Interim Report 2020

Evaluation of Healthy Families NZ

November 2020

The evaluation, and this report, were commissioned by the Ministry of Health and led by the School of Health at Te Herenga Waka—Victoria University of Wellington.

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Contents

1. Introduction

Report contents

This Interim Report 2020 for the Evaluation of Healthy Families NZ outlines the methodologies and potential tools we will be using for the second phase of the evaluation (2019 to 2022).

Contained in this report is:

Section 1: A description of the questions and approach for the current evaluation phase, with an updated infographic (Figure 1.1) outlining the evaluation design and the key approaches being used for this second phase of the evaluation 2019-2022. A summary of significant changes in the implementation of the initiative since the renewal of contracts in the second half of 2018. A timeframe for evaluation tasks going forward (Table 1.1).

Section 2: A summary of the draft indicator sets, whose development we will describe in more detail later in the report.

Section 3: A Prevention Action Framework for understanding types of activities and potential change in the Aotearoa New Zealand prevention system. The section details how we developed the framework through a review of the literature on systems thinking approaches to prevention for health. We also analysed qualitative interview data, collected in the first phase of the evaluation, for perspectives on community prevention. The framework is a work in progress that we intend to improve through feedback.

Section 4: Qualitative indicators that we are currently developing, of factors that would show quality of implementation and indicate the prevention system had been strengthened.

Section 5: Quantitative indicators sourced from national surveys, to provide context for locations and to provide potential longer-term indication of change.

Section 6: A methodology for a value for money evaluation of the initiative using a cost-consequences approach. There are few prior economic evaluations of systems change for health initiatives. As such the methodology proposed is a work in progress and we welcome feedback.

Table 1.1 Evaluation timeline after submitting the Interim Report

July-Dec 2020	Finalise report Incorporate further feedback on evolving methodologies Develop detail and criteria for indicators Collect cost information including interviews
Jan-Mar 2021	Write up work on framework development and cost-consequence analysis method for publication Cost analysis Collect area context data
Apr-July 2021	Plan data collection Draft data collection tools – key informant interviews, stakeholder survey, local outcome narratives
July-Dec 2021	Data collection: Interviews Stakeholder surveys Cost-consequence information Documents for review
Jan-April 2022	Data analysis – qualitative, rich and indicators, quantitative indicators, cost-consequences QCA analysis and interpretation Case study preparation Processing and visualisation of quantitative data
April-May 2022	Case study checking/ sense-making QCA analysis writeup Quantitative analysis written material and tables of results prepared Cost-consequence analysis finalised and written
End of June 2022	Summative Report

Background

The initiative and the evaluation

Healthy Families NZ is a large-scale prevention initiative that brings community leadership together in a united effort for better health. It aims to improve people's health where they live, learn, work and play by taking a 'systems change' approach to the prevention of chronic disease. Healthy Families NZ is in nine locations, in areas with higher-than-average rates of preventable chronic diseases and rates of risk factors for these diseases, and/or high levels of deprivation. The current Healthy Families NZ locations are: Far North, Waitākere, South Auckland, East Cape, Rotorua, Whanganui Rangitīkei Ruapehu, Lower Hutt, Christchurch and Invercargill.

Healthy Families NZ commenced in 2014. It aims to mobilise action and leadership to improve health in nine communities (through 10 lead providers) using a systems change approach to strengthen prevention. Healthy Families NZ is funded by the Ministry of Health (the Ministry). The initiative was initially funded for four years, with funding extended for a further four years from mid-2018 to mid-2022.

The Evaluation, which uses a comparative case study design, is funded by the Ministry and led by Dr Anna Matheson based at Victoria University of Wellington (previously at Massey University). For further background on the Evaluation and findings from the first phase of the initiative please refer to the Summative Evaluation Report (Matheson, Walton, Gray, Lindberg, Shanthankumar, et al., 2018) and an article published in the journal Health Promotion International "*Strengthening prevention in communities through systems change: lessons from the evaluation of Healthy Families NZ*" (Matheson, Walton, Gray, Wehipeihana, & Wistow, 2019).

For this current round of the evaluation of the second phase of the initiative we are continuing a comparative case study design as shown in the updated infographic (Figure 1.1). **The focus however, has shifted away from health risk-specific indicators towards wider wellbeing indicators and evidence that the overall prevention system has been influenced.**

Changes in the initiative for the second phase

A notable change in the second phase of Healthy Families NZ has been to widen the focus of the location teams. Where initially there were four action areas - healthy eating, physical activity, alcohol and smoking – the focus has been extended to encompass mental health, resilience and wellbeing.

Overall approximately 94 people are employed in the ten Healthy Families NZ lead providers. The ten Healthy Families NZ lead providers employ between five and 26 people depending on population size; the biggest team is based in South Auckland and smaller teams are in Whanganui Rangitikei Ruapehu, East Cape, Invercargill and Rotorua. As the initiative has evolved, lessons have been learned about what is needed in terms of workforce skills and focus. These lessons have been reflected in a number of job roles changing, to match skills better with an emphasis on strategic systems change and community co-design approaches. All Healthy Families NZ location teams have a Manager, Lead Systems Innovator and Strategic Communications Manager. Other roles include Systems Innovators (focused on a number of different work programmes including play, active transport, Māori systems etc) Advisors for Strategic Communications, Partnership and Engagement, and Evaluation.

The Strategic Leadership Groups have also evolved as lessons have been learned. All locations have carried out some form of review of their Strategic Leadership Group membership and function for the current phase. Several have identified parts of the community that they could be working more closely with, so have recruited new group members accordingly.

The locations of the Healthy Families NZ teams have remained the same. The only significant change across the Healthy Families NZ locations is that Healthy Families Lower Hutt has extended its area to cover the entire Hutt Valley region (now Healthy Families Hutt Valley). There has also been variation in the extent to which each location has experienced change. Two Healthy Families NZ locations (Far North and East Cape) have had complete changes in lead provider, Strategic Leadership Group, manager and team personnel. In other areas there has been more stability in the initiative, albeit with some turnover in team and Strategic Leadership Group makeup.

The Ministry's national team context has also undergone change. The Ministry's national team's role is to provide central resources to and strategic leadership of the whole Healthy Families NZ "network", and to build relationships within Government to align investment in prevention and build awareness of Healthy Families NZ's systems approach. The Ministry was restructured in 2019, a change intended to support the goal of "achieving equitable health outcomes for all people". Responsibility for the Healthy Families NZ initiative was shifted into a "mini-team" in the Healthy Communities team, within the Public Health Group. Healthy Communities is one of seven teams in the Public Health Group, Population Health and Prevention directorate, which is responsible for leading the Ministry's population health programmes. As at October 2020, there are three team members dedicated to Healthy Families NZ (one Senior Portfolio Manager, who acts as lead, supported by the Manager, Healthy Communities, as well as two Portfolio Managers, one based in Auckland, one based in Christchurch).

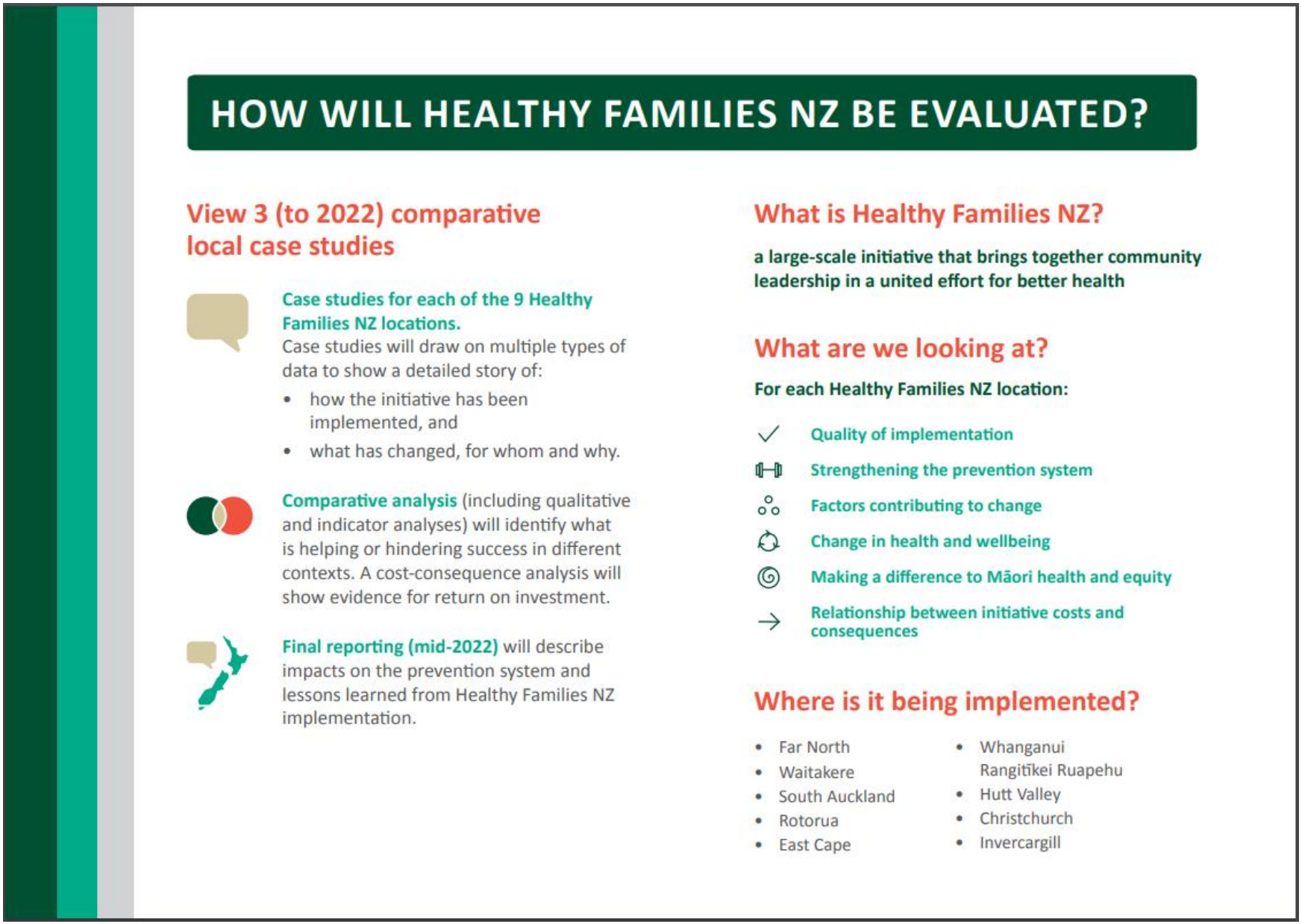
The Evaluation design and questions

The Evaluation is using a comparative case study design to answer the evaluation questions that have been developed in consultation with the Ministry. This is illustrated in Figure 1.1. The evaluation questions are:

1. What has been the quality of Healthy Families NZ implementation in each location?
2. To what extent has the prevention system in each Healthy Families NZ location been strengthened; how and in what ways?
3. What have been the most important factors/aspects that have contributed to changes identified in the prevention system of each Healthy Families NZ Location.
4. To what extent has there been an improvement in health and wellbeing in Healthy Families NZ locations?
5. To what extent is Healthy Families NZ making a difference to Māori health and equity; how and in what ways?
6. How and to what extent is the initiative showing value for money? (New evaluation question)

These questions will be answered using a range of data sources including interviews, reports, stakeholder surveys, nationally-collected health data, and a new tool developed called an "outcome narrative". These narratives will be produced by the location teams using a template designed by the evaluation team in partnership with the Ministry, and the Healthy Families NZ workforce. The outcome narratives will describe in their voices, significant outcomes the Healthy Families NZ location teams have achieved through their work, including the evidence that they have to show their successes.

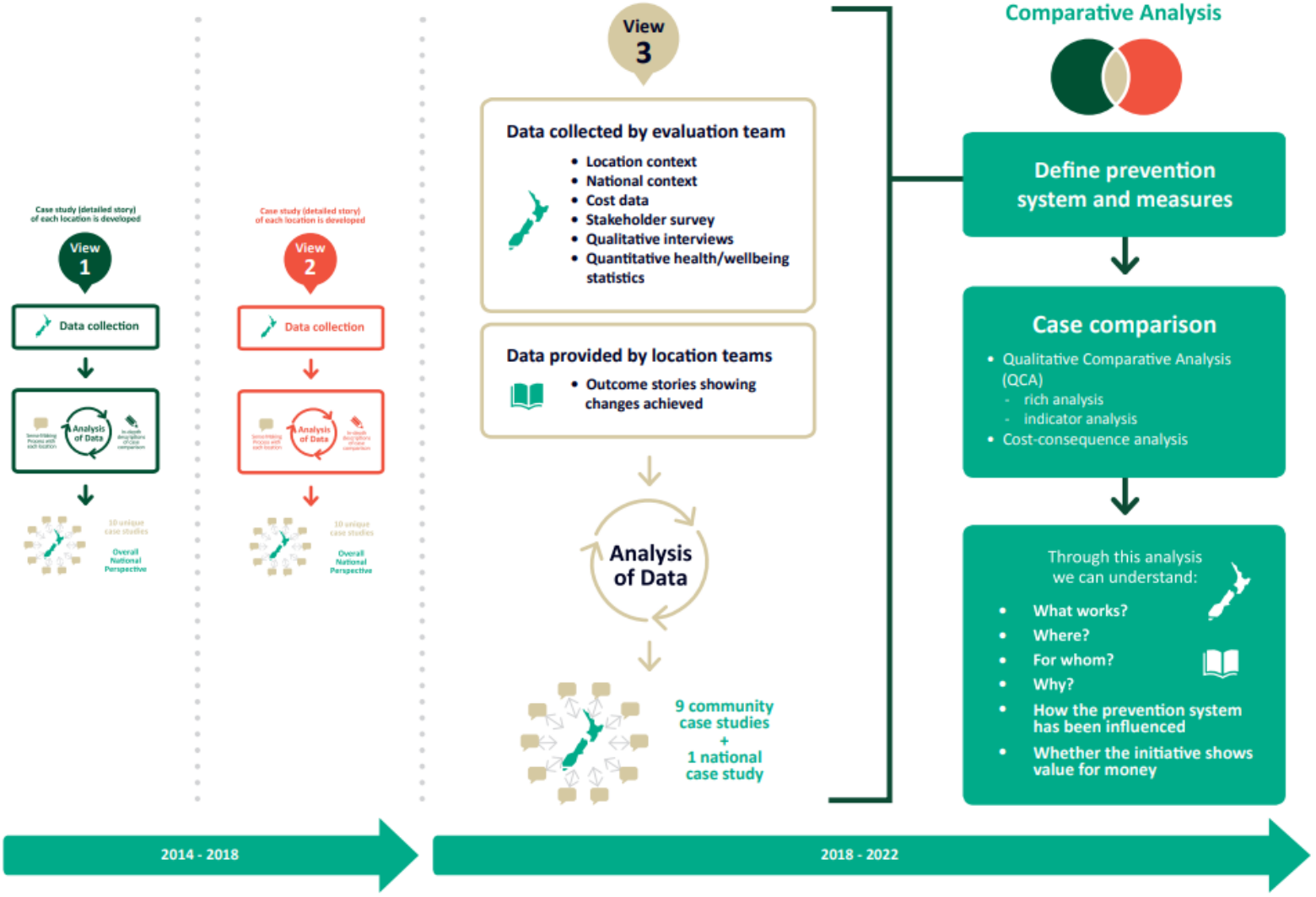
Figure 1.1 Healthy Families NZ evaluation infographic



EVALUATION DESIGN

Is Healthy Families NZ strengthening the prevention system to improve health and wellbeing?

VICTORIA UNIVERSITY OF WELLINGTON TE HERENGA WAKA



2. Developing indicators of progress

Much of this report describes the process undertaken to develop a set of qualitative and quantitative indicators that will help the evaluation team to make judgements and answer the evaluation questions. **Section 3** describes how we developed a Prevention Action Framework drawing on available literature and qualitative data gathered through the previous phase of the Evaluation. **Section 4** explains how the Qualitative indicators have been developed. **Section 5** explains the rationale for the selection of the Quantitative indicators. Below, we have summarised the indicators and mapped these onto Professor Mason Durie's model for Māori health promotion: Te Pae Māhutonga.

In building our set of draft indicators a significant focus (and potential constraint) has been their practical use for the purpose of evaluating the activities and outcomes of Healthy Families NZ – one of these constraints is the availability of data sources at the local level. The quantitative indicators come from national-level surveys for which sufficient data is available at Healthy Families NZ location level (New Zealand Health Survey, B4 School Check, Census 2018). The qualitative indicators will come from the data collected by the evaluation team (interviews, outcome narratives, surveys and other documentation). *One point to note is that the indicators described in this report are draft, and do not as yet have detailed criteria assigned to them.*

Draft indicator sets

Qualitative Indicators

Prevention System Outcome Indicators

- Community Self-Determination
- Communities defining Issues and solutions
- Leadership
- Systems Practice

Explanatory Indicators

- Connection and Collaboration
- Policy changes that support prevention
- Funding and contracting practices that support prevention

Analytical Indicators

- Deprivation
- Disruption to implementation
- Location setting
- Change in health promoting environments

Quantitative Indicators

- Ability to speak Te reo Māori language
- Household crowding, Household ownership
- Long term conditions – adult (diabetes, ischaemic heart disease, chronic pain, asthma)
- Long term conditions – children (asthma, eczema)
- Mental health – adult (psychological distress, mood disorder), Mental health – children (emotional or behavioural problems, development), Received physical punishment (children)
- Access to healthcare (unmet need, ED utilisation, immunisation status in 4-year olds)
- Self-rated health

- Oral health
- Nutrition
- Tobacco use
- Alcohol use
- Physical activity
- Body weight (BMI)

Māori health models

In developing the Healthy Families NZ evaluation framework, a te ao Māori lens, an indigeneity lens and Te Tiriti were an intentional part of our framing. The Healthy Families NZ location teams are all, to varying extents, working with partners to encourage organisations to use Matauranga Māori and associated knowledge resources, such as Maramataka, in their practices. We therefore identified and considered existing Māori health models – particularly those already referenced in current health promotion work – for their relevance and inclusion in the Healthy Families NZ evaluation framework.

Three Māori health models were considered:

- Te Whare Tapa Wha developed by Professor Sir Mason Durie compares health to the four walls of a house all four being necessary for wellbeing; with each wall representing a different dimension. Taha Wairua (spiritual health); Taha Hinengaro (mental health), Taha Tinana (physical health) and Taha Whānau (family health.)
- Te Wheke, the octopus developed by Dr Rose Pere uses eight tentacles of the octopus to from dimensions of health - Te whānau (the family), Waiora (total wellbeing for the individual and family), Wairuatanga (spirituality), Hinengaro (the mind), Taha tinana (physical wellbeing), Whānaungatanga (extended family), Mauri (life force in people and objects), Mana ake (unique identity of individuals and family), Hā a koro ma, a kui ma (breath of life from forbears), and Whatumanawa (the open and healthy expression of emotion)
- Te Pae Māhutonga is based on the Southern Cross constellation and developed by Professor Sir Mason Durie (Durie, 1999). The model defining 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)

    And two pointer stars representing Ngā Manukura (community leadership) and Te Mana Whakahaere (autonomy).

These three models of Māori health have a strong whakapapa Māori, developed by two distinguished Māori scholars Professor Sir Mason Durie and Dr Rose Pere and high levels of credibility in te ao Māori and te ao hauora tauiwi (Public health).

Te Pae Māhutonga and indicators of health and wellbeing

Based on our analysis of interview data collected in the first phase of the evaluation, and the findings of our literature review (both discussed in subsequent sections of this report), 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. (See Appendix 2 for a detailed description of Te Pae Māhutonga).

Table 2.1 show our progress to date in mapping indicators against Te Pae Māhutonga. Through this mapping exercise we can look across to the emerging Prevention Action Framework described in Section 3, to identity overlaps, gaps and indicators which work at different levels of the ecosystem. We can also see where the systems-change literature we have reviewed in this report is able to add to the model, as well as where we have gaps in the indicators we have selected.

Table 2.1 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 expect 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 in Section 3, if prevention in Aotearoa New Zealand is truly being strengthened.

Table 2.1 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 pre-requisite 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, documents, outcome narratives	Te reo Māori language	Census (change in indicator cannot be analysed: insufficient data)
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	Census (data can be used for context but not timeseries)
Te Oranga – Participation in society	Are we seeing local perspectives being valued? (priorities, goals, methods, outcomes)	Community self-determination	Outcome narratives, media	Long term conditions – adult (diabetes, ischaemic heart	NZHS

"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 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)	Communities defining issues and solutions Systems practice	reports, interviews	disease, chronic pain, asthma) Long term conditions – children (asthma, eczema) Mental health – adult Mental health children Access to healthcare (unmet need, ED utilisation, immunisation status) Received physical punishment (children) Household ownership Self-rated health Oral health	 NZHS NZHS NZHS, B4SC NZHS, B4SC NZHS, B4SC Census (use with caution) NZHS
Toiora – Healthy Lifestyles "Too many Māori, young and old, are trapped in risk-laden lifestyles and as a consequence will never be able to fully realise their potential." "Risks are highest where poverty is greatest".	Are we seeing evidence for change towards healthier practice, and access to healthier options, among individuals and organisations?	Change in health promoting environments	Outcome narratives, local data	Nutrition Tobacco use Alcohol use Physical activity Body weight (BMI)	NZHS NZHS NZHS NZHS NZHS, B4SC

Te Pae Māhutonga	Signs of a strengthening prevention system	Qualitative indicators	
	High level indicator questions	**Indicator topics**	**Data source(s)**
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 of Meadows framework? (levers, outcomes)	Leadership	Info from PMRs on SLG process, interviews, stakeholder survey
		Systems practice	PMRs, outcome narratives, interviews

3. Healthy Families NZ Evaluation Prevention Action Framework

This section details the rationale, the method and the findings drawn on for developing a framework through which we can make judgements about the effectiveness of actions on the prevention system, as part of the Evaluation. We are calling this a Prevention Action Framework because it focuses on defining factors at different levels of the prevention system that, if acted upon and shifted, could result in a system that supports prevention more.

We have drawn on:

1. thinking within the health system evaluation literature,
2. insights gathered from those involved with Healthy Families NZ, and
3. theory on how to achieve effective system change for health. This includes, for example, utilising Donella Meadows' hierarchy of effectiveness of levers for achieving system transformation.

Developing a framework and indicators of actions on the prevention system

The framework we are developing is aimed at identifying evidence of changes in the local prevention system, and the links between local outcomes that have been achieved, and the location teams' actions. We need therefore to identify the factors that can be acted on to produce change within the Aotearoa New Zealand prevention system.

How we will use the framework

We will use the Prevention Action Framework to:

- help visualise what the prevention system looks like;
- determine the key features and relationships, and their potential role in producing change;
- develop indicators for interpreting outcomes achieved and the potential effectiveness of the activities of Healthy Families NZ.

Data sources informing framework development

We are using two sources of information to inform our Prevention Action Framework. First, we have gathered insights from existing literature which discusses prevention systems in the context of health promotion. Second, we analysed qualitative data (interviews with participants involved with Healthy Families NZ as members of the workforce, Strategic Leadership Groups or partner organisations) collected in late 2017 during Phase 1 of the Evaluation.

We have brought together findings from both of these activities to develop a framework of the local prevention system, specific to the Aotearoa New Zealand context. While grounded in existing ideas about evaluating prevention initiatives using a systems lens, the framework will focus on factors that are important for communities here to achieve system change for health.

Section contents

In this section we will first summarise the findings of the qualitative analysis exercise, showing themes about key informants' views on what makes up a prevention system. We will then summarise the findings of a literature review looking at the use of prevention system ideas and frameworks, particularly for research into health promotion initiatives. Finally, we will present the draft framework that we developed based on these findings.

Analysis of 2017 interviews undertaken in Healthy Families NZ locations

Method

During the first phase of Healthy Families NZ (mid 2014 to mid-2018), the evaluation team produced two rounds of community case studies in order to conduct a case-comparison analysis showing progress of the initiative in the 10 locations (Matheson, Walton, Gray, Lindberg, Shanthankumar, et al., 2018). Each round of data collection involved multiple sources of data, including qualitative key informant interviews. The aim was to interview at least 10 people per location, including the managers, several workforce members and Strategic Leadership Group members, and some partners or stakeholders from different sectors who had worked with the Healthy Families NZ location teams in some way.

Semi-structured key informant interviews were carried out with members of the Healthy Families NZ workforce, Strategic Leadership Groups, and selected partners and national stakeholders in each of the 10 locations (View 1 - 120 interviews in total; View 2 – 107 interviews in total). The Ministry's national team and other national stakeholders were also interviewed to provide a national perspective (View 1 – seven interviews; View 2 – eight interviews).

Interviews took approximately an hour and covered participants' experiences with Healthy Families NZ, the successes and challenges, and their understanding of how to take a systems approach to health.

One of the questions we asked in the interviews in View 2 was "One aim of Healthy Families NZ is to strengthen prevention efforts. What is your view of what/who the prevention system is made of in your community?"

For this report we have gone back to our data from View 2 and thematically analysed the responses to this question to help inform our definition of a locally relevant prevention system. Below we discuss our findings.

Summary of Findings

There was a great deal of agreement in how participants described the prevention system in Aotearoa New Zealand. The overall themes were that the prevention system:

- includes overall environments, infrastructure, and societal structures that can enable health – and needs to include addressing barriers to access;
- involves every person and organisation;
- requires policy action;
- should enable intervention before a crisis;
- should include indigenous knowledge and strengths-based approaches; and
- changes must be driven by communities.

These themes are discussed in more detail below.

Theme 1: The prevention system includes overall environments, infrastructure, and societal structures that can enable health – and needs to include addressing barriers to access

A wide range of the participants across workforce, leadership and partner groups talked about the system as many levels of linked structures in society. Participants who spoke to this theme talked about the links between infrastructure, transport systems and other environment resources that should make it easier for people to live in ways that support health and wellbeing.

> *The prevention system first of all starts with the structural things in society… like a social welfare safety net; good, dry, affordable housing; safe transport systems, including those with a lot more availability or support for physical activity; and actually an education system that helps to buffer and ameliorate the inequalities…*
>
> *Alongside that you've kind of got your environmental health things … water and sewerage systems, clean air, hazard management and so on…That's all your kind of foundation things.*
>
> *Then you've got more the way people live their lives, the risk factors for long-term chronic disease and so on. So, things like smoking, alcohol misuse, low levels of physical activity, poor diet and nutrition and things like that, some of which are impacted by the structural things, your ability to do or not do those things is impacted by the structural things, but they also are choices that all of us make" (Strategic Leadership Group member)*

Some Leaders especially talked about needing to see the interrelationships within the system, in order to make sure that leverage points with potential to create change were targeted.

> *just a little tweak here and then everything else will be affected, that's what I see systems change is, looking for those tweaks or changes somewhere, that kind of has a ripple effect somewhere else, and that nothing is linear it's all kind of mixed up and everything is kind of nested inside each other, and it's all connected and interrelated (Strategic Leadership Group member)*

Some participants noted that while the people they worked with in their communities or organisations would not use a term such as "prevention system", they did understand that there were bigger picture drivers that impacted peoples' access to healthy options.

> *They definitely support systems change even though they wouldn't articulate it as being systems change. They would just say they want kai to be you know available and to be cheaper and that's a symptom of a system. …*
>
> *And I know that people understand that that's part of a bigger picture, but they wouldn't necessarily know how to portray that. (Workforce member)*

Participants were particularly concerned about the social determinants of health, and the problems caused by unequal access to services and resources. They wanted to see more action on poverty. Many had seen their communities impacted by poor housing, for

example, and they were aware that solutions needed to happen at a cross-sector, systemic level.

> *The system is what sits around the social determinants of health. So, what fosters and encourages wellness in these communities and how joined up that eco-system is to make that possible. (Workforce member)*

Some also noted that the original design of Healthy Families NZ – in which teams were instructed to focus on activities addressing four areas, nutrition, physical activity, smoking and alcohol – did not allow enough attention on the connected system issues they saw as underpinning these behaviours. They were not given a specific mandate to address poverty or housing problems in their communities, and yet these issues needed to be considered as social determinants underpinning healthy behaviour change. Links between mental health, poverty and economic pressures made it harder for people and communities to mobilise and create change.

> *It's about finding ways to remove the barriers that make it difficult for people to live in a healthy way and so you do get into issues around inequalities and poverty (Strategic Leadership Group member)*

Theme 2: The prevention system involves every person and organisation

Many participants talked about how the whole community was involved in prevention. From their own experience with Healthy Families NZ, workforce members and leaders were aware that organisations in all sectors of society had potential to become involved in prevention system change. They particularly noted that non-health-sector actors were a vital part of the prevention system, and that organisations needed to be working together across sectors to get the prevention system working.

> *The prevention system would look at who is doing what, where and how they're doing it, how that's going for them, what everyone's role is, where there might be opportunities to change/adapt, where the system might be failing or doing good things, how we can learn from that and replicate it for other areas. It's about a big group of interlocking people and organisations and contracts and resources. (Workforce member)*

Some gave examples of players in different sectors accidentally undermining each others' messages or acting in siloes that wasted resources and made it hard to achieve continuity, without realising they could achieve more if their work was aligned. On the plus side, there were some examples given of community players outside the health sector starting to recognise their role in prevention.

> *For your policies to be really effective they shouldn't be looked at singularly, they should be all be helping each other, and I think the same thing goes with organisations, you know we shouldn't be trying to work in silo. We should be trying to align ourselves so that we can have a bigger effect. (Workforce member)*

> *It's good to see that Council are actually starting to see themselves in the prevention space as well…*

That it's not just a health thing, that it's an everyone thing. It's good too that some schools are starting to identify that they see themselves in that space. (Workforce member)

Theme 3: The prevention system requires policy action

Some participants talked about the need for higher-level action to influence the system, which a number of them understood to mean policy change. This could be changing the rules around practices in an individual organisation, or local council policies that affected environments such as smokefree policies or food distribution practices.

There was also a sense that systems change work required leadership "upwards", that is, Healthy Families NZ communities influencing people in power to make high-level and potentially national policy changes.

In the local government sense, it's about policy…

It's about from a much broader perspective what's happening above at central government level and I think one of the huge advantages that we're probably not making the most of as a Healthy Families Collective is leadership upwards in terms of their policy setting in particular. (Strategic Leadership Group member)

I feel like it's higher level stuff. Even though they're focusing on this environmental stuff, there's also the space where they're dealing with people in power, people who can influence policy. I feel like that's what systems change is. (Partner)

Theme 4: The prevention system should enable intervention before a crisis

Frequently discussed with reference to the "fence at the top of the cliff instead of ambulance at the bottom" analogy, this theme was also about collaboration and infrastructure.

We've got a lot of organisations that are, I see them as ambulance at the bottom of the cliff kind of things... I think a lot of organisations also are operating in isolation here, so there's not a lot of collaboration between organisations or if they are collaborating it's at you a kind of basic level, it's not, from an operational level or from a more in depth kind of level. (Workforce member)

Participants saw the need for a shift in focus towards better collaboration. They also felt that incentives for service delivery might need to be changed in order to resource and encourage the early intervention side of prevention. This could be expressed as a paradigm shift – perhaps towards the "prevention mindset" referred to in other work, although this exact term was not used by participants.

Pretty much nobody was prevention, everyone was down the other end at like intervention or whatever it was. And that was really insightful for me so it was like, 'man I can see where all the money goes. It only goes for all this reactive stuff.' … Whereas prevention for me is about looking at what the causal roots are of that and taking action in that space. (Workforce member)

Theme 5: The prevention system should include indigenous knowledge and strengths-based approaches

Participants described the work that was underway in several locations to encourage application of traditional Māori knowledge. This is sometimes described as "Māori systems return" – that is, recognising that systems thinking is not new, despite more recent Western concepts being introduced to Aotearoa New Zealand community organisations. Rather, a form of systems thinking was here before, and had been helping Māori people to keep themselves and their environments well by recognising the interconnectedness of all systems. It was also pointed out that different cultures have different understandings of what health and wellbeing mean.

> *Your diet is around you and so is your prevention system, and that's kept the people well for 100's of years. So, we're focusing on actually our traditions. So, it's a mental journey first of all. Taking people back to consider the purpose of traditional practices around kai ki te moana, kai ki te awa, kai ki te marae (Strategic Leadership Group member)*

Some stakeholders who worked with youth/ rangatahi especially saw the use of mātauranga Māori as mana-enhancing, having potential to increase the self-worth and resilience of people who were often otherwise seen as at-risk.

The managers in locations implementing this systems return work acknowledged that it was not a straightforward task, particularly given the way that funding for prevention work tended to be prescribed, and the lack of recent precedent about how the knowledge should be applied. There were however some promising developments with partner organisations embracing the use of maramataka (the Māori lunar calendar as a guide for activities).

> *The stuff that we're doing in the Māori clusters around systems return and looking at maramataka and pātaka and rāhui and those systems, they've always been there, I guess it's just been a matter of how have we, as a team, as a community, what do we think about those systems? And can they be applied in a contemporary context? And what does that look like? And then who will drive it? (Manager)*

Theme 6: Prevention system changes must be driven by communities

Participants often expressed the need to empower and listen to their communities about priorities for prevention work. Some communities seemed reluctant to trust in "consultation" from a health organisation, having had experience of feeling things were done *to* them rather than *with* them. However, participants described a lot of effort going into gathering local insights, getting community groups to define their needs and goals.

> *The community usually has things done to them, and so what we are trying to share with our stakeholders is that our community are a part of the solution, and they hold a lot of the answers, so their input is valuable, and that whole process takes time… (Workforce member)*

> *My view of the prevention system is that it starts with the community. You can't rely on local governing systems for the answers. The awesome things happening without*

> *Healthy Families and organisations, communities create by default their own systems that work for them. They know their issues. They understand the hood better than anybody else does. All we can do is come in and whakamana or whakapiki those processes. (Workforce member)*

In particular, Healthy Families NZ location teams saw their role as connecting leadership from the local communities and supporting them to promote the changes that they had identified themselves. Although local priorities and national priorities did not always align, some stakeholders had found value in Healthy Families NZ locations teams' ability to help them connect with policymakers and to advocate more effectively.

> *For me the prevention system is out there, it is the people. Yeah that's my belief, so that's why I feel very privileged in Healthy Families that because it's, we tap into those community leaders and those champions to lead the way. We need to translate what that looks like to win favour with funders or the sector (Manager)*

> *We want to strengthen community leaders and to see that they're not outside of this prevention system. They are at the very heart of it. In fact, their role and influence is more powerful than ours in some situations because they influence people in a way that we can't. (Workforce member)*

Conclusion

Participants in Evaluation interviews described a number of facets of the prevention system as they saw it. Key considerations include the need for prevention system interventions to connect different groups in order to work more effectively together, to take into account local (e.g. Māori and other indigenous) knowledge systems, and to ensure that locally-based solutions and higher-level policy actions all incorporated the views of affected communities. As we develop new indicators to evaluate change in the system as described, we will consider measures that reflect the views of interview participants. The likely themes for such measures, according to the interviews analysed, are listed below under four headings. These headings reflect different levels of the prevention system, which will be elaborated on later in the report where we introduce our proposed Prevention Action Framework.

Paradigms, values and goals:

- Shifts in mindset towards prevention; increases in incentives to focus on prevention
- Community voice in prevention policy development
- Structural change: policy and who has power to change it

System structure, regulation and interconnection:

- Collaboration (cross-sector, local and national, community-led)
- Greater alignment of resources between organisations
- Evidence for actors within the system being more joined up to address systemic issues
- Evidence for the commercial determinants of health being addressed – likely through regulatory change
- More parts of the system addressing poverty
- Policy systems becoming more responsive to local needs

Information, feedback and influencing relationships

- Non-health organisations promoting health through their practices, partnerships or organisational goals
- Increase in organisational use of matauranga, and in collaborations to teach ways of using the knowledge
- Emergence of champions
- Evidence of Healthy Families NZ location teams leveraging influence to promote community priorities

Structural elements, resources and actors

- Infrastructure improvements
- Improvement in access to health-promoting facilities and services
- Healthy environment change

Literature review

Purpose

This literature review is to inform the development of a Prevention Action Framework, and to explore ways that researchers have measured and evaluated health prevention system impacts. We intend to build on examples of how such models can be used to evaluate system-level change resulting from health promotion.

Key questions include:

- In what context is the health "prevention system" mentioned?
- What are the parameters for the health prevention system, according to the available literature?
- How have impacts on the health prevention system been assessed, in previous research?

Background context

Healthy Families NZ has been designed and funded by the Ministry of Health. It was initially based on Healthy Together Victoria[1] with some adaptation to the local context and informed by the international and indigenous health promotion frameworks that the Ministry and associated health entities refer to. We are familiar with a number of models and frameworks used within the Aotearoa NZ health promotion context. We discuss these here as background to the wider review.

Māori health models

As described in the previous section, we reviewed Māori health models that are currently referred to by the Ministry[2], and have decided to refer to Te Pae Māhutonga as a framing lens on the indicators we select, to ensure that all these aspects of health promotion are represented.

[1] https://www2.health.vic.gov.au/about/publications/Factsheets/evaluating-a-complex-systems-approach-to-prevention

[2] https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models

Figure 3.1 Te Pae Māhutonga health promotion model

The Ottawa Charter for Health Promotion, 1986

This charter, developed in 1986 at a meeting on health promotion by the World Health Organization (WHO), lays out the prerequisites for people to be able to live healthy lives. This Charter and those that have built on it subsequently are used to plan public health services in Aotearoa. The Ottawa Charter defined several areas for action on health promotion. These are:

Build Healthy Public Policy

- Including putting health on the agenda of policy makers in all sectors, taking diverse approaches to foster equity and ensure healthier environments.

Create Supportive Environments

- Including taking a socioecological approach to health, acknowledging the connection between people and the environment and systematically assessing the health impact of environmental change.

Strengthen Community Actions

- Including community empowerment, drawing on existing resources and ensuring access to information and funding support.

Develop Personal Skills

- Including education and information to enable people to cope with health issues and make choices conducive to health.

Reorient Health Services

- Including the attitude and organisation of health services, to take responsibility for health promotion and focus on people's holistic needs.

Comment

The Ottawa Charter remains relevant to the type of prevention system change that Healthy Families NZ should be aiming to influence. In particular, the definition of supportive environments applies to the interconnectedness described in some Māori health models, and the action point about strengthening community actions reflects the role of Healthy Families NZ location teams in brokering collaboration between sectors in their communities.

WHO Building Blocks of a Strong Prevention System

The initial Healthy Families NZ design drew on Building Blocks, originally adapted by the Department of Health and Human Services, Victoria, from the WHO Building Blocks of a Strong Health System. These Building Blocks were designed to emphasise that health systems are dynamic and interconnected.

Figure 3.2 Healthy Families NZ Building Blocks of a strong prevention system

Comment

After reviewing other prevention system frameworks, we found that the Building Blocks on their own did not include all the relevant factors of a health prevention system. However, the Building Blocks combined with the Healthy Families NZ guiding Principles (also developed with help from the Department of Health and Human Services, Victoria, Australia), do address more levels of the prevention system. These are copied below.

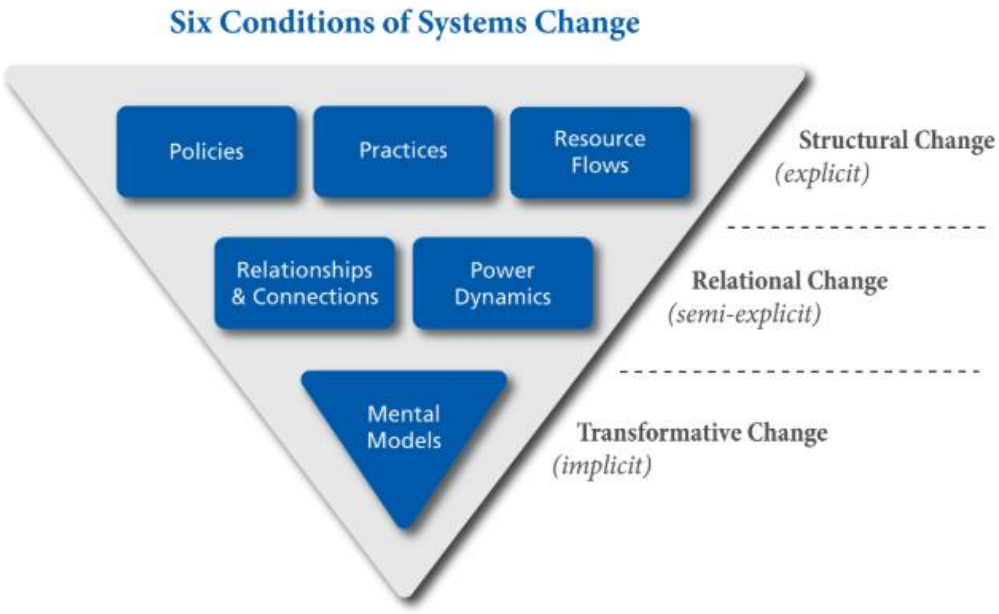
Figure 3.3 Healthy Families NZ Principles

Implementation at Scale	
	Strategies are delivered at a scale that impacts the health and wellbeing of a large proportion of the population, in the places where they spend their time – in schools, workplaces and communities.
Collaboration for Collective Impact	
	Long term commitment is required by multiple partners, from different sectors, at multiple levels, to generate greater collective impact on the health of all New Zealanders. Knowledge is co-created and interventions co-produced, supported by a shared measurement system, mutually reinforcing activities, ongoing communication and a 'backbone' support organisation.
Equity	
	Health equity is the attainment of the highest level of health for all people. Healthy Families NZ will have an explicit focus on improving Māori health and reducing inequalities for groups at increased risk of chronic diseases. Māori participation at all levels of the planning and implementation of Healthy Families NZ is critical.
Experimentation	
	Small scale experiments provide insight into the most effective interventions to address chronic disease. These experiments are underpinned by evidence and experience and are monitored and designed to then be amplified across the system, if they prove effective.
Adaptation	
	Strengthening the prevention system requires constant reflection, learning and adaption to ensure strategies are timely, relevant and sustainable.
Line of Sight	
	The line of sight provides a transparent view on how investment in policy is translated into measured impacts in communities, ensuring best value from every dollar spent on prevention.
Leadership	
	Leadership is supported at all levels of the prevention effort including senior managers, elected officials, and health champions in our schools, businesses, workplaces, marae, sporting clubs and other settings in the community.

Six conditions of systems change

During the current phase of Healthy Families NZ, location teams have adopted a practice framework, the Water of Systems Change, which was based on Meadows' as well as several other subsequent systems thinkers' work. This framework lists six conditions for systems change: one for transformative change ("Mental Models"), two for Relational Change ("Relationships and Connections" and "Power Dynamics") and three for structural change ("Policies", Practices" and "Resource Flows")(Kania, Kramer, & Senge, 2018).

Figure 3.4 Six Conditions of Systems Change (Kania, Kramer and Senge 2018)



Comment

For the purpose of the evaluation, this framework provides useful insight into how Healthy Families NZ location teams have prioritised initiatives and activities to promote and develop. A concise variation of a system change hierarchy, it shows what level of system change different activities are aimed at.

Summary

We have outlined those models which are likely to directly influence Healthy Families NZ and our evaluation of its progress. These include local and international health promotion frameworks that are either already directly quoted in reference to Healthy Families NZ or inform overarching ways of talking about health promotion.

Literature review search method

The purpose of this literature review was to explore how a "prevention system" has been defined, in particular by those taking a systems approach to health promotion evaluation.

We conducted searches via Scopus, following up some references with Google Scholar, using the following terms:

- "prevention system" AND health AND evaluation
- "prevention system" AND health AND intervention
- "systems thinking" AND health AND prevention

When papers covered initiatives with potential relevance to Healthy Families NZ and its evaluation, we also searched for and reviewed online material and other publications about those initiatives.

To be included, papers had to refer to the term "prevention system" as well as just prevention and/or the health system. Articles on evaluation approaches had to relate to health promoting initiatives and interventions. Between them these searches turned up 246 results, of which 62 were selected for further review. Of these, 49 referred to specifically named initiatives or projects; many of these were the subject of several papers and one initiative and its offshoots accounted for 17 papers. Other studies reviewed included evidence reviews, and some borderline-relevant studies into topics such as systems-thinking evaluation of social programmes or health-system-based prevention of disease or injury. The less relevant papers not selected for review were likely to refer to "prevention systems" in a narrow sense such as a technological security system, fall prevention system or workplace health and safety system. A bibliography is attached at Appendix 3.

This review comprises a brief summary of those studies that featured frameworks of interest to our prevention system definition task. It concludes with a brief overview of the kind of factors referenced at different levels of the framework we are developing.

Findings

Of the initiatives that we chose to review the papers and other material about, we collated quotes on their intervention logic, prevention system frameworks, development of indicators for measurement and theories of change. We then compared frameworks and criteria used to define a health prevention system.

Frameworks for measuring change in prevention systems

The two frameworks that apply most appropriately to the prevention system in Aotearoa New Zealand, as described by the interview participants and by the overall ideas behind Healthy Families NZ, are from a 2019 systematic review looking at elements of systems for chronic disease prevention (Baugh Littlejohns & Wilson, 2019) and an indigenous implementation framework developed with reference to Kaupapa Māori approach (Oetzel et al., 2017). A third resource with particular relevance to our evaluation approach shows definitions and measures developed for a "culture of health" to be achieved (Chandra et al., 2017; Plough, Miller, & Tait, 2018). These are discussed first, followed by other initiatives and their frameworks in alphabetical order.

Australian Prevention Partnership Centre: 2019 systematic review framework "Elements of systems for chronic disease prevention

The APPC is a collaboration between researchers, policy makers and practitioners, aiming to improve the use of evidence and increase the capacity for systems thinking about prevention (Wilson, Wutzke, & Overs, 2014). Researchers associated with the Centre recently completed a systematic review looking at how systems for chronic disease prevention and their attributes can be defined (Baugh Littlejohns & Wilson, 2019). They summarised seven attributes of effective systems for chronic disease prevention:

- collaborative capacity,
- health equity paradigm,
- leadership and governance,
- resources,
- implementation of desired actions,
- information, and
- complex systems paradigm.

The authors also concluded that "prevention systems" could be described as including the following elements: Diverse entities and multiple sectors, Multiple levers, Unique and ever-changing contexts, and Dynamic relationships and interactions.

Figure 3.5 Framework for describing, assessing and strengthening systems for CDP (Baugh Littlejohns and Wilson, 2019)

Fig. 2 Framework for describing, assessing and strengthening systems for CDP

He Pikinga Waiora Implementation Framework

This framework was designed by a team of researchers working on a National Science Challenge project aiming to make health interventions that work for Māori communities (although the framework has since been applied to other indigenous communities). It is grounded in Kaupapa Māori theory and aims to centre indigenous knowledge creation and use (Oetzel et al., 2017).

As shown in the diagram, the framework comprises four related elements wrapped around a Kaupapa Māori centre. The four elements are:

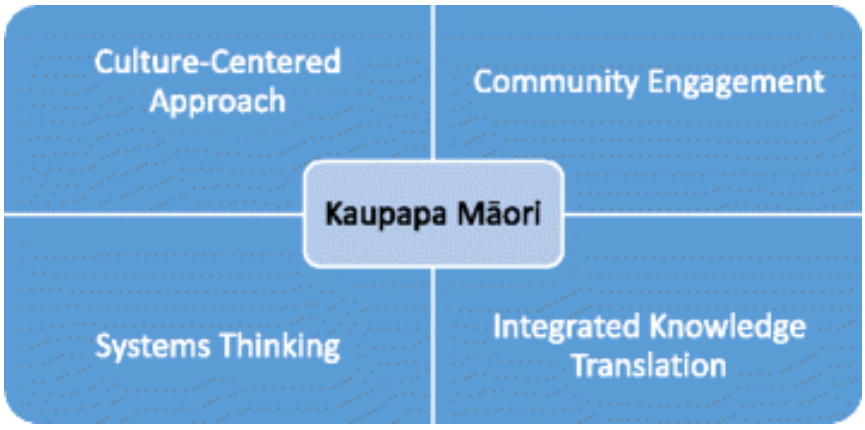
Culture-centred approach – recognising the importance of local perspectives and using these to leverage resources and create structural change.

Community engagement – power sharing, collaborative partnerships, bidirectional learning, co-created interventions.

Systems thinking – emphasis on holism and multilevel thinking, looking at dynamics and connections between elements.

Integrated Knowledge Translation – knowledge users as equal partners; co-creation and co-innovation rather than one-directional knowledge transfer.

Figure 3.6 He Pikinga Waiora Implementation Framework



Robert Wood Johnson Foundation "Culture of Health Vision and Action Framework"

This philanthropic public health foundation in the United States of America states their vision of "a Culture of Health—with health equity at the center"[3]. They have researched and consulted on a framework that identifies four action areas for achieving a national culture of health: Making health a shared value, Fostering cross-sector collaboration to improve well-being, Creating healthier, more equitable communities, and Strengthening integration of health systems and services. For each of these and an outcome area (Improved population health, well-being and equity), three Drivers are listed – parts of the system that require attention in order to make the changes needed to achieve the action areas. These Drivers then have evidence-based Measures listed alongside; these were narrowed down from a much longer list in order to include those for which national data was available, and to ensure a focus on broad/ upstream determinants of health, diverse audiences and equity (Chandra et al., 2017). The process for developing these measures has relevance to our evaluation process, given it involved consultation and refinement over some time with a multidisciplinary team and stakeholder feedback.

[3] https://www.rwjf.org/en/how-we-work/building-a-culture-of-health.html

Figure 3.7 Robert Wood Johnson Foundation Culture of Health National Measures

Communities That Care

Of those papers that were deemed relevant to review, a disproportionate number relate to one initiative of US origin – Communities That Care – which is referred to itself as a "prevention system" bringing together community stakeholders to prevent high risk youth behaviours and outcomes. Although referring to an initiative/ intervention as a system in itself does not fit our initial definition, we reviewed some of the literature on its approach because of the involvement of wider community actors, the evaluation of sustainability of the intervention (Gloppen, Arthur, Hawkins, & Shapiro, 2012) and the development of a theory of change relating to this initiative and its evaluations (Eric C. Brown, Hawkins, Arthur, Abbott, & Van Horn, 2008).

The CTC logic model shown below lists "System Transformation Constructs" (Eric C Brown, Hawkins, Arthur, Briney, & Fagan, 2011) which could be included in a definition of the prevention system:

- Adoption of science-based prevention
- Community collaboration for prevention
- Community support for prevention
- Community norms
- Social development strategy

Figure 3.8 Communities That Care prevention system model

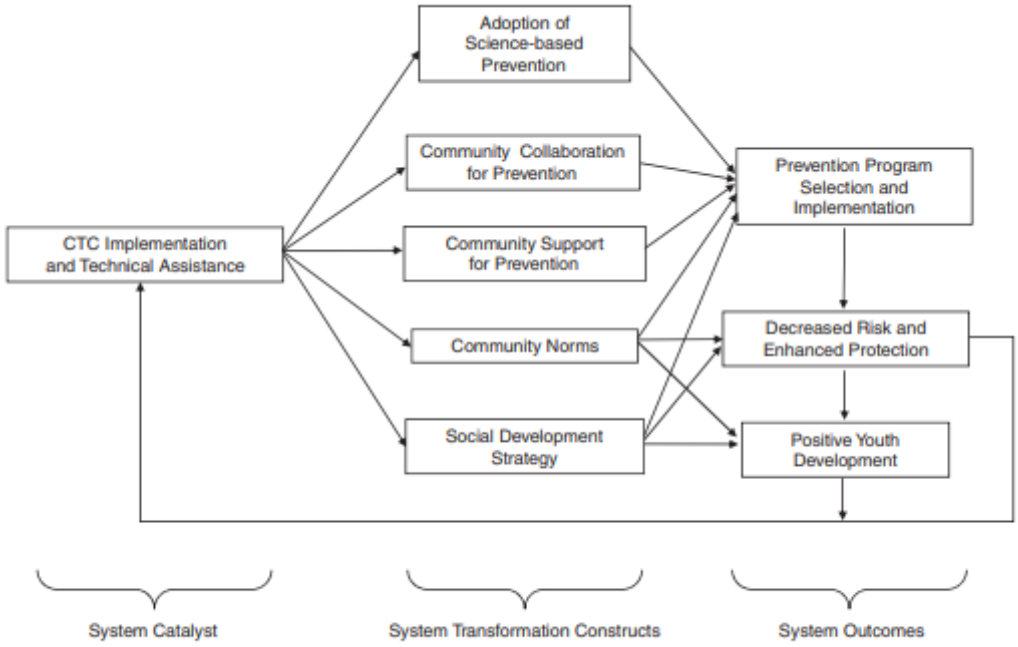


Figure 1. Theoretical model of Communities That Care prevention system transformation.

Prevention Institute, California, USA

In 2018 this Institute published a book illustrating their System of Prevention framework (Sims & Aboelata, 2019). The aim was to help people understand how systems interact with each other, in order to redesign the systems towards health, safety and equity. Common elements and actions for a successful System of Prevention are identified, described in the guide as the following actions:

- Develop a shared vision
- Engage in multilevel action
- Elevate community voices and leadership
- Facilitate community partnerships and multisector collaboration
- Empower a skilled prevention workforce grounded in social justice
- Make the case for prevention and equity
- Gather and share data, and
- Generate stable sources of funding.

Strategic Prevention Framework State Incentive Grant Program (SPF SIG)

This is an initiative in the USA aiming to prevent substance abuse. The impacts of this incentive grant on different states' prevention infrastructure has been evaluated (Diana, Landy, & Flanagan, 2014; Orwin, Stein-Seroussi, Edwards, Landy, & Flewelling, 2014). The domains covered included:

- Organisational structure
- Strategic planning
- Data systems
- Workforce development
- Use of evidence-based programs, policies and practices
- Cultural competence, and
- Evaluation and monitoring.

Sustainable obesity prevention review

This is one study (a systematic narrative synthesis review) rather than an intervention, in which the authors set out to "identify factors that contribute to the sustainability of community-based obesity prevention interventions and their intended outcomes." (Whelan, Love, Millar, Allender, & Bell, 2018). They identified 10 factors of sustainability, listed in order of how often they were referenced in the literature: Resourcing, Leadership, Workforce development, Community engagement, Partnerships, Policy, Communication, Adaptation, Evaluation, and Governance.

These are described in more detail, along with suggestions for their application, in the table copied below.

Table 3.1 Sustainability framework for obesity prevention (Whelan, Love et al 2018)

Table 2 Sustainability framework – factors, descriptions, proposed applications

Factor	Description	Application
Resourcing	Resourcing most frequently referred to financial resources, often used to employ human resources. Others highlighted the importance of human resources being drawn from existing capacity to enhance sustainability of the intervention or health outcomes.	Consider funding in terms of financial and human resources. Paid workforce is important, but volunteers can also add capacity. Extending the workloads of existing workforce needs reconsideration.
Leadership	Leadership was identified as important, but characteristics of good leadership were not clarified. Effective leadership will mobilize capacity, interactions, innovation, collaboration and trust. Leaders come from all aspects of the community.	Identify leaders within organizations (not always CEO level) and the community. Acknowledge emergent leaders throughout the intervention.
Workforce development	Workforce development included the upskilling of existing workforce and teaching skills to new recruits and volunteers, in all aspects of the intervention.	Provide ongoing training to all staff and volunteers at the start and during the intervention on planning, implementation and evaluation. Content knowledge is also important in supporting healthy eating and physical activity interventions.
Community engagement	Community engagement is a planned process that identifies all relevant stakeholders and includes community members beyond those engaged in the planning of the intervention.	Consider using participatory research frameworks that involve the community in all phases of the intervention to enhance sustainability.
Partnerships	Partnerships involve multiple organizations joining forces to achieve a common goal.	Formalize partnerships and collaborations and articulate this in writing.
Communication	Communication comprises the use of multiple media channels to enhance reach of the intervention and its messages to the intended audiences.	Develop a formal communication plan with an appropriate budget and regularly assess reach and effectiveness of communication strategies.
Policy	Policy includes rules, regulations or legislation that provide guidance or mandate the provision of healthy food and encouragement of physical activity to meet healthy guidelines.	Consider policy across all domains from rules and regulations to organizational and governmental policies. Plan how these policies are implemented and assess uptake and adherence.
Adaptation	Adaptation requires flexibility of evidence informed interventions to ensure contextual relevance to the community	Take heed of fidelity of implementation but place great emphasis on evolving intervention delivery to the specific context.
Evaluation	Ongoing checking to ensure alignment with strategic direction and re-balancing of implementation to achieve strategic vision.	Budget specifically for evaluation. Evaluate regularly, not only pre and post. Feedback regularly into the intervention to enable further adaptation and enhance successes and minimize dead ends.
Governance	A group or individual who provide strategic direction, mobilizes funding and resourcing and ensures the intervention keeps to the long-term vision A specific structure that guides the direction of the intervention, preferably established through a memorandum of understanding or similar guiding document.	Develop a clear governance structure to provide strategic guidance and oversight, keeping the end goal in sight. Good governance structures will mobilize resources and advocate for the intervention. Document roles and responsibilities and meeting frequency.

W3 project (What Works and Why)

This is an Australian project using peer-led programs to support HIV and hepatitis C prevention, particularly among drug-using communities (Brown G, 2016; G. Brown et al., 2018). It was designed using systems-thinking and participatory methods (G. Brown et al., 2019). The W3 Framework includes elements relating to the program, and system-level functions, as shown in the table copied below.

Table 3.2 What Works and Why Framework for HIV and Hepatitis C prevention

Table 2
Elements and Functions of the W3 Framework.

Element	Definition
Community system	The social networks and cultures the program engages with, and the processes of interaction and change that are taking place within them.
Policy system	The policy system includes funders, policy-makers, media, health services, research, and other organisations in the sector.
Peer-based activities	Different kinds of peer-based and peer led approaches that depend on peer skill – the ability to combine personal experience and real-time collective understanding to work effectively within a diverse community
Practitioner learning	Peer workers pick up insights from clients and contacts, and develop, test and refine mental models of their environment.
Organisational knowledge practices	Program management encourages the discussion and capture of insights from practitioner learning as an asset for the organisation and for sharing with stakeholders in the policy system.
Arrows	Flows of knowledge or causal influence that constitute the program as a system.

System Level Functions	Explanation
Engagement	How the program participates within the PWID communities and networks and maintains up to date mental models of the diversity and dynamism of needs, experiences and identities in its target communities.
Alignment	How the program works within and picks up signals about what's happening in its policy and health sector environment and uses this to better understand emerging policy issues and what may need to change to achieve better outcomes for the community. These changes may be either in the policy, health or justice systems or in the peer programs and advocacy conducted by peer organisations.
Adaptation	How the peer organisation changes and refines its understanding and approach based on insights from engagement and alignment. The foundation of the adaptation is peer skill - the ability to combine personal lived experience within injecting drug use with a broader collective understanding of the PWID community and apply this within peer services, peer health promotion or peer leadership (such as policy advice).
Influence	How the program uses existing social and political processes to influence and achieve improved outcomes in both the community and the policy/sector systems

WHOSTOPS (Whole of Systems Trial of Prevention Strategies for Childhood Obesity)

This was a cluster-randomised trial in 10 communities in southern Victoria, Australia. It took a systems approach to mobilising community action on measures to prevent childhood obesity (Allender et al., 2016). Researchers reported on the initiative's progress, applying an existing theoretical framework (Foster-Fishman's theoretical framework for characterising systems change) to bound the system. That is, to clarify what is being assessed and to understand what is contained within the system (Allender et al., 2019).

It is this Foster-Fishman framework that is of interest to our evaluation. They propose six elements of the system:

- Systems norms
- Financial resources
- Human resources
- Social resources
- Regulation, and
- Operations.

(Foster-Fishman, Nowell, & Yang, 2007)

Summary

We reviewed 62 national and international articles deemed relevant to the development of our prevention framework, along with online resources on to the development and evaluation of the related initiatives and programs. We found that the most useful frameworks were those that covered resource and infrastructure requirements along with those levels higher up in Meadows' list of levers – changing expectations, goals and values for what the system should achieve.

In the Aotearoa New Zealand context, according to interview participants and our understanding of system-change approaches here, two points not always covered in international frameworks include indigenous cultural values and the importance of community voice in deciding on goals and actions.

Although the work we reviewed has produced frameworks with variations in emphasis depending on the nature of the initiative, there were a lot of commonalities in the content found. Some of the literature was more operationally focused (that is, referred more to the resources, processes and components of programs) while others included higher-level levers, such as health equity paradigms and mindsets. In summary we found that those frameworks that referred to paradigm change focused on mindsets (holistic, systems-thinking), shared values (of equity, culture and health), norms, or shared visions.

In terms of system structure, frameworks within the literature depicted the dynamic relationships between different entities and sectors, multilevel action and collaboration, and policy systems that support collaboration.

Those that addressed information, feedback and relationships frequently referenced knowledge, data and information use, along with emphasis on community engagement, community voice, and co-creation of strategies for change. Leadership was also frequently mentioned. Knowledge-use processes such as evaluation, monitoring and adaptation based on evidence were also noted as important factors.

The material and structural elements and actors described in these frameworks included:

- resource allocation and its stability or sustainability;
- investment in a suitably skilled workforce;
- organisations and entities;
- and the social and physical infrastructure that can enable health in communities.

Comparison of findings to produce proposed framework

Our draft Prevention Action Framework for Aotearoa New Zealand has been informed by, first, compiling a summary of prevention system factors from existing relevant literature and other frameworks. These findings were then compared and contrasted with themes from interviews we conducted with participants in the Healthy Families NZ evaluation about their understanding of what the local prevention system encompassed.

We have then arranged these findings using Meadows' levers for intervening in a system (Meadows, 1999). The framework describes the components of a prevention system (as defined in the literature and interviews). The levers of system change are about showing the ways that a system can be intervened in, in the order of how much change each lever has the potential to cause. The system components identified therefore are listed in groupings, in the order of how influential a change in this factor could be for creating system change.

Prevention system – levers of change

The contents of the proposed Prevention Action Framework were initially arranged using Meadows' schema of 12 levers for intervening in a system developed (shown in the order of increasing effectiveness):

> *12. Numbers: Constants and parameters such as subsidies, taxes, and standards*
> *11. Buffers: The sizes of stabilizing stocks relative to their flows*
> *10. Stock-and-Flow Structures: Physical systems and their nodes of intersection*
> *9. Delays: The lengths of time relative to the rates of system changes*
> *8. Balancing Feedback Loops: The strength of the feedbacks relative to the impacts they are trying to correct*
> *7. Reinforcing Feedback Loops: The strength of the gain of driving loops*
> *6. Information Flows: The structure of who does and does not have access to information*
> *5. Rules: Incentives, punishments, constraints*
> *4. Self-Organization: The power to add, change, or evolve system structure*
> *3. Goals: The purpose or function of the system*
> *2. Paradigms: The mindset out of which the system—its goals, structure, rules, delays, parameters—arises.*
> *1. Transcending Paradigms*

(Meadows, 1999)

Table 3.2 shows our suggested components of the Aotearoa New Zealand prevention system, ordered by the thematic groupings we developed, with the corresponding Meadows levels noted in italics. The listed factors are things that, if acted upon and shifted, could result in a system that supports prevention more. Based on the information we have reviewed, we believe that this is the system that Healthy Families NZ is aiming to change. Therefore, this is what we will base our analysis of the Healthy Families NZ locations' activities and outcomes on.

Table 3.2 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)

4. Qualitative indicator development

This section describes the development of qualitative indicators for making judgements against the following two evaluation questions:

- To what extent has the prevention system in each Healthy Families NZ location been strengthened? How and in what ways?
- To what extent is Healthy Families NZ making a difference to Māori health and equity? How and in what ways?

Approach to making an evaluative judgement

In summary, when making evaluating judgements we will:

- Be guided by theory
- Focus on activities and outcomes close to and connected with Healthy Families NZ location teams
- Look across multiple indicators to make holistic judgement
- Be open to information outside of indicators, if presented and appears relevant, and
- Be aware of changes in wider context within which Healthy Families NZ operates.

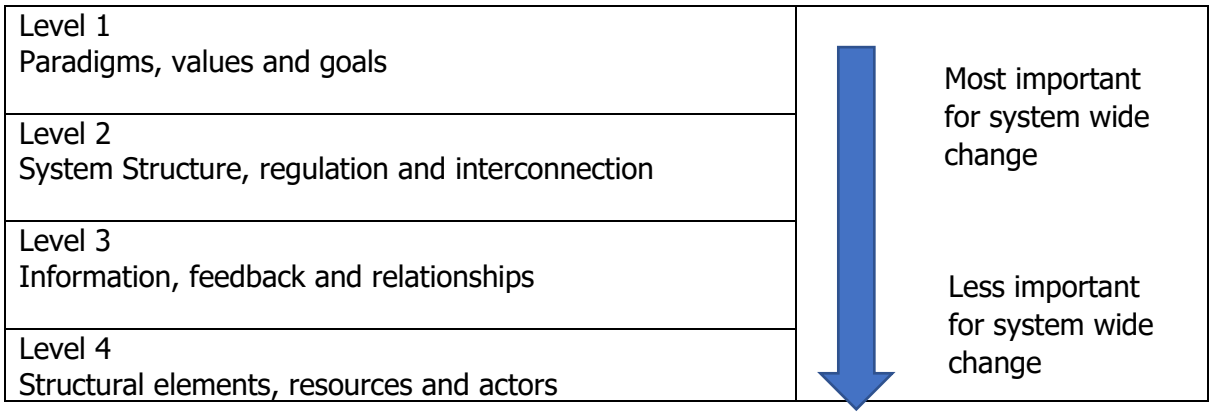
Guided by theory

Evaluative judgements in relation to each outcome focused evaluation question is guided by a theoretical framework. Reviewing recent literature on systems change and health prevention systems, a Prevention Action Framework has been developed. The Framework is being used to identify factors that are most important for strengthening the prevention system in achieving equitable improvements in hauora.

Details of the Prevention Action Framework were provided in the previous section. Examples of the types of outcomes that are expected if the prevention system is being strengthened in each Healthy Families NZ location are provided in Table 4.1. It is not expected that outcomes are demonstrated against all elements of the framework for each Healthy Families NZ location. Rather, when taking a holistic look across all evidence gathered, the example outcome descriptions in Table 4.1 help make an overall judgement about what is being seen against the theoretical framework.

A set of indicators developed from the Prevention Action Framework will be looked at in more detail. A table showing details of the draft indictor descriptions (what we would expect to see from the data we collect, to show these indicators are being met), and how they align with the Prevention Action Framework, is attached at Appendix 5.

Figure 4.1 Prevention Action Framework Summary



Focus on Healthy Families NZ location team activities

Healthy Families NZ as a whole, and individual location teams, are small players within the prevention system. The system can include all health focused organisations, local government, schools and other education providers, workplaces, natural and built environment, churches, maraes, households, whānau and community relationships, in addition to the cultural phenomena identified in our Prevention Action Framework.

However, the design of Healthy Families NZ is that they are a connector. Healthy Families NZ location teams support leadership that values prevention and systemic change. Healthy Families NZ location teams work across organisations to define, design and deliver new ideas and ways of working. They use communications strategically to spread ideas and information widely. These ways of working suggest that Healthy Families NZ may have a greater impact on strength of the prevention system than the size suggests.

Having said this, for evaluating outcomes, given the breadth of things that could be looked at to make an evaluative judgement about whether the prevention system has been strengthened, a subset of factors that are closer to Healthy Families NZ location teams are chosen. Those things that we might expect Healthy Families NZ can contribute to.

Methods for making evaluative judgements

Two methods will be used to inform evaluative judgements. Both are grounded in case-comparison design. First is a qualitative assessment using the Prevention Action Framework. This assessment asks the questions:

- What do we see and how well does it compare to types of outcomes expected?
- What is the extent or reach of outcomes?
- In what ways have changes occurred?
- What explains what we see?

The second method is Qualitative Comparative Method (QCA). QCA uses a smaller set more tightly defined indicators of outcomes and factors we expect might influence outcomes.

Different configurations of these indicators help consider what combinations of factors contribute to certain outcomes. The indicators used in QCA are also informed by the Prevention Action Framework.

Indicators for use within Qualitative Comparative Analysis

Three types of indicators have been identified from the Prevention Action Framework, as shown below.

Tier 1 indicators relate to level 1 and 2 of Prevention Action Framework and considered indicators of a strengthened prevention system. The indicators chosen are processes that reflect the paradigm, values and goals operating. These processes can be directly influenced by Healthy Families NZ locations.

Tier 2 indicators relate to levels 2 and 3 of Prevention Action Framework and considered indicators of policies, rules and structures that support prevention. They are less likely directly influenced by Healthy Families NZ, but do also reflect paradigm and values (or not) relating to prevention. They will be used in combinations to help consider the 'how' and 'why' question of prevention system strengthening.

Tier 3 indicators relate to levels 3 and 4 of the Prevention Action Framework and are considered indicators that provide analytical lens of the context within which Healthy Families NZ location teams are operating, and of the local level prevention system.

Figure 4.2 Three tiers of indicators

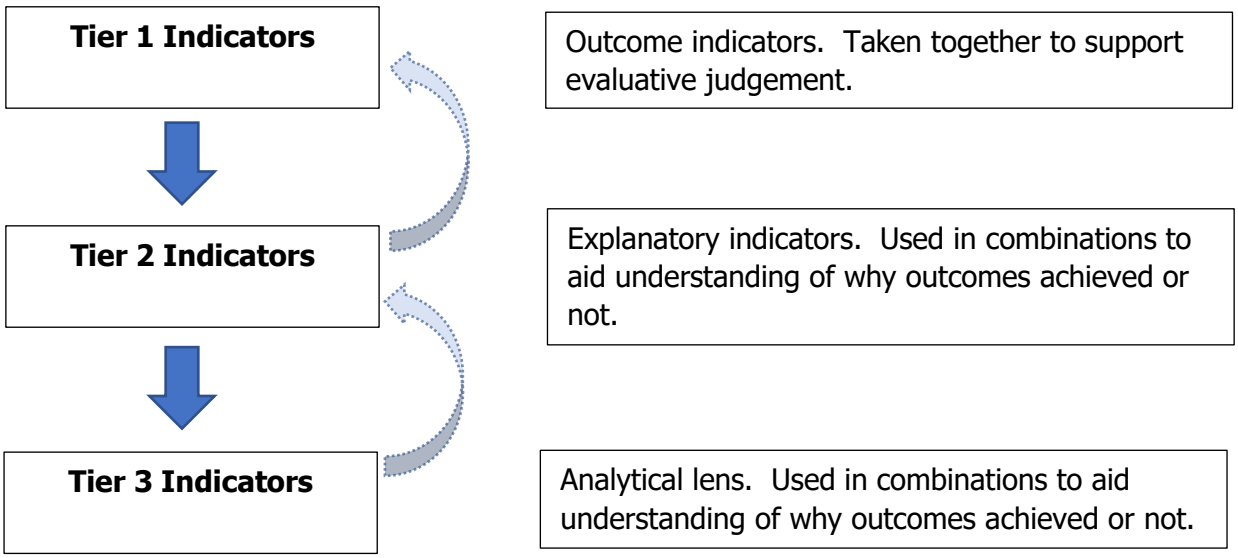


Table 4.1 provides details of all proposed indicators. Here a brief summary of the outcome indicators of a strengthened prevention system is provided.

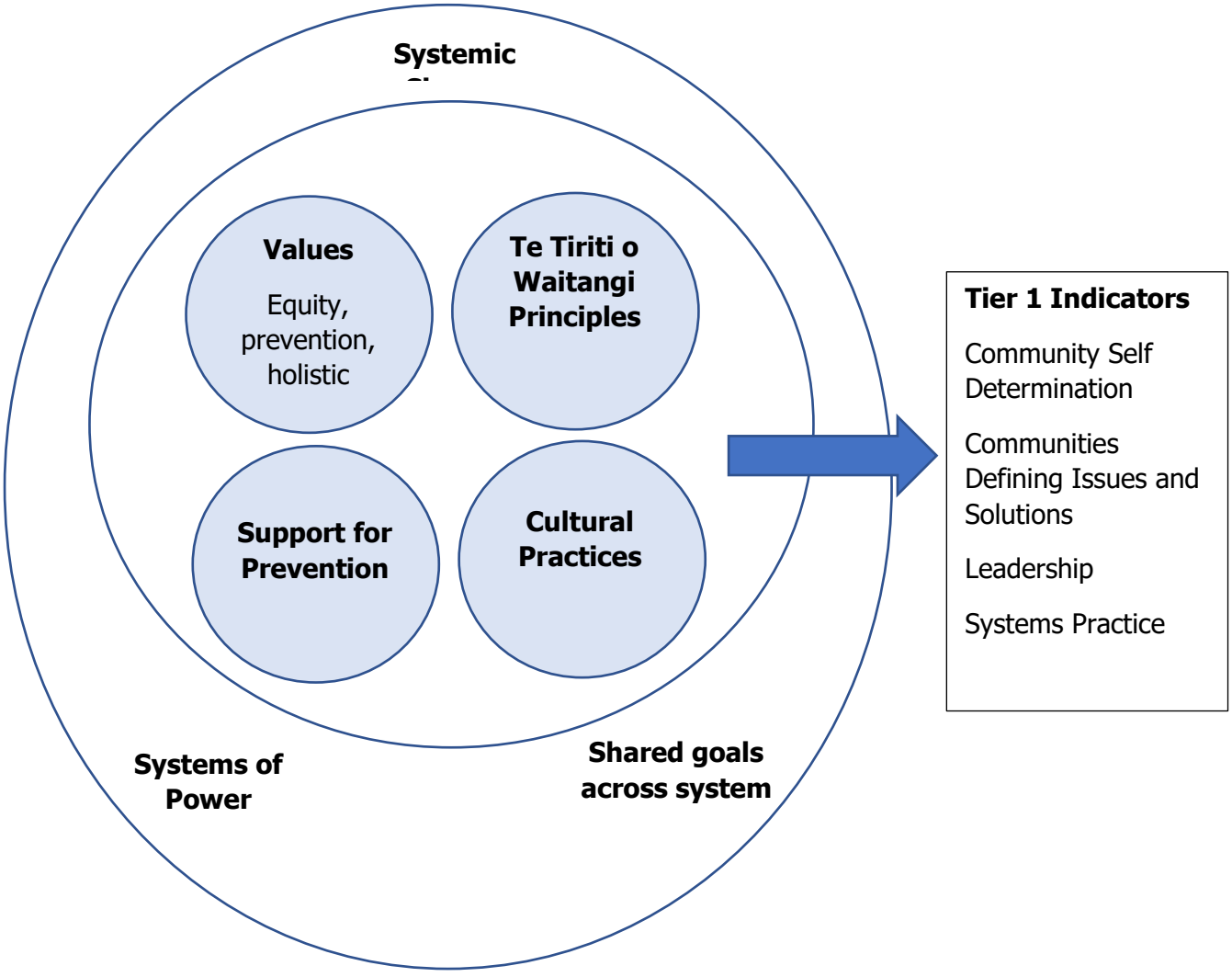
Table 4.1 Tier 1 outcome indicators

Community Self Determination	Involvement of diverse communities within leadership, projects and initiatives. Sharing of power and decision making, supported by two way communication. Collaborative ways of working. Processes that reflect prevention values, commitment to Te Tiriti o Waitangi principles, culturally safe processes, sharing power and resources.
Communities defining issues and solutions	Partnership involvement of groups in defining issues of focus, designing solutions and advocating for changes in power, resources and system structures. Processes that reflect prevention values, commitment to Te Tiriti o Waitangi principles, culturally safe processes, sharing power and resources.
Leadership	Mana whenua co-design of leadership structures. Support for community leaders. Connecting organisational leaders with kaimahi and communities. Processes that reflect Te Tiriti o Waitangi principles, sharing power and supporting more equitable system structures.
Systems Practice	Processes that actively seek multiple perspectives in defining issues and designing solutions. Recognition of multiple interacting causes of issues, reflected in design of solutions. Activities target multiple levels of Prevention Action Framework, and multiple causal influences. How processes support understanding of prevention as complex system and supporting change in complex systems.

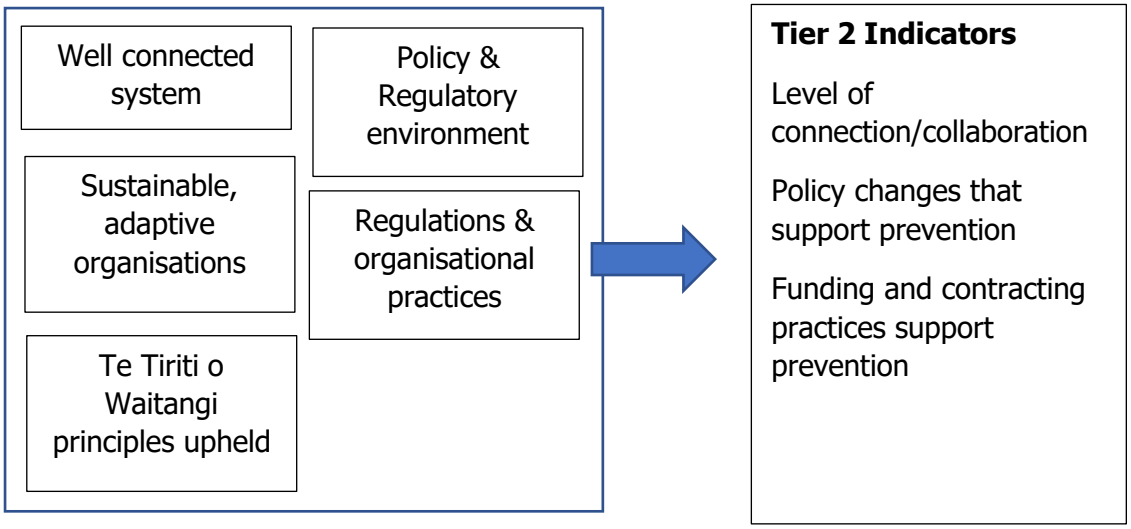
Te Tiriti considerations

A Te Tiriti lens has been an intentional part of our thinking and the development of the framework; it applies methodologically (we prioritised its importance, centrality, criticality), individually (considered for individual pieces of work done by team members) and collectively (a lens that we have applied together). After drafting the framework according to the information we had gathered and prioritised, and developing the related indicators in Table 4.2 below, we carried out an internal check process. This involved using the questions in Table 2.1 (Table 2.1 Healthy Families NZ evaluation indicators and Te Pae Māhutonga components) as a prompt to apply a Te Tiriti lens to the framework in Table 4.2, identifying possible emergent outcomes and looking for gaps in which Te Tiriti considerations should be more explicitly included.

Tier 1 indicators derived from Level 1 Prevention Action Framework



Tier 2 indicators derived from Level 2 Prevention Action Framework



Tier 3 indicators derived from Levels 3 & 4 Prevention Action Framework

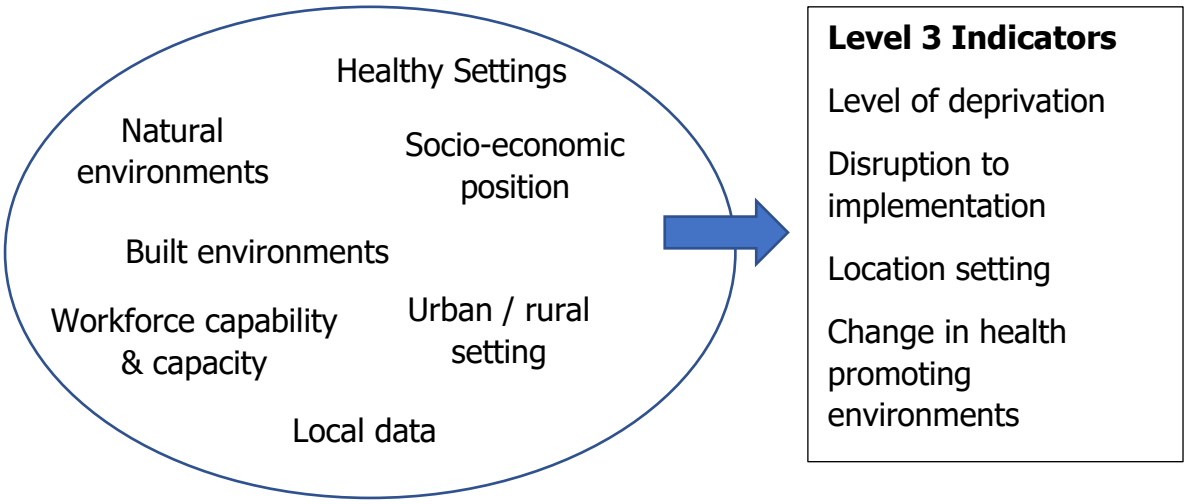


Table 4.2 Indicator descriptions and alignment with Prevention Action Framework

Indicator Type	Indicator Description	Alignment with Prevention Action Framework
Prevention System Outcome Indicators (Tier 1) Used as outcome conditions in QCA	**Community Self Determination** Involvement of diverse communities within leadership, projects and initiatives. Sharing of power and decision making, supported by two-way communication. Collaborative ways of working. Processes that reflect prevention values, commitment to Te Tiriti o Waitangi principles, culturally safe processes, sharing power and resources.	**Level 1: Processes that reflect:** • Showing commitment to values of equity and holistic health. • Valuing local perspectives • Intentionally upholding Te Tiriti o Waitangi principles of tino rangatiratanga, options and partnership • Commitment to disrupting systems of power • Commitment to prevention across multiple organisations. • Supporting development of shared goals by building connections across communities. **Level 2: Processes that contribute to** • A well-connected system through engagement and building trust **Level 3: Processes that supports impact of** • Community voice and knowledge • Incorporating indigenous knowledge and values • Information, communication and delivery systems • Policy process to meet community needs • Leadership across the system
	Communities defining issues and solutions Partnership involvement of groups in defining issues of focus, designing solutions and advocating for changes in power, resources and system structures. Processes that reflect prevention values, commitment to Te Tiriti o Waitangi principles, culturally safe processes, sharing power and resources.	
	Leadership Mana whenua co-design of leadership structures. Support for community leaders. Connecting organisational leaders with kaimahi and communities. Processes that reflect Te Tiriti o Waitangi principles, sharing power and supporting more equitable system structures.	**Level 1: Processes that reflect:** • Intentionally upholding Te Tiriti o Waitangi principles of tino rangatiratanga, equity, active protection, options and partnership • Support for prevention through commitment of leaders across diverse organisations • Valuing and inclusion of diverse cultural beliefs and practices • Commitment to disrupting systems of power

		Level 2: Processes that contribute to • A well-connected system by engaging diverse leaders • Sustainable and adaptive organisational structures by supporting leadership at multiple levels **Level 3: Processes that supports impact of** • Community voice and knowledge through support of leaders • Inclusion of indigenous knowledge and values by engagement of indigenous leaders
	Systems Practice Processes that actively seek multiple perspectives in defining issues and designing solutions. Recognition of multiple interacting causes of issues, reflected in design of solutions. Activities target multiple levels of Prevention Action Framework, and multiple causal influences. How processes support understanding of prevention as complex system and supporting change in complex systems.	**Level 1: Processes that reflect:** • Valuing local perspectives • Systemic change **Level 2: Processes that contribute to** • A well-connected system **Level 3: Processes that supports impact of** • Community voice and knowledge through integration of diverse perspectives and interrelated causes • Incorporating indigenous knowledge and values • Evidence informing action

Explanatory Indicators (Tier 2) Used as explanatory conditions in QCA	**Level of connection and collaboration** Increasing levels of connection between diverse organisations within the prevention system. Both depth (quality e.g. levels of trust) and breadth (diversity of connected organisations) are important. No one organisation controls the prevention system. Joined up action across people and organisations is needed.
	Policy changes that support prevention Policy changes that support prevention efforts at multiple levels, such as local government, workplaces, marae, sports clubs and schools. Policy and regulations act to limit possible futures of the system. Changes in policy can support positive prevention outcomes.
	Funding and contracting practices support prevention Changes in funding and contracting practices that support involvement and ability to adapt across diverse organisations. How resources are distributed into organisations across communities can impact ability to engage in collaborative work, equity of processes, and access of communities to decision-making.

Analytical Lens Indicators (Tier 3) Used as explanatory conditions in QCA	**Level of deprivation** The distribution of New Zealand Deprivation Index deciles within geographic area as proxy for level of poverty, access to resources across community, socio-economic conditions that support or hinder positive health outcomes.
	Disruption to implementation Whether the Healthy Families NZ location had any major disruptions to implementation, where it could reasonably be expected that fewer outcomes will be seen in that location.
	Location setting Whether the Healthy Families NZ location is in a large urban or more rural locations that could reasonably be expected to have fewer additional organisational supports, and increased geographic distance.
	Change in health promoting environments Whether there have been changes through non-Healthy Families NZ initiatives that could reasonably be expected to increase or decrease health promoting environments in area. Change in operating context for Healthy Families NZ.

5. Selection of quantitative indicators of health and wellbeing

Introduction

This section outlines the selection of a proposed set of quantitative outcome indicators about health and wellbeing for View 3 of the evaluation of Healthy Families NZ.

These indicators will be used to answer this evaluation question: To what extent has there been an improvement in health and wellbeing in Healthy Families NZ locations?

Purpose

The aim of quantitative indicator selection was to reduce ('slim down') the number of indicators used in View 2 and identify additional indicators related to the new focus on health and wellbeing.

Background

The quantitative indicators for this phase of the Healthy Families NZ Evaluation have shifted focus from five common risk (and protective) factors, such as tobacco use, to a broader view of health and wellbeing.

The evaluation team has decided to use the Māori health promotion framework, Te Pae Māhutonga, to define health and wellbeing. This framework guides indicator selection and identification of gaps in the quantitative indicators.

The data sources identified for obtaining indicators were the NZ Health Survey (NZHS), B4 School Check (B4SC), and Census. These datasets are known to be capable of providing meaningful information, over time, at the level of Healthy Families NZ locations. They are also efficient for the team to use, the NZHS and B4SC having been analysed in the previous evaluation phase. The use of Te Kupenga survey of Māori wellbeing Healthy Families NZ locations but will be used to provide context indicators. Due to data quality issues in the 2018 Census, some of the proposed indicators using Census data will not be able to produce timeseries information at the Healthy Families NZ location level. Some of these may be able to be used for contextual information, but not to show change.

Proposed indicators

We propose having a set of child and adult indicators like the last evaluation phase, to see whether both child and adult health are improving. The proposed indicators cover topics such as nutrition, oral health, tobacco use, long-term conditions, body weight, access to health care, home ownership, mental health, self-rated health and physical activity.

As discussed earlier, a table in section 2 shows the how groups of indicators relate to the dimensions of Te Pae Māhutonga. A detailed list of the indicators by Te Pae Māhutonga dimension, along with rationale and data source, is in Appendix 6. Some indicators have yet to be finalised, pending further investigation.

There are gaps in quantitative indicators for the dimensions of Maurioa – Cultural identity, Access to Te Ao Māori, Waiora – Physical environment, Ngā Manukura – Community

Leadership, and Te Mana Whakahaere – Autonomy. However, these dimensions are to be covered more by the other qualitative data sources, as shown in that table.

Selection criteria

Indicator selection involved 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 perspective were:

- the availability of data pre and post the implementation of Healthy Families NZ
- potential sensitivity to detect change over time (real change)
- removing or discarding indicators with quality or validity issues in their measurement eg, TV watching 2+ hours from the child NZHS, main mode of travel to work from the Census.

The key selection criteria from a relevance perspective were:

- coverage of a diverse range of aspects of health and wellbeing
- reflection of the dimensions of Te Pae Māhutonga given the useable data sources.

We also considered what we might assess as 'improvement'. We have set a low threshold for improvement (eg a decrease in the percentage of people doing 'no or little activity' would be an improvement even if 'meeting physical activity guidelines' did not change). Finally, we have removed previous indicators with a very narrow focus eg Heavy smoker (21+ cigarettes a day). This was based on the rationale that if there are going to be fewer indicators, an indicator focused on something too narrow was undesirable.

A detailed description of the quantitative indicators, their sources, and their rating for relevance and use to the evaluation, is attached at Appendix 6.

6. Value for Money – Cost-Consequence Analysis Evaluation of Healthy Families NZ

Background

Economic component of the overall Healthy Families NZ Evaluation.

The economic component addresses question 6 of the evaluation's overall questions:
How and to what extent is the initiative showing value for money? (new evaluation question)

New approaches needed for economic evaluation of health promotion initiatives through system approaches and in complex systems.

Not only is the Healthy Families NZ initiative complex, but also the social system in which it operates is complex (Matheson, Walton, Gray, Lindberg, Shanthakumar, et al., 2018). This double complexity raises several methodological implications for an economic evaluation (Shiell, Hawe, & Gold, 2008). The weak evidence base in the published literature on economic evaluations for system-change focused interventions in health promotion indicates the need for new approaches to economic evaluation (Shiell et al., 2008). The exercise of demonstrating value for money of intervention tackling underlying risk factors of chronic diseases is more complex than for specific treatments where effects are quicker and easier to isolate. Health promotion interventions involve changing fundamental systems and behaviours at individual, collective and institutional levels; this implies that outcomes can materialise in different ways for different people, each requiring its own set of indicators. As Healthy Families NZ is a community-led initiative, although it is guided by some shared principles, each of the nine locations (10 teams) decides on what the initiative looks like in their communities, depending on the specifics of each context and actors involved. Not only the starting point is different, and the activities prioritised are different, but also the interactions of all those elements would result in diverse outcomes. As a result, the underlying assumption of mainstream economic evaluations that 'everything else remains constant' does not hold in this case. This helps us to understand why economic evaluations of complex system-based initiatives are scarce, and even fewer include a strong indigenous perspective.

Raising evidence on economic evaluation of health promotion initiatives.

The good news is that there is a growing amount of compelling evidence on the economic case for investing in health promotion and disease prevention (McDaid, Sassi, & Merkur). There is a wide range of examples of health promotion actions having shown cost effectiveness value across multiple areas, such as rising tobacco prices, limiting children's exposure to advertising of foods and beverages high in salt, sugar and fat, reducing salt content in processed foods, promotion physical activity through mass media and at the workplace, promoting mental health and preventing depression through early actions in childhood to strengthen emotional and social learning and bonding with parents as well as workplace initiatives for physiological health, etc.; particularly relevant seem to be the combination of multiple actions in achieving greater health benefits (McDaid et al.). Evidence is growing also in Aotearoa New Zealand (Mernagh et al., 2010). Economic evidence is much

stronger now given the high and rising burden of chronic noncommunicable diseases such as cardiovascular conditions, cancers, mental disorders, chronic respiratory conditions and diabetes - being the main cause of disability and death worldwide (Institute for Health Metrics and Evaluation (IHME), 2018), as well as the proliferation of studies and standardization of methods of analysis for complex multi-dimensional and multi-level interventions. Nonetheless, this evidence refers exclusively to complexity of the intervention itself, not that of the systems in which they are implemented.

General approach outlined, tools to be refined along with the overall evaluation.

This protocol outlines the approach of the economic evaluation component of the overall evaluation. It emphasizes the specifics of the nature of the initiative and approach to evaluation, and its implication for designing the economic component, based on existing literature. It identifies the main considerations and criteria to choose the specific methods. Yet, the methods are not fully defined or finalised as they would be in a standard economic evaluation protocol, which would likely include for example resource categories to be included or the survey for data collection. We are not yet able to provide such details. This is first because of the innovative nature of this exercise within economic theory; we have not found other similar examples to simply draw from their methods employed; nor have we found agreed standards for an evaluation incorporating principles of a system approach and Māori lenses to prevention of chronic diseases. Second, the timing of the overall evaluation where the tools for assessing achievements are currently being defined in parallel to this protocol; the economic component draws on the overall evaluation for assessing the benefits of the initiative, as well as key parameters of the model like time horizon for projected benefits. Therefore, some aspects of this protocol are more like guidelines and criteria in designing the data collection tools, rather than the actual tools themselves. Consequently, this protocol will be a 'living document' throughout this evaluation. It will be revised along with data collection in an iterative way in order to truly incorporate community perspectives in defining the evaluation, as well as the evolving dynamics of the initiative in each setting.

The evolving nature of the protocol and tools is not a usual approach to take in economic evaluation, but it may be in fact one of the critical defining characteristics of a protocol for any economic evaluation of a community systems change initiative and that incorporates indigenous perspective, that may emerge from the economic analysis of Healthy Families NZ.

In sum, the value for money analysis will add an economic perspective to the ongoing Healthy Families NZ overall evaluation. It will adapt standard methods of economic evaluation of health promotion programs to the specifics of the initiative, in particular being focused on system change and incorporating an indigenous lens. It will provide evidence for showing the merits of the initiative in relation to the investments made, with a view to increasing the understanding and acknowledgement of the costs and benefits within specific settings. This in turn will serve to build the economic case of health promotion actions in Aotearoa New Zealand, for using a systems-change approach. It will also contribute to advancing knowledge on appropriate methods to evaluate the economic impact of complex

systems change initiatives incorporating indigenous perspectives, designed to prevent chronic diseases, which may inform evaluations of other similar programs.

Purpose, objective and research questions

Purpose and objective

The economic analysis will contribute to the overall evaluation in valuing what have been the results of the initiatives and at what cost. The main purpose of the economic evaluation is to provide the Ministry of Health with evidence and understanding of the value for money of the initiative. The objective is to gather and compare information on the costs and benefits of the initiative as well as to interpret and apply judgements on their value in specific contexts.

Overall research question:

How and to what extent is Healthy Families NZ showing value for money?

Specific research questions:

1. What are the economic costs of Healthy Families NZ, overall and in each location?
2. What are the economic benefits of Healthy Families NZ, overall and in each location?
3. How do the costs and benefits of Healthy Families NZ compare overall?
4. What are the main value for money similarities and differences across the 10 location teams?
5. How are costs and benefits distributed across population groups and in particular Māori?
6. How sensitive are these results to changes in model parameters and uncertain values?

We do not ask questions about re-allocation of resources from one to another location as that is not the purpose of the economic analysis nor from the overall evaluation. That is to say: the purpose of the study is not to investigate whether greater outcomes could be obtained from the intervention by re-allocating resources differently across the locations. The Healthy Families NZ systems approach appreciates the importance of the context in determining the goals and implementation pace.

Methodology

General approach

Cost-consequence analysis (CCA)

From the multiple methods for economic analysis of health programs (Drummond, Sculpher, Torrance, O'Brien, & Stoddart, 2005), the CCA is the most appropriate for the evaluation of Healthy Families NZ. CCA sets the cost of the initiative against the range of consequences, also referred as benefits or outcomes. It values these outcomes in its natural units, rather than necessarily monetary units as done for example in Cost-Benefit Analysis or in Quality-adjusted life years (QUALYs) units as in Cost-Utility analysis (De Salazar, Jackson, Shiell, & Rice, 2007). In CCA, as the benefits are expressed in natural units and are not restricted to

a single outcome, it can include multi-sector outcomes, including those that go beyond the health domain.

The strength of CCA is that it allows acknowledgement of all-important outcomes. In particular, it permits not to overlook key benefits when they are difficult to be measured or valued. On the other hand, the weakness of CCA is that it makes it difficult to select across competing initiatives, given that they may offer multiple outcomes which may not be directly comparable. This restriction is not such an issue for our case, given that the main purpose of this evaluation is to inform and understand the economic case in order to show value, rather than to choose between competing options.

CCA seems most relevant in this case; in fact, probably the only feasible economic analysis for a systems change approach. It is important that the evaluation acknowledges the multiple costs and benefits for all stakeholders, and which we know in advance that would be different across the nine locations' 10 teams, and flexible to evolve in time. It is also important to be able to capture the value of the investments made and returns achieved as perceived and valued by the communities themselves, in particular Māori. The multiplicity of outcomes, and the way they may be perceived and valued in different settings at different points of time, is central in a system approach. It is also an imperative for using an indigenous lens in order to be able to capture Māori perspectives in their own terms.

Study perspective

The analysis will adopt a societal perspective where all costs and benefits are included irrespective of who pays or enjoys them. Again, given that Healthy Families NZ is a community-led initiative, with a systems change focus, other perspectives like health system or funder approach would not be able to respond to the nature of this analysis. This societal perspective would probably be the case of any economic analysis of health promotion initiatives benefiting the health and wellbeing of the whole population. With the system-based approach taken, initiative actors and beneficiaries overlap, as the beneficiaries have an active role in influencing their environments and are in fact the main mechanism of change. Initiative actors and beneficiaries include: the Ministry, Healthy Families NZ location teams/communities, Lead Providers and Strategic Leadership Groups in the nine locations. We also consider the wider population and other stakeholders as beneficiaries of the initiative in the nine locations.

Time horizon

This is a retrospective study valuing costs and benefits since 2014 when Healthy Families NZ started, until at least 2022 – the end of the second evaluation phase, and probably projected for a longer period. A short time horizon may miss the true long-term benefits aimed at through systems change initiatives like Healthy Families NZ. Given the lengthy time-horizon when full effects are expected to realise, an approach would be to measure intermediate outcomes (until 2022) and model long-term ones (beyond 2022). These issues need to be carefully considered based on the identified main variables driving costs and benefits of the initiative.

Discounting rates

These will be applied to adjust costs and consequences for differences in their timing. Discount rates vary within the literature, ranging between 0% to 10% (Masters, Anwar, Collins, Cookson, & Capewell, 2017). High discount rates would weaken the value of public health interventions that would pay off in the long-run. We will use a 3.5% discount rate per annum as considered in other studies on prevention of chronic diseases in Aotearoa New Zealand (Mernagh et al., 2010). This will be the base rate; we will also consider conducting sensitivity analysis to test the effect of changing this rate for higher and lower values, and we will report accordingly.

Sensitivity analysis

Sensitivity analysis is important for robustness of findings in all economic evaluations, and reporting sensitivity analysis is a major element in assessing the quality of a study. This should be even more the case for a system approach (Shiell et al., 2008) and this case in particularly, given the complexities of the context and long-term and multi-level impact of health promotion. Given the complexities of both the initiative and the social settings, there are multiple variables where it is difficult to estimate the real effect. For example, on the attribution of a given impact to the initiative, the decay rate of effects over time or the interaction effect of multiple actions. Consequently, we will conduct sensitivity analysis around model parameters (e.g. discounting rates) and uncertain values (e.g. value of unpaid work). To conduct sensitivity analysis around these variables, we will need to work with the overall evaluation team in identifying the determining the plausible range of variation for each variable as well as identify combinations of variables that would most likely show interactions effects and should be included as such in the sensitivity analysis (De Salazar et al., 2007). The importance of sensitivity analysis for this type of economic evaluation seems such that it cannot be taken as an optional element, but rather necessary to provide a meaningful interpretation of the estimations and their implications.

Equity

The initiative as well as the evaluation are Te Tiriti-led in their approach, using a te ao Māori lens and explicit focus on equity. We will pay attention to how the costs and benefits are distributed across population groups, to see which option would be most conducive to reducing inequalities. The option reaching benefits to most people may not be that beneficial for those most marginalised. While initiatives targeting the hardest to reach groups may cost more, we will value equity as an outcome of the initiatives per se.

Te ao Māori lens

We will also pay special attention to include Māori understanding as part of the analytical lens, to help us unpack and interpret information. The role of indigenous principles in evaluation methods is also crucial in for example identifying the most valued resources and benefits of the initiative, and in their own terms. For example, the Te Pae Māhutonga Pae framework, as discussed earlier in this report (Durie, 1999). The framework identifies four elements (representing the stars) for Māori wellbeing: Mauriora (cultural identity, Waiora (physical environment), Toiora (healthy lifestyles) and Te Oranga (participation in society). It is important to acknowledge the comprehensive conceptualisation of health and wellbeing

in Te Pae Māhutonga may also provide a different weight to the resources invested and their value. For example Waiora and sacred physical locations like a Marae or a river or mountain having an extra added value to Māori compared to non-Māori. Indigenous perspectives bring about multiple forms of evidence that may not be considered in mainstream economic evaluations. A comprehensive understanding of Māori principles and values need to be incorporated into the frameworks and criteria of the evaluation, including approach to data collection. In acknowledging the role of indigenous perspectives in program evaluations, it is noted that "*rigor comes from the cultural validity"* (Wehipeihana, 2019).

At the same time, due to time and funding constraints, there are parts of a Māori-lens approach which we may not be able to realise fully. The need to be pragmatic in the application of all guiding principles leads to settling on available information and feasible proxies during the evaluation period. In practical terms, it means that we will aim to include and acknowledge Māori perspectives and terms in the analysis, although to a lesser extent than a fully Māori-led indigenous evaluation would do; that is beyond the objective of this study. It will nonetheless deliver a first economic analysis showing the value of the initiative taking into account systems approach and Māori lens, and that may serve as the basis for further examinations that may take a deeper look into specific components of it.

Estimating costs

Cost estimation process

The estimation of the costs of the initiative involves identifying, measuring and valuing of the costs of the initiative as implemented in the nine locations. This process goes through four major steps:

1. Identifying resources per activities
2. Measuring the use of resources/quantities
3. Identifying the unit prices
4. Estimating costs = quantity*price

Resources

We expect the 10 Healthy Families NZ lead providers to overall employ similar types of resources, with mostly their quantity and price varying across locations; the size of the location teams is very different across locations. Most costs are personnel related. Some personnel costs may be reflected in salaries paid, but others would not. We list all resources irrespective of whether a financial cost is incurred or not.

Economic and financial costs

We take into account both financial and economic costs. Financial costs are those 'paid for', those that involve a payment in the form of money transfer. Economic costs on the other hand, are those that do not involve a payment, but where there is nonetheless an 'opportunity cost' attached to the use of that resource. For example, the salary of a team member paid by the initiative is a financial cost, reflected in program expenditures. But the time of a community member not paid by the initiative is not a financial cost as no money is exchanged; it is rather an economic cost, as the person could be working on any other

activity. The analysis will consider all resources used, irrespective of whether a financial cost is incurred or not and regardless of who pays.

Costing approach

We will combine (a) 'top-down' costing based on Healthy Families NZ budgets and expenditure documentation, with (b) additional 'bottom-up' or also called micro-costing approaches to identify and add other costs incurred and not paid by the initiative. We will start with the costs funded by the program (included in Healthy Families NZ budgets) and assign them across the activities conducted and/or resources used for those activities; this is the 'top down' approach. Second, we will include also other costs that may not be included in the budget, through the micro-costing approach; here we identify the resources used and aggregate the costs of those not already accounted for in the budget. These may include apparently 'free' resources, such as the use of a Marae as a venue for meetings with no utilisation fee, as well as resources paid by other programs/agents. Costs will be expressed in real terms adjusting by inflation, before discounting exercise.

Valuing non-market resources

For financial costs, we will follow the value provided by the program finances. For economic costs, we will identify proxies for their market value when possible, e.g. the cost of using a library space (for free) could be approximated by the daily cost of renting a meeting room in the same location. There are economic costs which are difficult to estimate because they are difficult to quantify (e.g. intangible goods like knowledge and motivation) and assigned a value when it is not paid for. For example, differences in salary scales across seniority within one organisation partly reflect differences in experience, knowledge, connections, capacities etc, across professional levels, and can be thus taken as a measure of all those intangible resources. But when it comes to valuing the time of communities whose contribution is not paid for, the estimation of that value added is more daunting. There are multiple ways to approach this, to be selected depending on the specific context and emphasis of the study. In this case in particular, it has been argued that Māori leaders for example may bring mana and connections to the program, in both a cultural and programmatic sense, creating connections, endorsing the program, lends credibility to the individual, etc[4]. These are highly regarded resources in Māori culture, and should be valued according to this high value assigned by Māori. In fact, a monetary value could underestimate the critical role of for example 'non-negotiable' conditions. In sum, it is important then to include important resources used even when no monetary value can be easily attributed, as well as to include measures of value beyond monetary terms when more relevant to appropriately reflect its importance and appreciation by the community.

Resource classification and valuation

Table 6.1 shows an initial categorization of resources. It takes into account who funds/provides the resources - where funded by Healthy Families NZ or provided by whānau/communities or by other initiatives they may be collaborating with. It also classifies resources depending on its nature, and into two groups depending on the ease for identifying and valuing these resources. Resources in Group 1 in Table 6.1 is made of those

[4] Healthy Families NZ Evaluation Hui. Wellington, 19 November 2019.

resources that are easiest to identify, either because they are covered by the budget and specified as such (e.g. salaries, communication), or their role/contribution to initiative is clearly acknowledged in previous evaluation of the program (e.g. communities contributing kai to share at meetings, or marae used for gatherings) although their value may be yet to be estimated, but probably easy to do so through market value approach.

Resources in Group 2 are those requiring more work for identification and valuation, as their contribution may only implicitly recognised. For example, the importance of mana of the leaders engaging with Healthy Families NZ, highly valued by the communities, but how to measure and value it? Resources in Group 2 require further work in identifying the most important ones, their quantification/resource use and their value. The approach is to be able to identify them in a systematic way, to understand the team's thinking around their investments and role in the program. Once identified, we shall attempt to value them, first in monetary terms for those where may make sense, e.g. kai contributions. For these, unit prices will be reported. When no price can be assigned, we'll seek other ways to indicate value and that may enable for example the comparison of how much of it is invested in relation to how much of it is gained through the initiative. Another role is to understand the order of importance in relation to the rest of resources, regarding for example being able to be replaced with something else, being 'negotiable' or being 'a must', etc. We will conduct this assessment on a case by case basis for each resource.

Table 6.1: Classification of resources included in the analysis according to who funds/provides them, their nature, and the easiness of their measurement and valuation

Resource category	Funded through Healthy Families NZ	Provided by whānau/community*	Provided by other stakeholders*
GROUP 1: easier to identify and value resources			
Human	Healthy Families NZ workforce salary, stipends	Volunteers time, community time	
Materials	photocopying, computers, …	X	
Infrastructure	Room rental	Marae space	
Communication	Mobiles, internet time	X	
Travel	Vehicles, tickets, petrol, accommodation, …	X	
Training	XXX		
Coordination Meetings	XX	X	
GROUP 2: identification and valuation in progress			
Community in-kind contributions		Kai for sharing in meetings	
Mana-Capacity to influence	xx		
Capacity to manage			
…			

* and not funded by Healthy Families NZ.

Costs of resources will be provided by the multiple categories of analysis, included in Table 2. Table 3 provides an example of how cost results will be displayed in the case of costs by stakeholder, location and year.

Table 6.2: Cost categories to be used in the analysis and reported

Costs categories to be reported:
- Healthy Families NZ total and annual cost over the implementation period
- Budgeted costs and non-budgeted costs (total amounts and %)
- Costs per location site, total and per year (total amounts and %)
- Costs per resource type (total amounts and %)
- Costs in monetary terms, and costs expressed in other terms

Table 6.3: Example of a table reporting Results: Cost by stakeholders and locality (total and %)

	Locality 1	**Locality 2**	**…**
Costs MoH			
Costs Healthy Families NZ management			
Costs LP			
Costs SLG			
Costs from whānau/communities			
Costs paid by other programs			

Start-up and implementation phases

We had initially considered the relevance of distinguishing between start-up year (year 1) and implementation years. However, we have discarded this separation, given the continuous replacement of workforce, and continuous revision of their opportunities for action, plus in addition the fact that the most recent locations (Far North and East Cape) took significantly less time to set up including recruiting staff as compared to Phase 1 locations.

Valuing benefits/outcomes

The second part of the value for money exercise consists of identifying and valuing gains through the changes in outcomes as a result of the initiative. Same as with costs, the strategy is to be as comprehensive and faithful to the system-change and Te Tiriti lens as possible. This exercise will be based on the evaluation of the initiative conducted by the overall evaluation team at Victoria University of Wellington. In particular, the second phase of the Evaluation is looking into the reinforcement of the prevention framework in the communities and pathway to change. It will draw on literature on evaluating systems change and community-based initiatives as well as Healthy Families NZ outputs identified in the previous evaluation. This theory of change will guide how the change attributable to Healthy Families NZ should be measured and valued.

We use these findings as the starting point. We consider first all outcomes identified, regardless of whether they can be measured and valued or not (De Salazar et al., 2007). The benefits of the initiative are measured in their natural units, that is, consequent with CCA methodology. Some of the metrics may involve *"qualitative judgements about the extent to which each community case met criteria developed for each indicator"* (Matheson, Walton, Gray, Lindberg, Shanthakumar, et al., 2018). We will look for proxies to recognise merit in the specific context. Some of these ways could include the potential enabler of change, the multiplier effect, and appreciation according to Māori culture.

Some outcomes may be both a result as well as an outcome. For example, leadership capacity: leaders may invest their capacity to influence in the community, and doing so, they may gain in return further presence and recognition within the community. Besides, given the flexibility of the initiative to adapt to local contexts and priorities, targeted outcomes may vary across the nine locations, and may vary over time.

Balancing costs and consequences

We will put together costs and consequences to understand the value gained in relation to the investments made, and by whom. This implies making value judgements on whether the benefits obtained are worth the cost incurred. To do this, we will provide the information not only in aggregated terms, but also disaggregated by the major categories of analysis identified (such as actors and cost categories) in order to unpack the general picture. We will also provide detailed specifics for each location. Besides, we will make judgements on how the current initiative, at its current scale, is economically worthwhile. We will interpret the results in relation to the wider context including the broader principles pursued. Equity for example is a key consideration; it is not just how much the initiative costs and what value it brings, but also how costs and value are distributed, if they help reducing inequities in health, etc. In addition, we will also put the results in the context of other health promotion initiatives in the country, their relative costs and outcomes. This is not a direct comparison of costs and outcomes, as what works in one setting may not have worked in a different one. Rather, we will emphasize core elements of success under specific circumstances, in order to make evidence-based recommendations to guide decision making around system-based approached and Māori-led value added to health promotion initiatives.

Lastly, sensitivity analysis plays a central role in making sense of the analysis. It will help us elucidate how robust the conclusions are depending on changes of certain parameters, particularly regarding uncertain and missing information and main cost drivers. It is not only a marker of research quality, but it also serves to broader the understanding of how the different elements play out in the broader picture.

Data collection methods

We will employ multiple methods for data collection, from document review to interviews with key informants.

Document review I – international literature

We will review international evidence on best economic evaluation approaches for initiatives related to the Healthy Families NZ characteristics. This review has contributed to this protocol, and will continue during the duration of the study as appropriate. The review follows a selective approach to identify key resources leading the way to apply theories of economic evaluation to the specifics of Healthy Families NZ. It is a selective rather than an exhaustive review. We use Victoria University of Wellington library resources, google scholar and PubMed search engines, plus snowball techniques applying to these and other grey literature identified through our own Victoria University of Wellington resources. We will search for terms related to economic evaluation of systems change initiatives and valuing indigenous perspectives for health promotion and prevention of chronic conditions. Given the novelty of this area of research, we will track citations of key references and authors in order to incorporate new publications on the topic as they may emerge during the course of the evaluation.

In the literature review leading to this protocol, we were not able to find any other similar example of economic evaluation of a systems approach to a health promotion initiative such as Healthy Families NZ, even less when considering the importance of the Māori as a core component of the evaluation. Therefore, the economic evaluation, and this protocol specifically, are informed by weaving together guidelines from different areas of knowledge and adapting them to our specific case of study. These areas include: (a) Economic evaluation of health promotion initiatives; (b) Systems change approaches; and (c) Indigenous approaches to evaluation methodologies.

Document review II - Healthy Families NZ documentation

First, we will compile Healthy Families NZ budgets at national level provided by the Ministry of Health. Expenditure lines will show HG total amounts (in nominal terms) since the inception of the project and disaggregated by lead provider. It is allocated expenditure; it does not show spent amounts. We will also take into consideration inflation rates based on last quarter CPI data from Treasury to track expenditure over time in real terms. This first analysis will provide total and proportional Healthy Families NZ expenditure amounts, per location, in nominal and real terms, and trends over time.

Second, we will look into Performance Monitoring Reports (PMRs). Here we will look for breakdowns of the expenditure into main areas of expenditure, the recipients of the funding, activities funded, etc. We will use as much detail as provided in the documentation regarding the use of funds. We will also look into how are funds being spent, for example, are all funds spent as planned? And if not, are the unspent amounts rolled over for next year, or re-allocated across other areas? To the extent possible, we will gather and compare accounting practices from the different locations to get a coherent understanding on the use of funds. We will extract and compile PMR information into a table to be systematic in extracting the information and to ease comparison across locations and years.

Interviews and conversations with Healthy Families NZ managers

In total, we expect around 16-26 people interviewed: two from the Ministry's national team, one to two at each location (location manager and evaluator), plus all members of the overall evaluation team. Numbers may increase slightly if interviewees recommend other useful informants. Interviews will be conducted in person when based in Wellington, and via telephone or videoconference for the rest. First, contact and exploratory conversations with Healthy Families NZ national and Waitākere location teams took place for the development of this protocol. We also benefited from the evaluation meeting in Wellington where we briefly presented the value for money evaluation plan, discussed early questions, and gather their feedback. We incorporated their contributions into the initial plan, leading to this protocol.

After reviewing the Healthy Families NZ expenditure documents, we plan to interview the Senior Portfolio Manager and financial administrator of the initiative at national level (Ministry of Health). The interviews will serve to clarify unclear areas of the budgets and documents reviewed, to validate preliminary expenditure analysis and to collect any additional documentation. We will also seek to complete data gaps identified regarding expenditure and costing. Interviews will also allow us to gather managers' perspectives and inputs regarding the costs of the program, such as other costs incurred and not covered by the budgets.

Interviews at locations will follow. We will start with Waitākere location to refine the data collection tools before collecting data on the other ones. We have selected Waitākere location, because the manager has been part of the initiative since the very beginning, and because the evaluator is involved in health economics work, thus being able to engage easily with the economic approach. We will work with Waitākere location team to validate the preliminary expenditure analysis by location and time trends and to clarify uncertain areas, to better understand how funds are being spent and managed, adding extra details to PMRs where necessary, and very importantly, to better understand the costs incurred but not covered by the budget. This work will serve to develop an interview guide or a survey to structure data collection and discussions with the rest of locations regarding the economic data collection.

In principle, we do not plan to interview other participants. However, we are aware of the challenges posed by an economic evaluation that aims to include non-budgeted costs as well as Māori perspectives in a meaningful way. These challenges are well recognised in the literature (refs). Thus, we may consider reaching out to other team members If during the course of the study we encounter knowledge gaps in critical areas and that would require wider inputs. This could be in the form of contacting other related stakeholders specifically for this, or alternatively, adding some of these questions to the evaluation conducted by the Victoria University of Wellington team across the targeted sample of representative team members, leadership group members and stakeholders (in this case we would apply for amendment to the ethical approval accordingly).

Meetings and ongoing communication with the broader evaluation team

Discussions with the broad evaluation team at Victoria University of Wellington are ongoing since the outset of this second evaluation to ensure the synchronization of both evaluation angles. The economic evaluation "borrows" from their knowledge of the initiative, as this is their second evaluation of Healthy Families NZ, as well as their expertise on systems'

change. The contribution from the broader Victoria University of Wellington evaluation team is especially relevant for 'consequence' component of the Evaluation. This component will be based on their past and ongoing phases of the initiative Evaluation. Consequently, we have participated in the process of specification of preventive system. Another key element of their contribution is the guidance of the Māori evaluator in the team to the economic angle, to ensure Māori perspectives and approaches are well taken into account. We will request the inputs and feedback from Nan Wehipeihana the Māori evaluator in the Victoria University of Wellington team from the protocol design through to data collection, analysis and presentation of results.

Outputs and timeline

An interim report of the second evaluation will be submitted in mid-2020. This protocol will be part of it. Further activities in 2020 are outlined in Table 4. This timeline has been adjusted to accommodate for the delays caused by the COVID-19 pandemic in the activities of the project; some of the activities planned for the first half of the year (e.g. costing analysis) will take part in the second semester. Activities for the estimation of benefits will take place in year 2021 onwards.

Table 6.4: Timeline per activities in 2020

Activities	Timeline: 2020			
	Q1	Q2	Q3	Q4
Continued review of relevant international literature	X	X	X	X
Protocol development	X	X		
Data extraction from Healthy Families NZ documentation and budgets for cost analysis			X	
Discussions with MoH team			X	
Discussions with Waitākere team			X	
Finalization of data collection tools for costs estimation			X	
Interviews with remaining locations for data collection for cost estimations			X	
Finalisation costs estimation and analysis				X
Interactions with evaluation team to exchange information and align analysis including economic valuation with theory of change being developed	X	X	X	X

For additional information on this approach, see the presentation to the meeting of Healthy Families NZ location managers and Ministry team, 19 November 2019, Wellington, which is attached at Appendix 7.

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