne & Uprichard, 2012; Verweij & Gerrits, 2013), and was used within the first evaluation period of Healthy Families NZ (Matheson et al., 2018).

Process

The QCA process is summarised below:





Compare patterns across cases

Develop 'truth tables' to identify configurations of case conditions in relation to outcomes. Comparing configurations of conditions, insights about achieving strengthened prevention system identified.

Assign categories against each outcome and case condition for each case

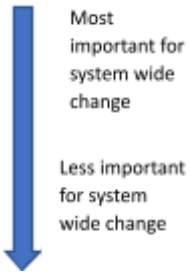
Case studies of each Healthy Families NZ location were read by multiple people within evaluation team. A consensus process was used to assign consistently shown or inconsistently shown against each condition for each case.

Each Healthy Families NZ location is considered a case.

A series of indicators (known as conditions within QCA) have been developed to highlight different aspects of the Prevention Systems Framework. When identifying configurations, one outcome of interest is considered at a time, with combinations of other indicators considered associated with that outcome.

A summary of indicators is provided below. QCA requires that indicators can only have two states, present or absent. We have used the term *consistently shown* or *inconsistently shown. Consistently* because seeing multiple instances of the indicator suggests a more embedded outcome and potential for ongoing strengthening of the prevention system. The term *shown* recognises that judgements are being made on the data available which will always be partial and therefore may miss instances where the outcome has been achieved*. Outcome* and *Explanatory* indicators have all been looked at within QCA analysis as outcomes of interest, in order to identify patterns across other indicators that give insight into when they are consistently or inconsistently shown.

How indicators match with Prevention Action Framework

<table>
<tr><td>Level 1
Paradigms, values and goals</td><td rowspan="2">  </td><td>Outcome Indicators</td></tr>
<tr><td>Level 2
System Structure, regulation and interconnection</td><td>Explanatory Indicators</td></tr>
<tr><td>Level 3
Information, feedback and relationships</td><td rowspan="2"></td><td rowspan="2">Analytical Indicators</td></tr>
<tr><td>Level 4
Structural elements, resources and actors</td></tr>
</table>

Summary of Indicators

Table G.1 Shows the Outcome Indicators with the evidence we looked for to assess whether they had been met. Table G.2 shows the Explanatory Indicators, and Table G.3 the Context Indicators.

Table G.1 Summary of Outcome Indicators

Indicator	Evidence
Leadership	Healthy Families NZ locations promote diverse perspectives within leadership of initiative. Activities and initiatives supported by Healthy Families NZ promote leadership from within communities, including partner organisations. Leadership supports aspirations and authority of Māori.
Systems Practice	Demonstrate systems perspective within Healthy Families NZ team practice. Systems perspective in practice will show understanding of multiple causes of situations/problems; that multiple solutions are possible and required; and that multiple perspectives of multiple actors should be understood.

Communities Defining Issues and Solutions (short title: Communities)	Communities that are impacted by problem are engaged in articulating problem from their perspective and co-design of solutions. Processes are designed to support diverse voices, including mana whenua. Processes support building of trust and encourage increasing number of organisations to engage. Both Healthy Families NZ staff and community partners describe similar attempts to genuinely engage diverse communities in co-design and implementation.

Table G.2 Summary of Explanatory Indicators

Indicator	Evidence
Funding and contracting processes support prevention (Short title: Fund)	Funding and contracting processes support collaboration, sharing of power and resources and systems perspective.
Level of connection and collaboration (Short title: Collaboration)	Three parts to strengthened networks and collaboration ● Coordination – increasing alignment of work, reducing unplanned duplication ● Networks – the range of organisations worked with. Assume that this is a precursor to closer collaboration and shared goals ● Collaboration – meaning shared goals, potentially shared resources
Policy changes that support prevention (Short title: Policy)	Within settings, such as schools or council facilities, policies can support prevention by creating rules, setting standards or committing resources. A policy that supports prevention also displays commitment to a perspective that the setting has a role in supporting health through prevention.
Health Promoting Environments (Short title: Environments)	Changes within built environments and settings (e.g. workplaces, schools) that support prevention.

Table G.3 Summary of Analytical Indicators

Indicator	Evidence
Improvement in total population health **(Short title: Population health)**	**Four** indicators show improvement over time: - Compared to Rest of NZ - NZHS $p < 0.10$

	- B4SC p < 0.05 and needs to be a change of public health significance (at least 1.5% absolute change) - Can't count both obesity and obesity and overweight combined from same dataset etc - At least one NZHS indicator (criteria not necessary)
Māori health improvement (Short title: Māori Health)	**Three** indicators show improvement over time: - Over time in location and/or over time comparison to Rest of NZ - NZHS p < 0.10 - B4SC p < 0.05 and needs to be a change of public health significance (at least 1.5% absolute change) - Can't count both obesity and obesity and overweight combined from same dataset etc - At least one NZHS indicator
Improvement in health equity (Short title: Equity Health)	**Three** indicators show improvement over time: - In location and/or in comparison to Rest of NZ - NZHS p < 0.10 - B4SC p < 0.05 and needs to be a change of public health significance (a rate ratio of 0.2 absolute change) - Can't count both obesity and obesity and overweight combined from same dataset etc - At least one NZHS indicator
High level of Māori population (Short title: Māori Popn)	Visual cluster approach to identify high compared to lower levels of Māori in total population for a Healthy Families NZ location
High level of Pacific population (Short title: Pacific Popn)	Visual cluster approach to identify high compared to lower levels of Pacific Peoples in total population for a Healthy Families NZ location
High proportion of population living in high deprivation areas (Short title: Deprivation)	Location with % population living in decile 9 and 10 combined, greater than 50%

Strengths and limitations of approach

Strengths

QCA provides a different and complimentary lens on the information collected within the evaluation for each Healthy Families NZ location. It is designed to help identify combinations of factors associated with an outcome being acheived. It also requires careful definition of indicators. With indicators linked to Prevention System Framework, as categories of activities, the indicators provided useful guides to interview and survey questions and analysis.

Limitations

The number of cases (nine) is small, and is too small for the use of all analysis tools within QCA. The approach here is to develop 'truth tables' which identify configurations. QCA usually will then use boolean algebra to look across identified configurations to help identify combinations of causes as well as necessary and sufficient causes of the outcomes. The number of cases means that analysis has only used truth tables to identify configurations. The small number of cases also limits the number of indicators that can be looked at together.

A lack of diversity in outcomes and indicators limits the ability to detect causal configurations. All three outcome indicators lacked diversity, with most locations identified as consistently showing all three indicators.

2. Summary

A summary of all indicators for all Healthy Families NZ locations is provided in Table G.4.

In summary, Table G.4 shows how many indicators are classified as *consistently shown* for each location. In broad terms, we can consider that the higher number of indicators classified as *consistently shown* suggests a Healthy Families NZ location is being effective and generating momentum for prevention. Most Healthy Families NZ locations could be classified as *consistently showing* for a majority of indicators.

Table G.4: Summary count of consistently shown indicators by Healthy Families NZ location

Locations	No. out of seven indicators showing consistently shown
East Cape	5
Far North	5
Hutt Valley	7
Whanganui Rangitīkei Ruapehu	6
South Auckland	6
Rotorua	4

Invercargill	5
Waitākere	5
Christchurch	3

Three indicators were developed to identify areas with most leverage for change within the Prevention Action Framework (*Leadership, Communities Defining Issues and Solutions, Systems Practice*). All three of these were consistently shown in most locations, which suggests that prevention is being seen as important across multiple organisations in the locations. *Consistently showing Systems Practice* suggests an awareness of multiple systemic issues that can act to support or hinder good health, and designing activities across these multiple issues. Of particular interest is the development of knowledge, resources and examples of using Māori systems thinking to support a focus on good health through prevention. The locations that are led within Māori organisations are an important resource for this Māori systems work, but also of note is the development of capability across all Healthy Families NZ locations in this area, supported with a Māori systems rōpū.

There was less consistency shown for indicators that we would expect to flow from a commitment to prevention (explanatory indicators – *funding that supports prevention, policy that supports prevention*, and *health promoting environments*).

Importantly, an increase in *level of connection and collaboration* was consistently shown in all locations, which is likely an important building block for increasing impact over time.

Table G.5 shows the details of how the nine location cases have been categorised.

Table G.5: How cases have been categorised

	Outcome Indicators			Explanatory Indicators				Analytical Lens					
Location	Communit-ies	Leadership	Systems Practice	Collabora- tion	Funding	Policy	Environm-ents	Māori Population	Pacific Population	Deprivat-ion	Population Health	Māori Health	Equity
Invercargill	CS	CS	CS	CS	IS	IS	CS	*	*	*	0	0	1
Christchurch	IS	IS	CS	CS	IS	CS	IS	*	*	*	0	1	1
Hutt Valley	CS	CS	CS	CS	CS	CS	CS	*	*	*	1	1	1
Whanganui Rangitīkei Ruapehu	CS	CS	CS	CS	CS	IS	CS	#	*	*	1	1	0
East Cape	CS	CS	CS	CS	CS	IS	IS	#	*	#	0	1	1
Rotorua	CS	CS	CS	CS	IS	IS	IS	#	*	*	1	1	0
South Auckland	CS	IS	CS	CS	CS	CS	CS	*	#	#	1	1	1
Waitākere	CS	CS	CS	CS	IS	IS	CS	*	#	*	0	0	0
Far North	CS	CS	CS	CS	CS	IS	IS	#	*	#	0	1	1

CS = Consistently Shown
IS = Inconsistently Shown

= over half pop'n visual cluster
* = less half pop'n visual cluster
0 = change
1 = no change

Māori and Pacific populations and health indicators

Table G.6: Analytical Lens Indictors – Māori Population and health

Location	Māori Population	Māori Health	Equity
Invercargill	*	0	1
Christchurch	*	1	1
Hutt Valley	*	1	1
Whanganui Rangitīkei Ruapehu	#	1	0
East Cape	#	1	1
Rotorua	#	1	0
South Auckland	*	1	1
Waitākere	*	0	0
Far North	#	1	1

= high proportion of population

Four out of four locations with high proportion of the population Māori also showed improvement in Māori health. One of these also showed improvement in equity.

* = lower proportion of population
0 = change
1 = no change

Table G.7: Analytical Lens Indicators — Pacific Population and health

Location	Pacific Population	Pacific Health	Equity
Invercargill	*	0	1
Christchurch	*	0	1
Hutt Valley	*	1	1
Whanganui Rangitīkei Ruapehu	*	1	0
East Cape	*	0	1
Rotorua	*	1	0
South Auckland	#	1	1
Waitākere	#	0	0
Far North	*	0	1

There is no indicator of Pacific Peoples health, due to small numbers. However, of the two locations that showed high proportion of Pacific Peoples, one showed improvement in both Population Health and Equity.

Case Configurations — Outcome Indicators

The three outcome indicators (*Communities defining issues and solutions*; *Leadership; Systems Practice*) were consistently shown for a majority of Healthy Families NZ locations. *Systems Practice* was identified as consistently shown for all locations, suggesting this core feature of Healthy Families NZ model is understood and being integrated into how locations go about their activities. *Leadership* was consistently shown in all but two locations, while *Communities defining issues and solutions* was consistently shown in eight of nine locations.

QCA is most useful when there is diversity of outcome. Because most locations are classified as consistently shown across the three outcomes, there are fewer insights that are likely to come from identifying configurations. That said, truth table configurations were generated for *Communities Identifying issues and solutions*, and *Leadership*. As all locations consistently showed *Systems Practice*, truth table configurations were not identified for this outcome.

Table G.8: Communities Defining Issues and Solutions Configurations

Configurations	Communities	Fund	Policy	Environments	Leadership
2 locations	CS	CS	IS	IS	CS
2 locations	CS	IS	IS	CS	CS
1 location	CS	IS	IS	IS	CS
1 location	CS	CS	IS	CS	CS
1 location	CS	CS	CS	CS	CS
1 location	CS	CS	CS	CS	IS
1 location	IS	IS	CS	IS	IS

Systems Practice and *Level of Connection and Collaboration* were not included within truth table configurations because they were categorised as *consistently shown* for all locations and would therefore not aid in understanding causation.

Seven out of eight cases consistently showing *Communities* also consistently show *Leadership*.

No pattern was identified to suggest that explanatory indicators of *Funding*, *Policy* or *Environments* being either consistently or inconsistently shown has much influence on *Communities*. However, one location that consistently shows *Communities,* yet inconsistently shows *Leadership*, had *consistently shown* for all other outcome and explanatory indicators.

Table G.9: Leadership Configurations

Configurations	Leadership	Fund	Policy	Environments	Communities
2 locations	CS	CS	IS	IS	CS
2 locations	CS	IS	IS	CS	CS
1 location	CS	CS	CS	CS	CS
1 location	IS	CS	CS	CS	CS
1 location	CS	IS	IS	IS	CS
1 location	CS	CS	IS	CS	CS
1 location	IS	IS	CS	IS	IS

Seven out of seven cases that consistently show *Leadership* also consistently showed *Communities*.

Out of the seven cases consistently showing *Leadership* a range of other conditions were consistently shown alongside *Communities*, with no discernible pattern.

A contradictory configuration was shown, where all conditions were consistently shown, with one case consistently showing *Leadership* and another case inconsistently showing *Leadership*.

Configurations suggest that *Communities defining issues and solutions* is an important component of *Leadership* but is not sufficient to support *Leadership* on its own.

Table G.10: Leadership by Population Analytical Lens Indicators

Configurations	Leadership	Māori Popn	Pacific Popn	Deprivation
3 locations	CS (2) IS (1)	*	*	*
2 locations	CS	#	*	*
2 locations	CS	#	*	#
1 location	CS	*	#	*
1 location	IS	*	#	#

Areas of deprivation do not appear to be barrier to *Leadership* being *consistently shown*.

Having a high proportion of Māori or Pacific Peoples population does not appear to be a factor in whether *Leadership* is *consistently shown*.

Table G.11: Policy Changes that Support Prevention Configurations

Configurations	Policy	Leadership	Communities	Fund	Environments
2 locations	IS	CS	CS	CS	IS
2 locations	IS	CS	CS	IS	CS
2 locations	IS (1) CS (1)	CS	CS	CS	CS
1 location	CS	IS	IS	IS	IS
1 location	IS	CS	CS	IS	IS
1 location	CS	IS	CS	CS	CS

Configurations suggest there is a link between *Policy*, *Fund* and *Environments*. *Fund* and *Environments* are neither necessary or sufficient, but most often at least one of *Fund* or *Environments* is consistently shown if *Policy* is also consistently shown.

Policy was *consistently shown* in three locations, and *inconsistently shown* in six locations. The indicator *Policy changes that support prevention* assumes that health supporting activities within a setting (school, workplace) are more likely to be sustained if there is a policy change supporting that activity. A water only policy within a school is an example. Such policy changes may take time to be implemented, following engagement and perhaps demonstration projects.

Inconsistently shown could either suggest that not much has been achieved in terms of policy changes, or it could be that not enough time has passed in working within a setting to see policy changes. There is likely a link between *Environments* and *Policy changes that support prevention*. *Environments* identifies where changes to a setting have taken place, such as more water fountains being funded and installed. Such activity may not be supported by policy changes in the short term, but longer-term commitment to funding and activity may well rely on policy commitment.

Two locations categorised as *inconsistently shown* for *Policy* also had *inconsistently shown* for *Environments*, even though classified as *consistently shown* for *Leadership* and *Communities defining issues and solutions* and *Funding processes support prevention*. A further two locations also showed inconsistently shown for *Policy*, but *consistently shown* for *Environments*. However, in these two locations, *Fund* was classified as *inconsistently shown*. We assume that there may often be a link between ongoing funding dedicated to prevention (e.g., programme of water fountain installation) and Policy that supports such resource allocation.

Neither *Fund* nor *Environments* can however be necessary or sufficient for *Policy* to be consistently shown, either individually or in combination. This is because one location is classified as *inconsistently shown* for *Policy*, with both *Fund* and *Environments* classified as consistently shown, while another location is *consistently shown* with both *Fund* and *Environments inconsistently shown*.

Table G.12: Policy by Analysis Lens Population Indicators

Configurations	Policy	Māori Popn	Pacific Popn	NZDep
2 locations	CS (1) IS (2)	*	*	*
2 locations	IS	#	*	*
2 locations	IS	#	*	#
1 location	CS	*	#	*
1 location	CS	*	#	#

There is no obvious configuration pattern of the three population characteristic indicators that would help explain *Policy changes that support prevention* being consistently or inconsistently shown.

Table G.13: Funding processes that support prevention configurations

Configurations	Fund	Leadership	Communities	Policy	Environments
3 locations	IS (2) CS (1)	CS	CS	IS	CS
3 locations	CS (2) IS (1)	CS	CS	IS	IS
1 location	CS	IS	CS	CS	CS
1 location	CS	CS	CS	CS	CS
1 location	IS	IS	IS	CS	IS

All locations with *Funding to support prevention* identified as *consistently shown*, have at least two of the four other conditions also as *consistently shown*. However, contradictory configurations are also shown where two or more conditions are *consistently shown*, but *Fund* is *inconsistently shown*.

Table G.14: Funding to support prevention by Analytical Indicators

Configurations	Fund	Māori Popn	Pacific Popn	NZDep	Māori Health	Total Popn Health	Equity Health
2 locations	1 (1) 0 (1)	1	0	0	1	1	0
1 location	1	0	0	0	1	1	0
1 location	0	0	0	0	1	0	1
1 location	1	1	0	1	1	0	1
1 location	1	0	1	1	1	1	1
1 location	0	0	1	0	0	0	0
1 location	0	0	0	0	0	0	1
1 location	1	1	0	1	0	0	1

There are no insights from the configurations in Table G.16.

Table G.15: Health Promoting Environments Configurations

Configurations	Environs	Leadership	Communities	Policy	Fund
3 locations	IS (1) CS (2)	CS	CS	IS	IS
3 locations	IS (2) CS (1)	CS	CS	IS	CS
1 location	IS	IS	IS	CS	IS
1 location	CS	IS	CS	CS	CS
1 location	CS	CS	CS	CS	CS

There are too many contradictory configurations related to *health promoting environments* indicator to identify any insights. However, it is consistent with *funding and contracting to support prevention* that any location classified as *consistently shown* for *Environments* has a minimum of two other indicators also *consistently shown*. We are interpreting this as momentum within a Healthy Families NZ location, indicated by consistently shown on multiple indicators, increases likelihood that other areas are also consistently shown.

Table G.16: Health Promoting Environments Configurations by Analytical Indicators

Configurations	Environs	Māori Popn	Pacific Popn	NZDep	Māori Health	Total Popn Health	Equity Health
2 locations	CS (1) IS (1)	#	*	*	1	1	0
1 location	CS	*	*	*	1	1	1
1 location	IS	*	*	*	1	0	1
1 location	IS	#	*	#	1	0	1
1 location	CS	*	#	#	1	1	1
1 location	CS	*	#	*	0	0	0
1 location	CS	*	*	*	0	0	1
1 location	IS	#	*	#	0	0	1

There are no insights from the configurations in Table G.16.

2. Comparison to first Evaluation Period

In the first evaluation QCA analysis could not be carried out on the *Prevention Attitudes and Paradigm* outcome, because all but one of the locations were classified as having this outcome present, meaning there was not sufficient variation to identify configurations.

This is similar to the current situation where even though we tried to make the criteria for consistently shown to be a step up from the first evaluation to reflect maturing of Healthy Families NZ initiative, *Leadership*, *Systems Practice* and *Communities Identifying Issues and Solutions* were mostly classified as *consistently shown*.

The focus for QCA in the first evaluation was on *Prevention Infrastructure,* which has similarities to Explanatory Indicators *policy to support prevention* and *funding to support prevention*. As with the first evaluation, it is these areas that showed greater variability between Healthy Families NZ location, and therefore more of a focus in QCA.

Within the first evaluation period, QCA identified that having at least three Building Block indicators as 'present' was related to Prevention System Infrastructure being 'present' — but that it did not seem to matter which building blocks were present or absent — suggesting having at least three was a sign of momentum or effectiveness. In this second evaluation period there were fewer indicators around Building Blocks, however, we can see that no location had fewer than three consistently shown across the seven outcome and explanatory indicators, and at least for *Funding and contracting that supports prevention*, and *Policy that supports prevention*, these outcomes were more likely to be shown if at least a couple of other indicators were also consistently shown. Consistent between the two evaluation periods is that momentum in a few areas supports momentum in multiple areas. Building momentum is important and it might not matter too much where that momentum starts.

Within the first evaluation, action on policy seemed more likely within a Healthy Families NZ location that was located within, or had close relationship with, local government. Within this second evaluation period, two of the three locations consistently showing *Policies that support prevention*, were located (or at least partially in case of South Auckland) within local government. A third location had several successes with local government that led to a consistently shown category.

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Appendix H: Cost-consequence analysis (economic evaluation)

2. Introduction: Value for Money Evaluation of Healthy Families NZ

Purpose and aim

The purpose of the Value for Money (VfM) Evaluation is to provide the Ministry of Health and other partners with evidence on the economic value of the Healthy Families NZ initiative. In this context, VfM refers to the achievements due to Ministry of Health investments and contributions from other stakeholders. The results will inform the Ministry of Health about the merits of the intervention relative to the investments made. We address Research Question VI of the Evaluation Phase II: *How and to what extent is the initiative showing value for money?*

The aim is to provide the Ministry of Health with evidence and arguments to show the economic case for the initiative. Findings will contribute to improving our understanding of the value added by this initiative in relation to the resources invested.

Definition of VfM

The Ministry of Health has an obligation to ensure the best possible gains from its funded services and interventions. The VfM analysis is a way of examining how much is being achieved for the resources invested, and what results Aotearoa New Zealand is getting out of the investments made. The Good Practice Guide for Public Sector procurement defines VfM as:

"Value for money means using resources effectively, economically, and without waste, with due regard for the total costs and benefits of an arrangement, and its contribution to the outcomes the entity is trying to achieve. In addition, the principle of value for money when procuring goods or services does not necessarily mean selecting the lowest price but rather the best possible outcome for the total cost of ownership (or whole-of-life cost)." (Controller and Auditor-General Tumuaki o te Mana Arotake, 2008)

The New Zealand Health Strategy (Ministry of Health, 2016) identifies the importance of VfM analysis as one pillar of the Triple Aim Framework, and ways to achieve improving VfM in the context of health systems:

"Improving value for money so that better health outcomes are achieved using the same resources is vital in the face of changing health needs and growing expectations. Working with others across government is one way to achieve this. Another way to improve value for money is to realise the potential for the health system to make more use of investment approaches. By adopting a more holistic perspective on social value and costs – that is, taking an investment approach – we can make better decisions and better-informed trade-offs." (Ministry of Health, 2016)

These approaches to VfM note that the issue is not about investing in cheaper options, but rather, thinking more broadly about the wide range of costs, outcomes and value of key health interventions.

Cost-consequence analysis (CCA)

As described in the protocol, we follow a CCA methodology to evaluate VfM. In CCA, the costs of the initiative are set against a range of consequences achieved, also referred as benefits or outcomes. This approach permits the consideration of various multi-sector consequences in their natural units. This approach emphasizes providing information to enhance the understanding of costs incurred and benefits produced, and it is left to the decision maker to make the value judgements involved in balancing them out in each specific context:

"Cost-consequences analysis (CCA) is a form of economic evaluation where disaggregated costs and a range of outcomes are presented to allow readers to form their own opinion on relevance and relative importance to their decision-making context." (Drummond et al., 2005)

There are thus three parts to a CCA. The first part is about the costs: what resources have been invested in the initiative, through the Ministry of Health budget as well as by other partners; this is discussed in Section 3. The second part is about the consequences, or how much Aotearoa New Zealand is getting out of the investments; this is detailed in the previous parts of this report and noted briefly in Section 4. The third part is where both costs and consequences are compared; Section 4 presents consequences relative to the investments made, and Section 5 describes VfM as perceived by the initiative's stakeholders. The report also looks into the next steps in deriving and evidencing VfM (Section 6), an overall discussion putting the initiative in the context of investments in the area of health promotion (Section 7), limitations and strengths (Section 8), and final conclusions (Section 9).

2. Methodology

We followed a CCA methodology; more details on this methodology and its application to this intervention are detailed in the Protocol in the 2020 Interim Report (Te Herenga Waka — Victoria University of Wellington, 2020).

Budget data

We compiled budget data from the Ministry of Health as the basis of the costs of the intervention. We reviewed six-monthly Performance and Monitoring Reports (PMRs) and Financial Reports (reporting expenditure against budget) shared by the Ministry of Health, but our capacity to extract and analyse this information was limited given different reporting formats and differing levels of completeness. Less than half of PMRs or Financial Reports were compiled, and their level of reporting varied significantly. As a result, we were not able to provide breakdowns of spending across different resource categories.

We also attempted to systematically compile information on other costs beyond those funded by the Ministry of Health, in terms of resources invested by other partners. However, this turned out to be too complex an exercise, not achievable at this stage.

Interviews

We conducted 11 interviews with 17 participants in total, including 14 members of location teams (current and/or previous location managers plus others such as Strategic Leadership Group and evaluators); with the Ministry of Health manager of the initiative; and with two members of the evaluation team. Interviews took place in April and May 2022. These interviews served to collect participants' views on how they perceive the VfM of the initiative, and related information. They were based on a predetermined questionnaire (attached at the end of this appendix). Given the length and complexity of the questionnaire, only a selection of questions was discussed with participants (indicated in the attached questionnaire).

The focus of the interviews was scaled down after discussions with Waitākere and evaluation team members, given the complexity of information requested and little data being readily available. Consequently, the focus shifted from getting the detailed desired VfM information, to ascertaining what evidence was and was not available. The intention thus is to first set the baseline of where we are at today in terms of understanding VfM and what available evidence there is to back this up, and second, to identify what data would be required in the future to further make the economic case for the initiative.

The complexities and reach of the initiative limited the systematic compilation of information about the costs and consequences of Healthy Families NZ. In adapting to this limitation, participants were asked to respond in reference to a selected set of projects rather than the full set of projects they were involved in. These were usually flagship projects, projects for which more data was available, projects that had been implemented for longer and thus were more complete, or more recent projects where information was easier to recall.

Literature review

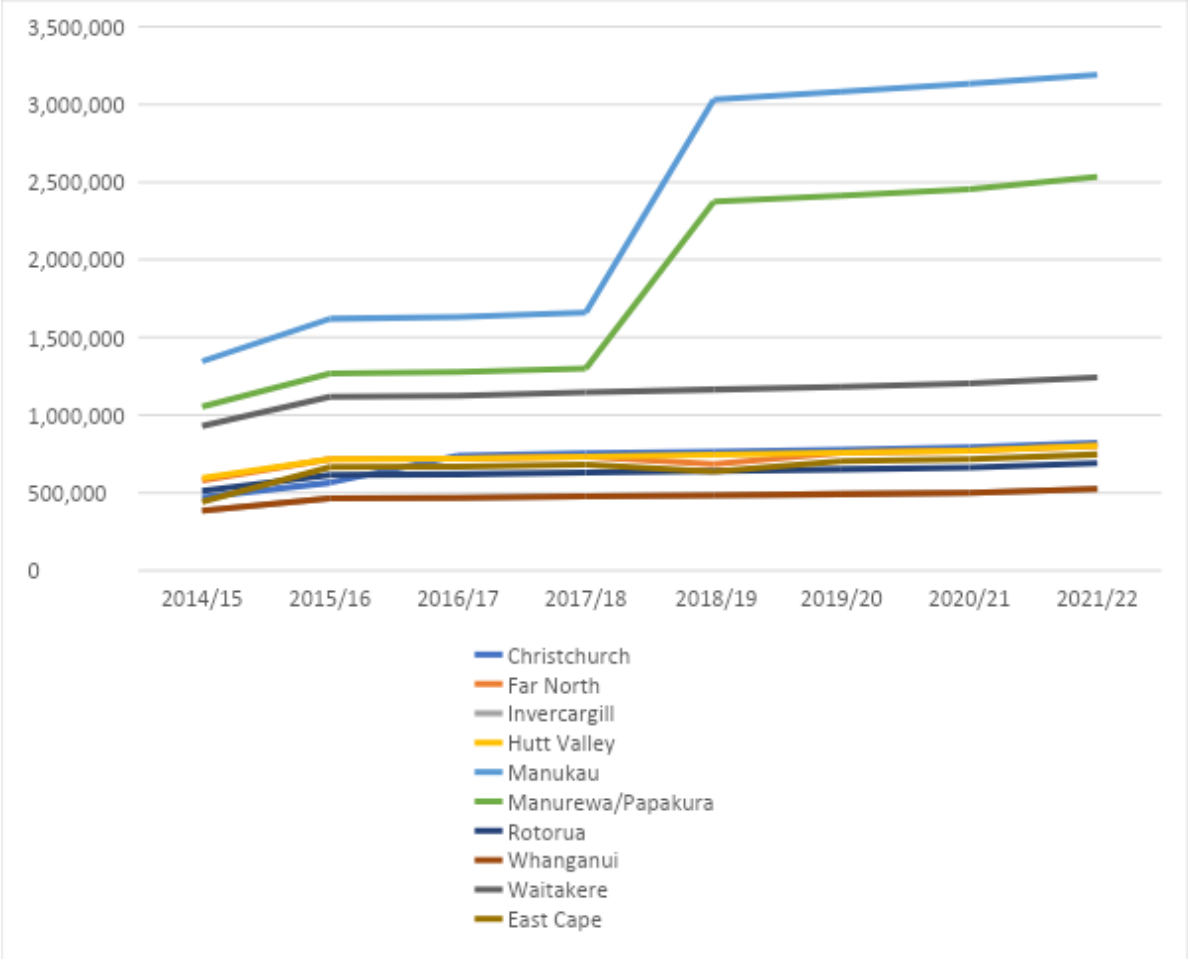
National and international published literature was reviewed on health economics and economic evaluation in relation to systems change interventions to reduce the burden of chronic disease, health promotion and prevention interventions, and indigenous approaches, among others, to frame the study and compare results. The findings of this review are not presented here as this report focuses on summarising the results of data collected around budget analysis and findings from interviews.

3. How much does the initiative cost?

Overview of Healthy Families NZ funding from the Ministry of Health

The Healthy Families NZ budget is about NZ$ 10 million annually in the second phase, and it was about NZ$ 9 million annually in the first phase (except for first year when it was NZ$ 7 million), totalling about NZ$ 82 million across 8 years. Allocations have remained fairly similar for all teams across both phases, except for both teams in South Auckland where funds increased significantly in the second phase. Figure 1 depicts the budget amounts after discounting for inflation (in real 2022 NZ$). These budget figures reflect committed and renewal amounts and are based on data provided by the Ministry of Health/Healthy Families NZ national team in June 2022. Figures are provided for financial years reflecting Ministry of Health accounts.

Figure H.1: Healthy Families NZ budget per location team, 2014/15-2021/22, real 2022 NZ$



Source: Data provided by Ministry of Health/Healthy Families NZ team in June 2022.

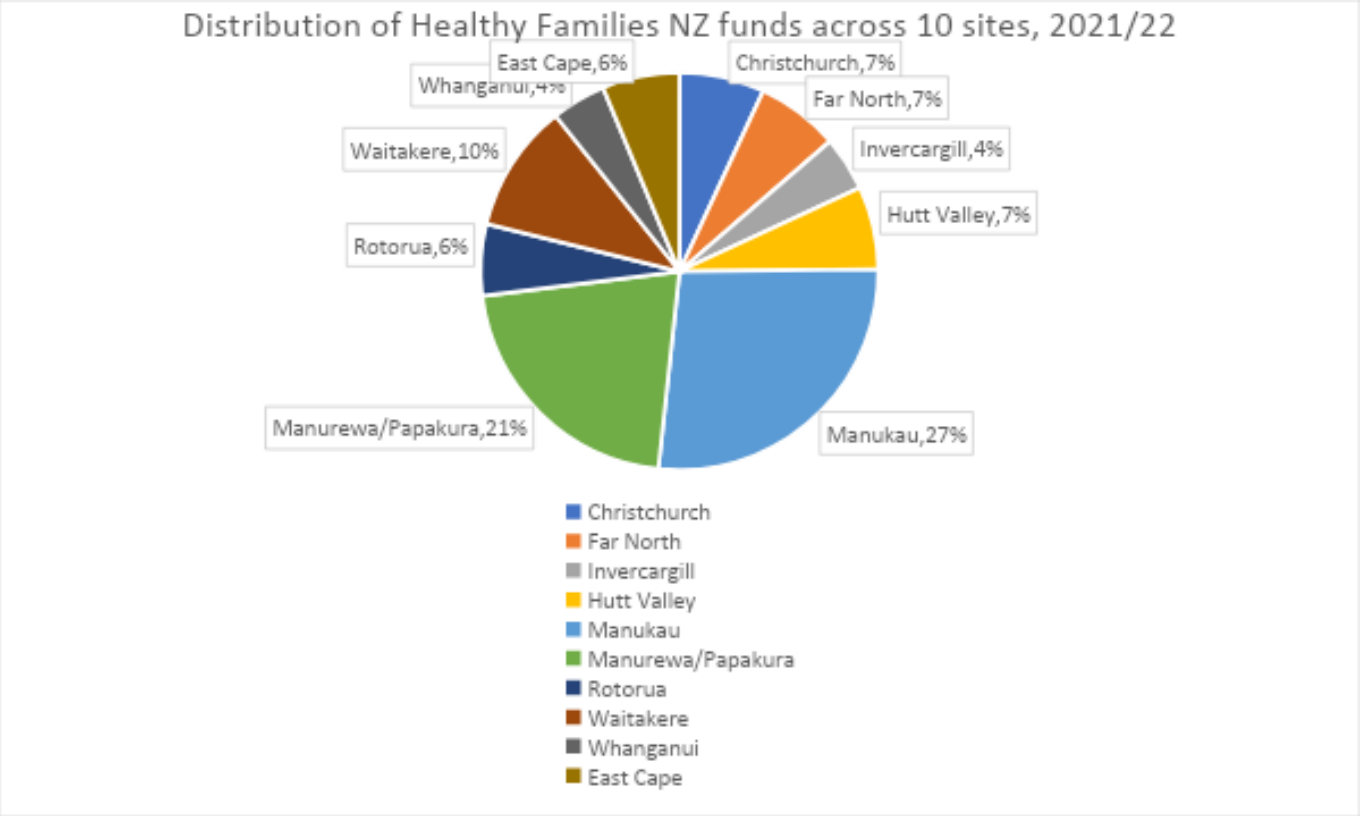
Amendments for Christchurch. This budget excludes some extra allocations to Christchurch in 2014/15, originally intended for Healthy Families NZ but which ended up allocated as a side contract for activities outside the initiative due to changes in providers. Therefore, the budget here presented does not include these amounts to more accurately reflect the investments made in the initiative. This exclusion has been agreed by the Ministry of Health, Christchurch and evaluation teams.

Distribution of Healthy Families NZ Ministry of Health funding across locations and by population characteristics

Budget distribution across locations

Both teams in South Auckland locations, Manukau and Manurewa/Papakura, hold larger amounts than the other locations: about 27% and 21% of total budget respectively, with the rest of teams holding between 4-11% of the budget in 2021/22 (Figure 2).

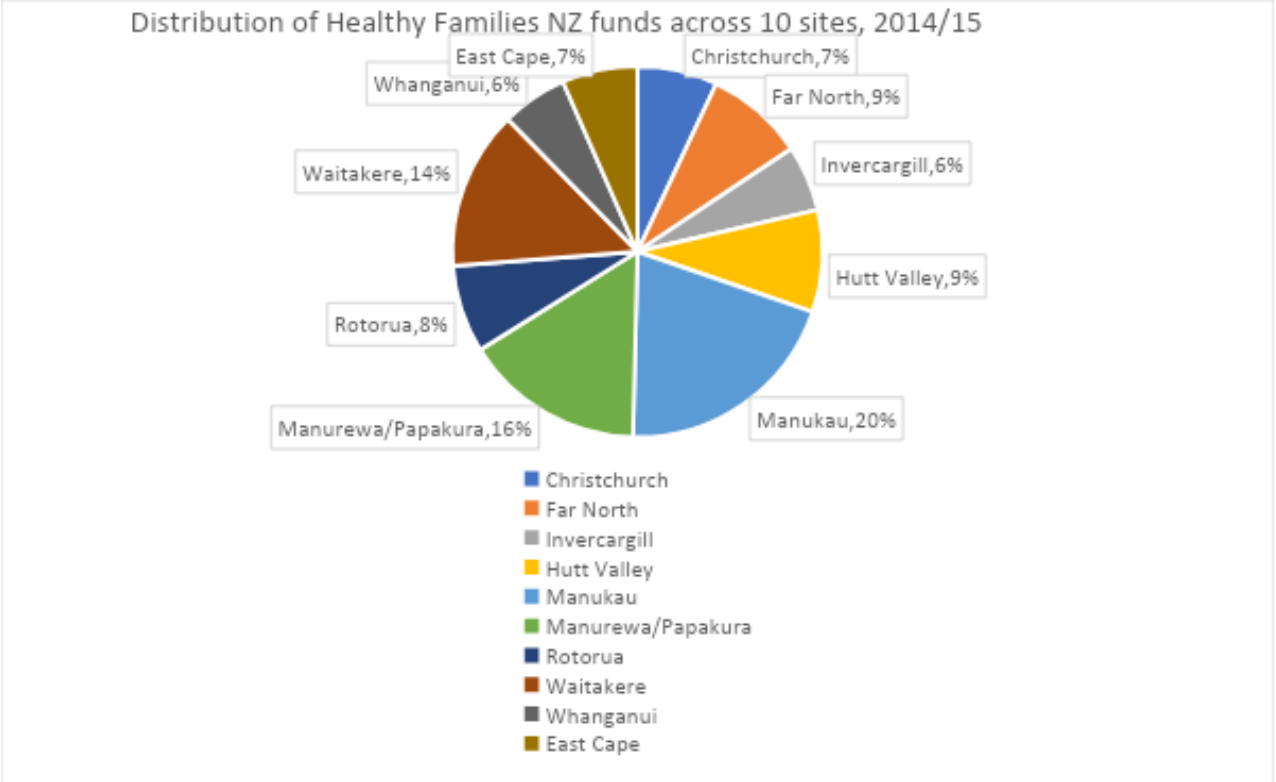
Figure H.2: Distribution of Healthy Families NZ funds across 10 locations, 2021/22



Source: Data provided by Ministry of Health/Healthy Families NZ team in June 2022.

The distribution was fairly similar in Phase 1 (Figure H.3), just with slightly lower proportional allocations to Manurewa/Papakura and Manukau (16% and 20% compared to 21% and 27% in 2021/22).

Figure H.3: Distribution of Healthy Families NZ funds across 10 sites, 2014/15



Source: Data provided by Ministry of Health/Healthy Families NZ team in June 2022.

Budget distribution and population characteristics

How big is the investment in terms of the population targeted? When considering the population in each location, the funds allocated over the 8 years amount to about NZ$ 16-120 per person targeted over the period, or an average of NZ$ 8 per person per year funded by Ministry of Health (Table H.1).

These are only very approximate numbers. The estimation of allocations per capita is imprecise for several reasons. First, it is difficult to estimate the population targeted or benefiting at each location, as interventions take place within the locations not necessarily aiming to reach the exact number of people living within those locations, but rather as a system intervention that will ultimately benefit the population. Second, it is sometimes difficult to estimate the population of the location to start with; for example, in the case of Christchurch, we are using the population
of Christchurch as a whole, instead of Spreydon/Heathcote specifically, and thus underestimating the funding per capita for this specific area. Third, it could be argued that by challenging and changing systems, the effect of Healthy Families NZ extends beyond each location, benefiting others beyond their administrative borders. All these reasons explain the difficulty in understanding the size of the funding relative to the beneficiary population. Nevertheless, although these figures are only a first approximation and cannot be used for policy or comparisons, they do serve to illustrate the relative low spending amount per population targeted or covered in each location by the initiative.

Table H.1: Healthy Families NZ funds per population living in the location/population targeted

	Budget 2014-2022 (nominal NZ$)	Population	Māori population (%)	Pacific population (%)	Funds per capita over 8 years (NZ$)	Annual funds per capita (NZ$)
Far North	6,077,260	65,250	48%	5%	93	12
Waitākere	9,614,216	170,514	16%	18%	56	7
Manukau	19,574,061	163,572	16%	52%	120	15
Manurewa/Papakura	15,357,261	153,303	26%	29%	100	13
Rotorua	5,297,211	71,877	40%	5%	74	9
East Cape	5,546,625	56,796	55%	4%	98	12
Whanganui Rangitīkei Ruapehu	4,002,110	64,599	27%	4%	62	8
Hutt Valley	6,160,616	148,512	17%	9%	41	5
Christchurch	5,984,179	369,006	10%	4%	16	2
Invercargill	4,002,110	54,204	17%	4%	74	9
TOTAL/AVERAGE	81,615,649	1,317,633	27%	13%	62	8

Source: Budget data provided by Ministry of Health/Healthy Families NZ team in June 2022; Population data from Census 2018 usually resident population (Source: Statistics New Zealand). *Note:* Ethnicity data is based on total response ethnicity.

The population profile of these locations in Table H.2 shows the intended high presence of Māori and Pacific populations in the locations selected to participate in the initiative. Overall, about 33% of the population in the 10 locations where Healthy Families NZ operates is either Māori or Pacific. We also see that there is some correspondence between the amount of funds allocated and the socio-demographic profile: the three locations with the highest proportion of Māori and Pacific populations (Manukau, East Cape and Manurewa/Papakura) have the highest budgeted amount per capita (NZ$120, NZ$98 and NZ$100 respectively). This is not surprising, as the initial allocation was based on a capitation formula, which factors in higher rates for Māori and Pacific populations, amongst other criteria (Ministry of Health, 2021). This shows congruence between the funding allocation with the equity and Māori focus of the intervention.

Table H.2: Māori and Pacific population in Healthy Families NZ locations, total and proportional

	Māori population	Māori (%)	Pacific population	Pacific (%)	Māori and Pacific population	Māori and Pacific (%)
Far North	31,503	48%	3,123	5%	34,626	50%
Waitākere	26,940	16%	30,864	18%	57,804	31%
Manukau	26,253	16%	85,776	52%	112,029	64%
Manurewa/Papakura	40,287	26%	4,4457	29%	84,744	50%
Rotorua	28,839	40%	3,912	5%	32,751	43%
East Cape	31,044	55%	2,457	4%	33,501	57%
Whanganui Rangitīkei Ruapehu	17,697	27%	2,607	4%	20,304	30%
Hutt Valley	26,184	17%	14,517	9%	37,560	25%
Christchurch	36,642	10%	14,178	4%	50,820	13%
Invercargill	9,444	17%	2,049	4%	11,493	20%
TOTAL/AVERAGE	274,833	27%	203940	13%	478,773	**34%**

Source: Census 2018 usually resident population (Source: Statistics New Zealand)

Note: Individual counts and percentages for Māori and Pacific are based on total response ethnicity. The combination of Māori and Pacific population (total and percentage) is estimated by adding counts from *prioritised* Māori and *prioritised* Pacific. This combines those who responded as Māori, Pacific, or both, avoiding the possibility of double counting those who identified as both Māori and Pacific.

Equally, with regards to deprivation levels, Healthy Families NZ sites are geographically located in regions with high levels of area deprivation as indicated by the New Zealand Index of Deprivation 2018 (NZDep) (University of Otago, 2022). Locations with the highest proportion of people living in the most deprived areas/quintile 5 (Manukau, Far North and Manurewa/Papakura) are also amongst the top funding recipients in per capita terms (first, fourth, and second respectively) (Table H.3). This again follows from the capitation formula allocation criteria and is consistent
with the equity and Māori focus of the intervention.

Table H.3: Population living in most deprived quintile (Q5) (%) and Healthy Families NZ funding per capita

	NZDep 2018 Q5 (%)	Funds per capita over 8 years (NZ$)
Far North	56%	93
Waitākere	23%	56
Manukau	68%	120
Manurewa/Papakura	52%	100
Rotorua	38%	74
East Cape	50%	98
Whanganui Rangitīkei Ruapehu	40%	62
Hutt Valley	17%	41
Christchurch	14%	16
Invercargill	25%	74
AVERAGE LOCATIONS	38%	62

Source: Census 2018 usually resident population (Source: Statistics New Zealand)

Table H.3 also shows that most locations have high proportions of their populations living in areas of high deprivation (Q5).

Budget distribution and team size

Is the funding allocated proportional to the size of the team? We looked into Full Time Equivalents (FTEs) as a proxy for team size in order to understand the relationship between the funding managed by locations and the size of teams. This would serve to understand how much funding teams manage in relation to the workforce employed. Table H.4 presents the FTE data from the Ministry of Health based on FTEs funded by the Ministry of Health. These FTEs include both full and part time staff, and amount to about 70 FTE per year in 2018-2022. The workforce roles include managers, strategic communication managers, systems innovators, Māori systems innovators, strategic relationships managers, system activators, people and practice leads, system designers, and Kaiarahi Māori.

Funded FTE is different from actual FTE employed at a certain point in time. The actual number of staff employed would differ notably across the period depending on available roles and vacant positions. Besides, the number of staff employed varies drastically with the project cycle, with FTEs tending to be lower at the beginning of the intervention phase when hiring new staff and at the end when uncertainty about contract renewals may lead to staff leaving. The actual FTE employed throughout different times of the intervention would be useful information to have for more precision on FTEs employed.

Table H.4: Healthy Families NZ team size: approximate annual FTEs and funding allocated per FTE

Healthy Families NZ locations	Annual budget (nominal NZ$)	Annual FTEs 2018-2022	Annual funding per FTE (nominal NZ$)
Far North	759,658	4	189,914
Waitākere	1,201,777	10.5	114,455
Manukau	2,446,758	12.75	191,903
Manurewa/Papakura	1,919,658	10.45	183,699
Rotorua	662,151	5.5	120,391
East Cape	693,328	4	173,332
Whanganui Rangitīkei Ruapehu	500,264	6.5	76,964
Hutt Valley	770,077	6.5	118,473
Christchurch	748,022	5	149,604
Invercargill	500,264	4	125,066
TOTAL	10,201,956	69.2	147,427

Source: Budget data provided by Ministry of Health/Healthy Families NZ team in June 2022; FTEs from communication with Ministry of Health/Healthy Families management team (June 2022).

Given the difficulties in identifying a meaningful and stable average FTE per site, interpretations of funding managed per team size could be misleading and need to be done with caution. The approximate numbers suggest average financing per FTE funded vary between NZ$76,964 – NZ$191,903. Variations could be explained first by the difference between funded and actual FTE employed, as well as variations in FTE employed at different points of time. It could also reflect different team models, the focus on profiles more or less costly, different stages in implementation, or simply be due to the imprecision of FTE estimation. In any case, the main key message may be the relatively small size of teams compared to the funding managed.

4. Resources invested on top of the initiative's budget

There are other funds and resources on top of the national budget that need to be considered, including:

Resources used at the Ministry of Health central level

Resources employed at the Ministry of Health include the staff working on the initiative at the national level, which is 3 FTEs[11]. Staff employed at the Ministry of Health coordinate and manage the initiative at the national level.

Contributions by other stakeholders — Funding leveraged by Healthy Families NZ

Locations leverage funding from other stakeholders for their activities. Data and time limitations prevented a systematic compilation of funds leveraged by each initiative. Some examples include: Whanganui Rangitīkei Ruapehu, which notes half a million dollars transition from the local DHB into the initiative to support change shifting from clinically-led to community-insight-led approaches as around suicide prevention, and the over two million dollars in community grants supporting the Healthy Environment Approach ideas.

The investments by other stakeholders could be considered both as a cost in terms of resources invested, as well as a consequence of the actions taken by the team. Because of the systems approach of the initiative, there is an overlap in considering these investments as both a cost and a consequence. Given the purpose of the initiative, which includes mobilising stakeholders and being driven by local leadership, the preference is to consider these other resources invested as a sign of success, rather than a charge.

Non-monetary resources and their value

In addition to the funding invested, stakeholders contribute to the initiative with multiple resources. It was often said that the funding leveraged is only a small proportion of the value raised by Healthy Families NZ and provided by stakeholders and partners. These other resources are, for example, their networks and influence, and the mana that is brought to lead and forge trust. Often these non-monetary resources are about a set of skills, which are difficult to measure. This point is teased out in the findings from the interviews.

5. How does funding compare to the consequences from the initiative?

The consequences of the initiative are presented in earlier sections of this report, including in relation to the prevention system being strengthened, the quality of the implementation, and making a difference to Māori health and equity. The achievements of the initiative refer to both

[11] Communication with Healthy Families NZ Ministry of Health staff, May 2022.

shorter- (e.g. having water fountains in schools) and longer-term outcomes (e.g. reducing chronic diseases and improving wellbeing).

In Table H.5, we have put together funding information compared with a selection of key consequences. The objective is to show how much is being achieved in relation to investments made for each of the locations. This table serves only as a quick illustration, as the outcomes presented are only some examples of key achievements and fall short of the wide range of the full range of outcomes.

Table H.5 is an overview of funds invested in each location with some examples of what each location saw as their key achievements, and important areas of success (see column four, labelled Consequences 1). This comparison indicates that key achievements vary across locations, even for those with similar funding ranges. It also shows the relatively low funding per capita compared to the wide range of interventions in place, and the significant systems modifications achieved. This way of presenting information is in line with the methodology followed. The literature on CCA indicates that dealing with multiple outcomes measured in different units, requires "*the decision-maker to decide which interventions represent the best value, preferably using systematic and transparent process.*" (National Institute for Health and Care Excellence (NICE), 2012). Following these recommendations, we attempt to provide a complex set of information in a transparent way, yet it is for the policymaker to decide on the worth and actual effectiveness across locations.

To reflect the consequences of the interventions, we have chosen only a selection of key achievements as identified through the outcome narratives, as examples of the breath of tangible local results. We have also chosen to add another layer for outcomes for the outcome areas pointing at the higher level or wider repercussions effected. Once again, the consequences in Table H.5 are not a full synthesis of what have been achieved but merely serve to illustrate some of consequences associated with the funds invested.

Table H.5 also includes a set of higher level consequences (see column five, labelled Consequences 2), as identified in earlier sections of this report, relating to the Prevention Action Framework developed for this evaluation. These show how locations are working to strengthen the prevention system.

Table H.5 refers to the last four years of the initiative (Second Phase). However, the consequences identified for this period build on the work on the previous phase, for example around training the workforce and building key relationships.

Table H.5: Healthy Families NZ indicators for funding/costs vs selected consequences, Second Phase 2018-2022

LOCATIONS	COSTS	COSTS	CONSEQUENCES	CONSEQUENCES
	Funding 2018-2022 (NZ$)	**Funding per capita 2018-2022 (NZ$)**	**Selected key achievements 2018-2022**	**Higher-level outcome areas (by PAF levels) impacted across locations**
Far North	3,088,900	47.3	✔ Co-design work on kai systems including Kai Town - Design Challenge, edible playground, food hub and food provision in education settings ✔ Active travel projects eg rural cycleways ✔ Organising COVID support work ✔ Influencing council decision-making processes	**1. Paradigms, values and goals** Spreading and scaling of equity as a goal More systems thinking capability in more organisations Wider understanding of the role of local government in health and wellbeing Increasing learning, applying and valuing of Mātauranga Māori **2. System structure, regulation and interconnection**
Waitākere	4,917,796	28.8	✔ Māori systems/ Kaupapa Māori/ Māori thought leadership work ✔ Workplace wellbeing initiative ✔ Engagement/ empowerment via Pacific ECE teachers initiative ✔ Water provision/promotion initiatives ✔ Systems change webinar series	

			✔ Supporting more connected communities to prioritise working for Māori and Pasifika: West Auckland Together	Strengthened, better-connected food system More regulations that support prevention **3. Information, feedback and relationships** Health in all policies approaches Local perspective influencing policy/ community voice and knowledge as valued evidence Indigenous knowledge and values incorporated into practice Improved local community agency Improved cultural and place identity Better innovative local engagement methods
South Auckland	22,792,132	71.9	✔ Influencing council decisions to focus more on health and system change ✔ Food system work, particularly Food Hub project ✔ Māori systems work and use of Matauranga ✔ Neighbourhood-based leisure activity initiatives involving Pacific and Māori Community organisations	
Rotorua	2,713,368	37.8	✔ Ka Pai Kai food in schools ✔ Support for community COVID response ✔ Education and promotion around use of Maramataka ✔ Kai Rotorua: Marae and community gardens, a “food sovereignty community roopu”	
East Cape	2,873,047	50.6	✔ Getting community voices heard in local government decision-making ✔ Producing evidence for change, particularly around community perspectives on kai sovereignty	

			✔ Increasing learning around Maramataka ✔ Play initiatives and Reimagining Streets project	Strengthened leadership for health and wellbeing
Whanganui Rangitīkei Ruapehu	2,052,040	31.8	✔ Mental health work with regional suicide prevention strategy and Tane Group for men ✔ Kai Ora collective ✔ Promoting Maramataka and reporting on how people use it ✔ Te Reo o Te Rangatahi, engaging youth to co-design solutions with Te Puni Kōkiri	**4. Structural elements, resources and actors** Healthier settings (education, work, sport) Physical environment changes to promote health Skilled and sought-after workforce Strengthened collaboration for health and wellbeing
Hutt Valley	3,154,256	21.2	✔ COVID kai response, and related food resilience movement ✔ Leveraging influence to help communities have input on council policy and urban planning ✔ Transport planning including active transport ✔ Influencing councils towards more systems thinking capability ✔ Smokefree public spaces	
Christchurch	3,238,704	8.8	✔ Healthier events policies	

			✔ Food system work: kai sovereignty, community composting initiatives ✔ Te Pou o te Whare Program (access to sports for children in care) ✔ Play projects and influencing Play development work at the city council	
Invercargill	2,052,040	37.9	✔ Influencing city council around outdoor spaces: play opportunities and smokefree spaces ✔ Workplace wellbeing ✔ Play settings; influencing decisions using community insights ✔ Healthier events and clubs guidelines ✔ Promotion of traditional physical activities with local marae	
TOTAL/Average	46,882,282	37.3		

Source: Budget data provided by Ministry of Health/Healthy Families NZ team in June 2022; Population data from Census 2018 usually resident population (Source: Statistics New Zealand). Consequences selected from Healthy Families NZ Outcome Narratives and key informant interviews.

6. Next steps in adding and evidencing VfM

What is needed in the future to increase VfM and to better capture it? Some considerations emerging from the interviews:

Next steps for adding value:

i. Investing in sustaining the investments made, as it is still very early on in the process.

ii. Initiating similar system change at national level, in particular within the Ministry of Health, Health NZ and Māori Health Authority to provide support to what the Healthy Families NZ locations are doing. This could include combining resources and actions of the health sector with other ministries.

iii. Further coordinating and learning from similar actions across Healthy Families NZ locations, weaving everything together.

iv. Generating better data to show the VfM case.

v. Providing longer contracts to retain the highly skilled workforce.

vi. Including communities' perspectives directly so their inputs drive the analysis of VfM. This is important as value may be perceived differently by different groups, with communities being both actors and beneficiaries.

Next steps in capturing and showing VfM:

i. Following up investments to show long term impacts.

ii. Generating better data around intervention reach in terms of the beneficiaries, beyond population data.

iii. Providing a better understanding of attribution and contribution in the context of systems change approaches.

iv. Further exploring indigenous lenses for assessing value.

v. Exploring the enablers enhancing VfM in each location.

vi. Using one Healthy Families NZ location to conduct a case-study for an in-depth study of VfM in one specific case.

The next move in advancing the economic case for the initiative could start with clarifying decision-makers' information needs regarding economic information, as noted in other CCA studies (Mauskopf et al., 1998). Different types of decision makers, such as the Ministry of Health, Health NZ, the Māori Health Authority, or city councils, may require different types of economic information depending on their area of focus and responsibility, etc. With this in mind,
it would be useful to identify decision makers' preferences around for example the time period

for economic information, as chronic diseases are long-term, and systems change impact duration arguably longer. Another example would be the preferred format for presenting results, if they should fit within a specific template, or follow selected economic categories, and the level of disaggregation of information. Clarifying information preferences for different decision-makers would help to target future analysis for the intended final users and to better respond to their needs and expectations.

1. Limitations and strengths

7. Limitations and strengths

Limitations

We used the best available data given the time and context of this second evaluation. The emphasis has been on being truthful to the nature of the intervention, rather than aiming at precision of measurable indicators.

The evidence here provided is limited for several reasons. The usual assumptions of economic evaluation using market values as the proxy for the value for resources invested and outcomes achieved seems particularly deficient or inappropriate for evaluating a systems change initiative. This is even more so for Healthy Families NZ, where one of the greatest assets is the trained workforce and another is the mobilisation and working together with partners and communities, the values of which cannot be captured by their market value (salary) without being under-represented. Furthermore, data and time limitations prevented the summarising of available information in a more systematic way.

Excluded from this analysis is the ability to draw causality between investments and associated outcomes or consequences. Given the nature of the activities and systems change principles, it is not possible nor an objective of this evaluation to pin attribution of outcomes to the initiative. Instead, we are just looking at the processes promoted by the initiative and the consequences associated with these processes.

Strengths

Although we have not been able to identify, measure and value other costs beyond the Ministry of Health budget for Healthy Families NZ, we have advanced our understanding of what these other costs/contributions are and how valuable they are, which can serve as the basis for future work. Equally, the groundwork in reviewing PMRs and financial reports served to establish the usefulness of existing documentation for the economic evaluation.

Another strength has been the inclusion of views of key stakeholders such as staff and evaluation teams through interviews. This allows us to portray the worth of the initiative as perceived by multiple team members based on their experience with the intervention. Results do reflect the views and valuing criteria of those carrying the initiative out, which constitutes a first step in advancing our understanding of VfM in this context and is coherent with the principles of the initiative.

All in all, this exercise is a very innovative attempt to depict VfM for a systems change interventions of this kind, as shown by the lack of precedents found in the literature reviewed. Given the innovative nature of the exercise, our approach has been ‘throwing the net wide’

across what constitutes VfM. The emphasis has been to bring evidence to expand our understanding of the worth of the initiative in a coherent way with the principles. The unpacking of the avenues constituting VfM would hopefully serve to make the case of the initiative in a way that can be easily understood by policymakers without risking over-simplification.

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Healthy Families NZ — Value for Money evaluation questionnaire

*** In clear grey color are those questions that were not part of the interviews ***

SECTION 1:	CONTEXT FOR THE VALUE FOR MONEY SURVEY

What are we looking for?

The purpose of the Value for Money Evaluation is to provide the Ministry of Health (MoH) and other partners with evidence on the economic case of the initiative – that is, the outcomes achieved thanks to MoH investments and contributions from other stakeholders. To do this, we will ask you some questions to better understand the resources and costs of Healthy Families NZ in relation to its outcomes or benefits.

Your inputs will contribute to create a picture of what are the major resources, costs and outcomes involved in the initiative's achievements, and use your examples to illustrate how the initiative is adding value to health, wellbeing and equity in your communities, and the resources invested to get there. Some of these questions may seem a repetition from earlier sections, but we do ask you to answer them again as we need your responses to be framed in this specific Value for Money understanding.

IMPORTANT: If the questions seem too broad, feel free to answer in reference to a selected set of your projects. You could include some projects from the larger sites and some from smaller sites. You can choose which ones, and they can be the same or different for each question. Please mention which specific projects you are referring to when relevant.

Q1.2 Which location/team are you part of?

- East Cape
- Far North
- Invercargill
- Hutt Valley
- South Auckland
- Rotorua
- Christchurch
- Waitākere
- Whanganui Rangitīkei Ruapehu

Q1.3 What is your position within Healthy Families NZ?

- Location manager
- Strategic Leadership Group
- MoH National
- Other

Q1.4 How many years have you been involved with Healthy Families NZ: _____ years

SECTION 2: OUTCOMES

We are interested in the various types of outcomes you have achieved
This section is about the achievements of Healthy Families NZ, and how well we are converting our investments into the desired results. We are referring both to shorter (e.g. having water fountains in schools) and longer-term outcomes (e.g. reducing chronic diseases and improving wellbeing)

Q2.2 Can you tell us about which investments has Healthy Families NZ been able to leverage in your location? In which sector/field, and about how much ($)? (emphasis on 2019 onwards)

_____

_____

_____

_____

Q2.3 About how much of those investments leveraged are targeted towards Māori?

- Most
- Many
- Some
- Few
- I don't know

Q2.4 From your point of view, which of the outcomes/results achieved are most valuable for you? And for Māori groups in your location? Please explain why

PROMPT: please mention at least three outcomes most valuable for you and three for Māori groups and explain.

_____

_____

_____

_____

_____

Q2.5 Improving Māori health and wellbeing is a key objective of the initiative. In your opinion, to what extent have Māori health and wellbeing been improved so far?

- Exceeded expectations
- As expected
- Objectives not yet achieved
- I don't know
- Others, please specify _____

Q2.6 Reducing inequities in health is a key objective of the initiative. In your opinion, to what extent have health inequities been reduced so far?

- Exceed expectations
- As expected
- Objectives not yet achieved
- I don’t know
- Other, please specify

Q2.7 To what extent have the health and wellbeing of specific groups such as Pacifica been improved?

- Exceeded expectations
- As expected
- Objectives not yet achieved
- I don't know
- Others, please specify _____

Q2.8 Any comments on the above? Please explain

_____

_____

_____

_____

Q2.9 Do you think the outcomes/achievements of the Healthy Families NZ initiative may bring about economic savings now or in the future in your communities? If yes, how? Please explain and/or provide some examples

PROMPT: you could refer to the outcomes mentioned earlier in this section, and/or give other examples.

Savings refer to economic gains, such as reduced unemployment in the longer term, or less use of expensive hospital services

_____

_____

_____

_____

Q2.10 How likely are the processes and changes initiated by Health Families NZ to continue after 2022 over the next 5 years or so if the funding was sustained? (for overall/majority of activities)

- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely
- I don't know

Q2.11 And if the funding was not sustained, how likely are the processes and changes initiated by Health Families NZ to continue after 2022 over the next 5 years or so ? (for overall/majority of activities)

- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

Q2.12 Please explain and/or provide examples

_____

_____

_____

_____

Q2.13 How would you think the impact of the outcomes achieved so far will evolve in the future (over the next 5 years or so)? (for overall/majority of activities)

- ☐ Impact will decrease with time
- ☐ Impact will be sustained in time
- ☐ Impact will continue but gradually decrease in time
- ☐ Impact will grow in time

Q2.14 Please explain and/or provide examples

_____

_____

_____

_____

SECTION 3: COVERAGE

We are interested in how far the initiative has reached, its range of influence
We are aware that estimating how many people may be reached by or participate in Healthy Families NZ activities is problematic given the design of the initiative and changes over time. Recognizing this limitation, could you provide a broad estimation of its scope in the following questions.

Q3.2 Target - What proportion of the population in your location is targeted by the initiative in a given year?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.3 Target - What proportion of the Māori population in your location is targeted by the initiative in a given year?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.4 Coverage - In your opinion, what proportion of the targeted population in your location may have been reached by or participated activities in any way in the initiative since its inception?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.5 Coverage - what proportion of the Māori targeted population in your location may have been reached by or participated in Healthy Families NZ activities in any way since its inception?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.6 Coverage - What proportion of the overall population in your location may have been reached by or participated in Healthy Families NZ activities in any way since its inception?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.7 And what proportion of the overall Māori population in your location may have been reached by or participated in Healthy Families NZ activities since its inception?

- o Between 0-25%
- o Between 25-50%
- o Between 50-75%
- o Between 75-100%

Q3.8 Would you like to provide any explanations on the above (targeted and reached/participation estimations)? For example, do you think of any specific groups or geographical areas to guide your estimation?

_____

_____

_____

_____

_____

SECTION 4: CONTRIBUTIONS

This section is about the relative contribution of the initiative to outcomes
We are going to ask now some questions on the relative contribution of the initiative to the overall or major achievements viz-a-viz contributions from other stakeholders. We would like to better understand how you perceive the contribution of the initiative to the observed outcomes mentioned, both outcomes linked to specific activities as well as changes in the wider prevention system. Yet, it is not possible to establish how much of the observed outcomes are directly due to Healthy Families NZ activities, as there are so many other factors and partners involved in the overall results and activities.

Q4.2 How much has the initiative contributed towards the changes observed in the prevention system?

- o No contribution
- o Some contribution
- o Most contribution
- o All contribution

Q4.3 The overall contribution of the initiative to observed changes in reducing chronic illnesses has been

- o No contribution
- o Some contribution
- o Most contribution
- o All contribution

Q4.4 Please explain the above choices

_____

_____

_____

_____

Q4.5 How would you characterize the essential role of Healthy Families NZ in strengthening the prevention system?

- o Essential, without the Healthy Families NZ the major changes associated with the initiative would not have taken place
- o Without the initiative the achievements would have taken place, but at a slower rate
- o Without the initiative the achievements would not have taken place

Q4.6 How would you characterise the essential role of Healthy Families NZ in reducing chronic illnesses?

- o Essential, without Healthy Families NZ the major changes associated with the initiative would not have taken place
- o Without the initiative the achievements would have taken place, but at a slower rate
- o Without the initiative the achievements would not have taken place

Q4.7 Were initiatives to continue as planned, how long would you think it would take to achieve significant impact in reducing chronic conditions in your locations, such as on reducing smoking, obesity, etc.?

- o Already achieved
- o 1-2 years
- o 3-5 years
- o 5-10 years
- o >10 years

Q4.8 Please explain the above choices

SECTION 5: RESOURCE ALLOCATION

We are interested in resource allocation and barriers to spending

This section is about difficulties experienced in spending available funding

Q5.2 Has your team experienced difficulties to spend allocated MoH funding since the start of the initiative?

- Yes
- I don't know
- No

Q5.3 If yes, in which year did you experience spending difficulties? (Select years)

2014	2015	2016	2017	2018	2019	2020	2021

Q5.4 How long have spending difficulties lasted?

- Less than one year
- Between 1-2 years
- More than 2 years

Q5.5 In your opinion, which were the obstacles hindering spending?

- ☐ Funds not received on time
- ☐ Unclear timing and amount
- ☐ Conditions apply to spending that you can't meet
- ☐ Difficulties to hire new staff
- ☐ High turnover of our staff
- ☐ Planned activities being delayed
- ☐ Others, specify _____
- ☐ Others, specify _____
- ☐ Others, specify _____
- ☐ Others, specify _____

Q5.6 How have spending challenges impacted on your activities? Could you give some examples?

_____

_____

_____

Q5.7 How could spending challenges be minimized?

_____

_____

_____

_____

Q5.8 What plans do you have to allocate the extra funding you have available?

_____

_____

_____

_____

SECTION 6: RESOURCES LEVERAGED

This section is about the resources leveraged by the initiative
The following questions deal with what resources are we using to produce results and what are the other type of resources that your organization has been able to mobilize for your work. We are interested specifically on what are the other type of resources that other organizations have redirected into the activities conducted. We will ask you about resources invested by other organizations, which are not paid by Healthy Families NZ budget as such.

Q6.2 Resources contributed by others: Are there resources/capacities/elements that are important for the initiative and that are invested by others, i.e. not funded by MoH budget? If yes, which ones? Please complete table below. identify what type resources, who is providing them, and to which outcomes they contribute to.

The reason for doing this is to better acknowledge and understand resource mobilization and use; this will be useful to guide future work if the projects were to be continued or roll out.

PROMPT: Focus on the resources that are material to the program, those most relevant. There is no need to go through all the resource categories in the table. These categories are to facilitate your identification only. We request you to comment on the intangible resources as they are often undervalued. Respond from your own perspective but also to reflect perspectives from your communities.

	Examples (and amount)	Provided by whom?	Contributed to which outcomes?
HUMAN RESOURCES, such as personnel categories or roles and FTE			
PHYSICAL RESOURCES, such as office space			
IN KIND contributions, such as kai			
FUNDING			
INTANGIBLE RESOURCES, such as mana endorsement, capacity to influence, leadership, trust, ...			
Others, please specify			
Others, please specify			
Others, please specify			

Q6.3 Any comments on the above? For example, *you can provide some examples of how did those resources come together?*

_____

_____

_____

_____

Q6.4 Value. How critical were the resources invested by the team or other organizations in ensuring the success of the activities and achievement of objectives? To what extent could you have done it without them?

_____

_____

_____

_____

Q6.5 Māori framework. Now we want to identify resources leveraged using the Te Pae Mahutonga framework. We would like you to identify important/material investments made and the results gained, through a Māori lens. Thinking on the contributions of other organizations to activities, what type of resources were mobilized and results obtained in relation to the six dimensions of Te Pae Mahutonga framework?

PROMPT: We are interested in tangible (e.g. human resources, kai) and intangible resources (e.g. mana, leadership) that are contributed by others.

PROMPT: Focus on the resources that are material to the program, those most relevant. There is no need to go through all the resources that apply. We only request you to emphasize the intangible resources as they are often undervalued.

	Resources invested	Main results gained (3 max)
MAURIORA. CULTURAL IDENTITY. Access to Te Ao Māori. Meaningful contact with language, customs, and inheritance. Expression of Māori values.		
WAIRIORA, PHYSICAL ENVIRONMENT. Environmental protection. Nature and quality of the interaction between people and the surrounding environment.		
TOIORA, HEALTHY LIFESTYLES. Health promoting environments.		
TE ORANGA, PARTICIPATION IN SOCIETY. Dependent on the terms under which people participate in society.		
NGĀ MANUKURA, COMMUNITY LEADERSHIP. Local perspectives being valued, decision-making actions, leadership.		
TE MANA WHAKAHAERE – AUTONOMY. Local control, Te Tiriti upheld, leadership.		

Q6.6 Any comments on the above?

Q6.7 Opportunity costs- Do you think you could have used those leveraged resources in a different way that would have resulted into higher gains or better value for improving populations health and wellbeing and reducing inequities in the community?

PROMPT- think about other projects you've worked on, or initiatives under way, and give some examples. Are these resources working better or worse than in other programs?

_____

_____

_____

_____

Q6.8 Are the types of resources invested by Māori and Pacifica groups different than for other groups? Pls. explain

_____

_____

_____

_____

SECTION 7: BALANCING RESURCES AND OUTCOMES

We are interested in balancing the resources invested with the outcomes achieved

The following questions are about your understanding of the value added be the initiative in relation to the efforts made. This is the last section of the survey.

Q7.2 To what extent do you believe Healthy Families NZ provides Value for Money? Please explain

_____

_____

_____

_____

Q7.3 In your opinion, how do different organizations or communities value differently the worth of the outcomes achieved in relation to the resources invested, in particular Māori and Pacific groups?

PROMPT: can you provide same examples or explain in what information/experience you base your opinion?

_____

_____

_____

_____

Q7.4 What resources could bring higher value for money if used in a different way? Please explain

_____

_____

_____

_____

Q7.5 Can you identify anything that may help your team in addressing issues of equity more effectively in future years?

_____

_____

_____

_____

Q7.6 Do you think you could have achieved better outcomes with similar resources were the initiative different? And in particular to achieve better health outcomes for Māori and equity? Please explain. You could use an example to show in which way

_____

_____

_____

_____

Q7.7 Often, a combination of activities or resources can achieve greater benefits for the prevention system than standalone ones, showing positive interaction effects. Where have you seen these positive interaction effects in your location? Could you give some examples of these mutual reinforcements? In which areas do you see these synergies taking place? (e.g. for specific activities, or for specific groups inside the initiative or with other partners, etc.)

Q7.8 To what extent is Healthy Families NZ funding replacing other funding avenues? If the initiative's funding was not available, would other funders cover these activities?

PROMPT- you can think about if similar processes were taken place before the initiative, funded by other sources

Q7.9 Final comments. You have reached the end of the survey. Before you go, any final insights or reflections on the value for money of the initiative? For example thinking on the years ahead for your team and how to enhance the value for money of your activities/focus; or thoughts for other areas that may be interested in replicating the initiative, what strategies would you recommend to get higher results from the activities performed?

Thank you!

Appendix I: Stakeholders survey summary report

1. Methods

Sample

The manager at each Healthy Families NZ location was asked to provide a list of stakeholders/ partners with whom they had worked in the last two years. Across all locations, the managers provided 785 contacts. Given the small numbers of stakeholders provided by the Healthy Families Far North manager, we requested additional names, to ensure that we contacted all relevant people. A further 14 names were provided, who were emailed on 13th July 2021.

A brief electronic survey was sent on 28th June 2021. Two weeks later (13th July 2021), we sent a reminder email to people who had not responded.

A total of nine e mail addresses failed, 47 bounced and 20 were duplicates. Three additional people contacted us to ask if they could take part, and three others complained/ opted out. A total of 284 people finished the survey, equating to a response rate of 38% overall. Across the locations, the response rate ranged from 20% (South Auckland) to 46% (East Cape).

Description of Respondents

Six people said they would rather not take part, and a further six said that they had not had any contact with a Healthy Families NZ team in the last two years. Note that the remaining questions were not compulsory to answer, so not all question were answered by each respondent; percentages are given out of the people who did answer the question. Of the remaining respondents, 224 (85%) had never been a member of a Healthy Families NZ SLG, five (2%) had been previously, and 33 (13%) were currently a member of a Healthy Families NZ SLG.

Respondents were asked to describe the main area(s) of activity of their organisation and could choose as many areas as they wanted from the choices provided, as well as having the option to add other activity areas. The most common area was education (n=70, 14%), health promotion or public health services (n=60, 12%), Māori health and social services (n=52, 10%), local government services (n=52, 10%), iwi or Māori development (n=45, 9%), sport and recreation (n=44, 8%), environmental protection or education (n=35, 7%), central government services (n=21, 4%), commercial business (n=18, 4%), Pacific health and social services (n=16,

3%), provision of secondary care services (n=12, 2%), health care funding and planning (n=11, 2%) and provision of primary health care services (n=8, 2%).

2. Findings

Engagement with Healthy Families NZ

Most respondents reported frequent and ongoing engagement with Healthy Families NZ; 121 (49%) reported engaging with them regularly, 92 (37%) reported engaging with them on several occasions, 23 (9%) only once or twice and five (2%) said not in the last five years. In terms of current engagement, 199 (80%) reported that they are currently engaged with Healthy Families NZ, 30 (12%) reported that they had in the past and 18 (7%) that they did not know. Of those people who were no longer engaged with them, most reported the reason for stopping as having worked together on a one-off project only.

Relevance of the work of Healthy Families NZ

Most respondents said that the work of Healthy Families NZ was very relevant (n=129, 53%) or quite relevant (n=89, 36%) to their organisation, while only 16 (7%) reported the work as not very relevant and two (<1%) as not at all relevant. In interpreting these results, it is important to remember that the potential respondents to the survey were identified by the Healthy Families NZ team, so we would expect the stakeholders and partners to find their work of relevance.

Level of collaboration between organisations

Stakeholders were asked their impression of whether there had been changes in the level of collaboration between organisations working in the illness prevention/ health promotion area in the last two years. A total of 125 people (52%) reported greater collaboration, 66 people (27%) reported no change in the level and 16 (7%) less of collaboration.

Of those who reported greater collaboration, 75 (60%) reported that the Healthy Families NZ team had helped to facilitate this to a great extent and 42 (34%) to a small extent.

Of those who reported who reported no change or a reduction in the level of collaboration, 27 (33%) reported that the Healthy Families NZ team had helped to facilitate this to a great extent and 32 (39%) to a small extent. Nineteen (23%) thought that the Healthy Families NZ team did not facilitate collaboration to any significant extent.

Opportunities for collaboration with Healthy Families NZ

Stakeholders were asked whether the local Healthy Families NZ team actively provided opportunities for their organisation to be involved in the Healthy Families work programme. In total, 102 (43%) reported that the Healthy Families NZ team had actively provided these opportunities to a great extent and 83 (35%) to a small extent. A further 27 (11%) reported that Healthy Families NZ had not actively provided these opportunities to any significant extent or at all (n=7, 3%).

Provision of support or resources by Healthy Families NZ

Stakeholders were asked whether the local Healthy Families NZ team provided support or resources to help their organisation to do its job more effectively. Of the 237 respondents, 72 (30%) reported that the Healthy Families NZ team provided such support to a great extent and

94 (40%) to a small extent. The other two (29%) reported that Healthy Families NZ had not provided such support to any significant extent.

Involvement in decision making

Stakeholders were asked whether the local Healthy Families NZ team provided opportunities for their organisation to be involved in decision making in relation to illness prevention/ health promotion. Answers to this question were quite varied. Just over half reported involvement to a great (n=48, 20%) or small (n=79, 33%) extent, whereas about one third reported involvement to no significant (n=48, 20%) or no extent at all (n=26, 11%). A further 36 people (15%) reported that they were not sure or did not know.

Involvement in decision making for Māori

Stakeholders were asked whether the local Healthy Families NZ team actively provided opportunities for Māori organisations/ iwi/ hapū/ whānau to collaborate in illness prevention/ health promotion efforts. Over one third of respondents (n=86, 36%) reported that they were not sure or did not know; among the others, virtually all reported that Healthy Families NZ team actively provided collaborative opportunities for Māori organisations to a great extent (n=82, 34%) or a small extent (n=57, 24%). Only 14 people reported that these opportunities were not offered to any significant extent or at all (combined 6%).

Involvement in decision making for Pacific people

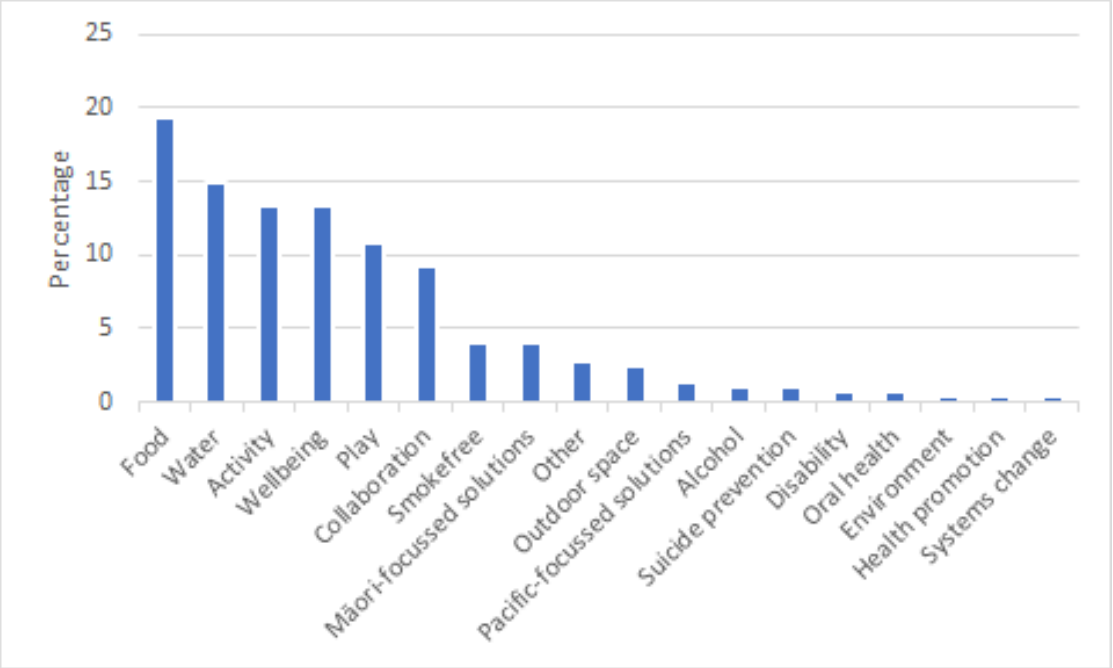
Stakeholders were asked whether the local Healthy Families NZ team actively provided opportunities for Pacific communities and/or organisations to collaborate in illness prevention/ health promotion efforts. Most respondents (n=133, 56%) reported that they were not sure or did not know; among the others, virtually all reported that Healthy Families NZ team actively provided collaborative opportunities for Pacific organisations to a great extent (n=44, 19%) or a small extent (n=46, 19%). Only 14 people reported that these opportunities were not offered to any significant extent or at all (combined 6%).

Examples of illness prevention/ health promotion changes

Stakeholders were asked to describe up to five changes they had noticed in their organisations/ social or physical environment. It is important to note that this does not describe the actual number of changes but gives an overall view of the degree of visible change. A total of 294 changes were described. These were most commonly related to food/ water and activity/ play, although improving workplace wellbeing and increasing collaboration were also commonly reported.

Stakeholders reported that most (n=198, 67%) of these changes would “definitely not” or “probably not” have occurred if it hadn’t been for Healthy Families NZ.

Figure I.1: Proportion of reported health promoting changes in each category



3. Limitations and future suggestions

Asking locations to identify stakeholders will always result in a select sample to whom the survey is sent; low response rates will exacerbate the potential bias in the results associated with this. The initial list of stakeholders per location ranged from 14 (Far North) to 179 (Ōtautahi Christchurch).

A better approach in future could be to identify a range of possible stakeholders (e.g., local councils, schools, health and social service providers), and contact people from each of these at all locations. This could be supplemented by the ones that locations identify themselves. The response rate is unlikely to be higher (and will probably be lower), but it is likely to be a broader range (less select) group of people who have a chance to reply to the survey.

We would also review the purpose of each question in this survey in future. For example, some respondents did not wish to report their role or job title, and upon reflection we do not find that this question added a lot to the interpretation of the rest of the data, so could be left off.