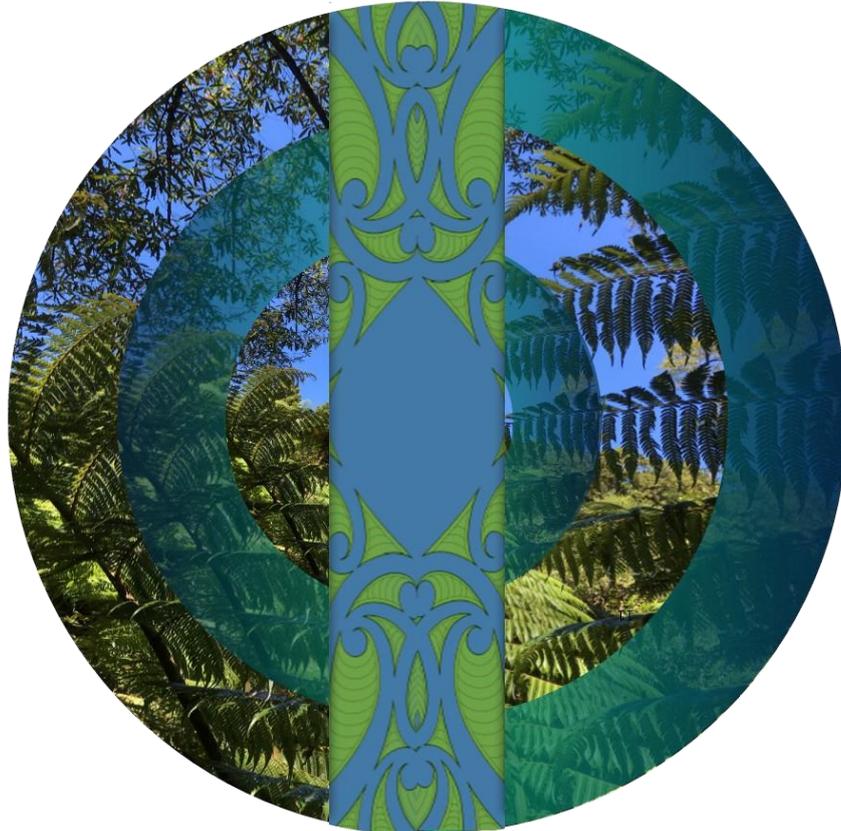




THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato



He Pikinga Waiora (HPW)
Implementation Framework
Resources Only

2019

National
SCIENCE
Challenges

HEALTHIER
LIVES

He Oranga Hauora

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The following are the resources required to assist you in achieving a sustainable and equitable co-designed implementation project and partnership. The implementation framework provides a process for structuring a robust intervention and each of these resources has been carefully chosen to assist in getting you through some of the roadblocks that may have hindered true partnership in the past. Please explore each resource and use them, when the time is right to ensure you are achieving a high quality intervention that leaves the community empowered and achieves goals for all stakeholders.

HOW TO CREATE A SYSTEMS MAP

There are many ways of developing 'systems' maps. We place quotation marks around system in recognition that 'systems' map make explicit the mental models stakeholders hold about problematic situations.

The 'systems' map we created for He Pikinga Waoria drew on system dynamics. Here we represented the 'system' in terms of stocks (accumulated quantities, e.g., number of healthy people), flows (changes to the stocks, e.g., number of healthy people developing prediabetes), converters (variables that influence flows, e.g., screening rate), time delays (e.g., time between becoming obese and developing diabetes). Feedback loops were used to capture the dynamics of diabetes prevention (e.g., building health literacy).

Other systems methods can be used to build 'systems' map. For the purpose of this guide we set out some general advice on how to build causal loop diagrams, which are commonly used to unpack the complexity of issues including diabetes and obesity. For readers wanting to explore other approaches, the following link will take you to a free Open University course about the different ways in which problematic situations can be represented.

<https://www.open.edu/openlearn/science-maths-technology/computing-and-ict/systems-computer/systems-diagramming/content-section-0?active-tab=content-tab>

Developing a causal loop diagram

This section has drawn heavily on Maani and Cavana (2000) and de Pinho (2015).

Building causal loop diagrams can be a powerful way to engage with stakeholders. A causal loop diagram should in effect tell a *compelling story* about a problematic situation to help develop a shared understanding amongst stakeholders and guide steps going forward.

There are a number of steps involved in creating a causal loop diagram:

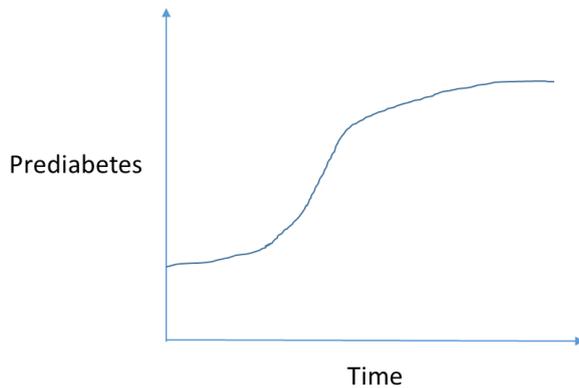
1. Creating a rich picture and behaviour over time graphs
2. Identifying variables and relationships
3. Representing relationships as feedback loops
4. Identifying points of leverage



Step 1. Creating a rich picture and behaviour over time graphs

Creating a rich picture of the problematic situation can be helpful first step as it helps to pull together thinking to date about the system including different perspectives on issues, concerns and opportunities. See the soft systems methodology guide for advice on how to construct rich pictures.

An understanding of the problematic situation can be enhanced by developing behaviour over time graphs of key features in the rich picture – see Figure 1.

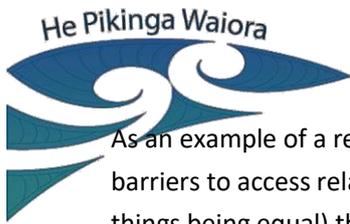


Step 2. Identifying variables and relationships

A causal loop diagram consists of two elements: variables and relationships. Variables or factors impacting on the system in focus are then identified including any outcomes of interest (e.g., number of people with pre-diabetes). Variables can be hard (e.g., number of people screened for pre-diabetes) or soft (e.g., cultural responsiveness). de Pinho (2015) advises identifying 10 - 12 variables, clearly naming them using neutral nouns (e.g., ‘health literacy’ rather than ‘good health literacy’) and ensuring they are measurable and observable so that they represent quantities that change over time (e.g., ‘complications’ rather than ‘ill health’). Deciding which variables to include (and exclude) depends on the boundaries drawn around the model. Model boundaries should be explicit and set in partnership with stakeholders were possible.

Arrows are drawn between variables to illustrate relationships. Relationships can be classified as moving in the same (+) or opposite direction (-). Take the relationship between screening and diagnosis of prediabetes as an example. As the number of at risk people are screened for pre-diabetes increases we expect that (all things being equal) the number of people diagnosed with pre-diabetes to increase. Likewise, as the number of at risk people screened for pre-diabetes decreases we can expect that (all things being equal) the number of people diagnosed with pre-diabetes to decrease. In this way, both variables move in the *same* direction (+) and we indicate the relationship like this:





As an example of a relationship characterised by an opposite direction, let us consider the way in which barriers to access relates to utilisation of primary care. As barriers to access reduce, we expect that (all things being equal) the utilisation of primary care increases. Likewise, as the barriers to access increase, we can expect that (all things being equal) the utilisation will decrease. In this way, both variables move in the opposite direction (-) and we indicate the relationship like this:



To help improve the presentation of He Pikinga Waiora's system map we have omitted the '+' and '-' signs and provide a narrative to build reader intuition about the directionality of the relationships.

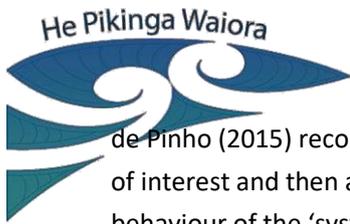
Step 3. Representing relationships as feedback loops

The behaviour of the 'system' is determined by its structure, that is, interacting feedback loops where there is circular cause and effect between variables (hence the term causal loop).

Reinforcing feedback loops are destabilising and tend to exhibit growth or decline over time. In contrast, a balancing feedback loop is stabilising and usually indicates a 'system' is self-maintaining. Teasing out the causality in a 'system' helps us to see what kinds of feedback predominates in the 'system'.

Reinforcing feedback loops are labelled as (R) and balancing feedback loops are labelled as (B). Feedback loops are also labelled to summarise their contribution to 'system' behaviour. Our He Pikinga Waiora model contains five feedback loops that we posit accounts for dynamics of diabetes prevention in New Zealand. These are: building health literacy, reversing the pre-diabetes epidemic, recovery from diabetes, growing awareness of pre-diabetes, and moving beyond business as usual.

For example, the 'building health literacy' balancing loop. Currently diagnosis of pre-diabetes or diabetes triggers a discussion (in primary care) about lifestyle changes to delay or stop the progression of pre-diabetes to diabetes, or encourage self-management of diabetes to avoid complications. Healthy choices lead to healthy eating and exercise patterns which can reduce the risk of developing diabetes, and in some cases reverse pre-diabetes. However, knowledge about healthy diet and exercise is insufficient to bring about lifestyle change. The capacity to sustain a healthy lifestyle is influenced by resources to enable healthy choices (e.g., sufficient disposable income and patient/whānau peer support) and the extent that the settings where people 'live, work and play' make the healthy choice the easy choice (e.g., removing sugary drinks from schools). Public health literacy needs to be built at many different levels to avoid 'victim blaming' and stigmatising those with pre-diabetes and/or diabetes. This requires actions such as raising awareness of the social determinants of health amongst policy makers, health professionals and non-health stakeholders to establish healthy policies and practices.



de Pinho (2015) recommends that causal loop model is built in an iterative way starting with the outcome of interest and then adding variables and relationships (including delays) until the model captures the behaviour of the 'system'. Avoid the temptation to include every variable – simple models work best.

Step 4. Identifying points of leverage

Feedback loops provide opportunities for interventions, which may involve breaking the chain of events, or inserting a new programme, policy or action which helps to stabilise dynamics (leverage points).

References

Maani, K., & Cavana, R. Y. (2000). *Systems thinking, system dynamics: Managing change and complexity*. Prentice Hall. Auckland.

de Pinho (2015) *Systems tools for complex health systems: a guide to creating causal loop diagrams*.

Available at: <https://www.who.int/alliance->

[hpsr/resources/publications/CLD_Course_Participant_Manual.pdf](https://www.who.int/alliance-hpsr/resources/publications/CLD_Course_Participant_Manual.pdf)

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POLICY BRIEFING

August 2017

PRE-DIABETES: A WINDOW OF OPPORTUNITY?



Introduction

The purpose of this policy briefing is to set out the take home messages from an Institute of Environmental Science and Research (ESR) project that has examined how a number of different stakeholders, namely policy makers, clinicians, health managers and communities (including Māori), are responding to the problem of pre-diabetes. The attraction of tackling pre-diabetes is that it facilitates the identification of individuals and/or populations at higher risk of developing diabetes and thus the targeting of interventions to delay or stop the development of diabetes and its complications.

This project has been aligned to He Pikinga Waiora, a project funded by the Healthier Lives National Science Challenge to develop an implementation framework for activating community partnerships, indigenising evidence based initiatives and creating sustainable and effective intervention pathways.

The 'systems' map (Figure 1) depicts stakeholder views about the way in which social, economic, cultural and individual factors mediate people's risk of developing pre-diabetes, type 2 diabetes and complications. The 'systems' map is intended to *stimulate dialogue* between stakeholders and *prompt learning* about the mix of policies, strategies, programmes and actions necessary to improve health outcomes and reduce health inequities.

Why a systemic approach?

'Wicked problems' such as the prevention of chronic conditions are characterised by high levels of complexity, uncertainty and conflict. These problems are not easily understood nor are they tackled successfully using a reductionist approach, which breaks complex problems into smaller simpler problems. Our research has regarded the aetiology of type 2 diabetes ("diabetes") as a complex interacting mix of genetic, physiological, psychological, familial, social, cultural, economic and political factors. In this way, both biomedical research on specific physiological causal mechanisms and efforts to change behaviour form a necessary but insufficient basis to develop effective interventions that work in 'real world settings'. There is no simple solution. A bigger picture understanding is needed to develop a multi-level comprehensive approach to addressing diabetes.

Context



Diabetes is a common chronic condition that significantly impacts on the health and wellbeing of New Zealanders. People with diabetes are at increased risk of cardiovascular disease, kidney failure, blindness and lower-limb amputations. It is estimated that 260,000 people have diabetes, 100,000 have undiagnosed diabetes, and one out of four New Zealanders are pre-diabetic which places them at increased risk of developing diabetes and cardiovascular disease¹. Māori, Pacific Islanders Indo- Asians and people with a lower socioeconomic status are at an increased risk of developing pre- diabetes and diabetes. Healthcare costs are expected to grow from NZ\$540 million in 2006/2007 to NZ\$1.78 billion by 2021. The prevention, early detection and treatment of diabetes represents a serious challenge to health services and is a priority long-term condition for the Ministry of Health.

Diabetes is largely a preventable condition. However, while lifestyle modification interventions such as weight loss, a healthier diet and/or physical activity hold the potential to slow or prevent the onset of diabetes, there are a number of challenges to scaling up these interventions especially for communities deemed 'hard to reach'. The challenge then is to move beyond a narrow focus on intervention efficacy to include consideration of effective implementation in specific settings with a focus on prolonging sustainability and facilitating uptake. Our 'systems' map is intended to make visible how stakeholders are responding to pre-diabetes, and identifies barriers to exploiting what some stakeholders see as a 'window of opportunity' to curb the diabetes epidemic.

Developing the 'systems map'

We used systems dynamics² to create a 'systems' map of some of the big picture drivers for pre-diabetes, describe the ways in which different stakeholders are attempting to address pre-diabetes, and highlight some of the ways in which interventions may be undermined. Data for the 'systems' map was obtained from key informant interviews undertaken either in person or by telephone with policy makers, primary and secondary care clinicians, health promoters, researchers and patients³. Interviews

¹ People with pre-diabetes are glucose intolerant and have a HbA1c of 41-49 mmol/mol. Having pre-diabetes does not necessarily mean that a person will go on to develop diabetes. The probability of progressing from pre-diabetes to diabetes is estimated between 30 and 70 percent.

² System Dynamics enables an appreciation of complex situations where multiple variables interact, knowledge is incomplete, time lags between cause and effect are significant, and no one stakeholder has an overview of the 'whole system'.

³ A total of 24 key informant interviews were undertaken including 12 with patients from Te Kōhao Health and Poutiri Trust with pre-diabetes and/or diabetes.

⁴ For example, the *obesogenic environment* which highlights the way in which the environments that people 'live, work and play' can undermine the capacity of people to make healthy choices. This points to limitations of lifestyle interventions that assume individual responsibility and cautions against victim blaming. In this way, issues such as food insecurity, urban design, the marketing of energy dense and nutrient poor food require interventions beyond those provided by healthcare services to address structural causes.



lasted between 45 minutes to 1 ½ hours and were audio recorded. With the exception of patient interviews which were transcribed, verbatim notes were taken for all other interviews. The data was analysed thematically⁴. We describe the 'system' in terms of *stocks* (accumulated quantities, e.g., number of healthy people), *flows* (changes to the stocks, e.g., number of people progressing to diabetes), *converters* (variables that influence flows, e.g., screening rate), *time delays* (e.g., between becoming obese and developing diabetes) and *feedback loops* (e.g., balancing (B in the system) and reinforcing (R in the system))⁵ .

The 'systems' map

The backbone of the 'systems' map (following Jones et al., 2006⁶) is the way in which healthy people develop pre-diabetes, recover or progress onto diabetes (without complications) and then develop diabetes (with complications). Points to note include:

- The number of healthy people is determined by the inflow of births and outflow of people developing pre-diabetes or dying with normal glycemic levels. Our goal is to maximise the number of healthy people by preventing the onset of pre-diabetes or helping those with pre- diabetes and diabetes reverse their condition.
- The 'systems' map differentiates between people with a diagnosis and those without a diagnosis of pre-diabetes and type 2 diabetes.
- Many of the risk factors that determine whether a healthy person will develop pre-diabetes and then go on to develop diabetes are thought to be the same. These risk factors are likely to influence whether a person with pre-diabetes or diabetes can recover and become healthy. We focus on two specific risk factors: genetic predisposition and people with unhealthy weight⁷. However, the system is more complex, and not all individuals with an unhealthy weight will develop pre-diabetes, and not all pre-diabetics progress to diabetes. Furthermore, individuals may have the same level of genetic predisposition but this 'genetic risk' can interact with the individual's environment (e.g., lifestyle) leading to different health outcomes.

⁵ Reinforcing feedback loops are destabilising and tend to exhibit growth or decline over time. In contrast, a balancing feedback loop is stabilising and usually indicates a 'system' is self-maintaining. Teasing out the causality in a 'system' helps us to see what kinds of feedback predominates in the 'system'. These feedback loops provide opportunities for interventions, which may involve breaking the chain of events, or inserting a new programme, policy or action which helps to stabilise dynamics.

⁶ Jones, A., Homer, J., Murphy, D., Essien, J., Milstein, B., and Seville, D "Understanding diabetes population dynamics through simulation modeling and experimentation", *American Journal of Public Health*, 96:3(2006), pp. 488-494.

⁷ People who are obese are considered at high risk of developing diabetes.

A public health approach is used to categorise leverage points because this has utility when examining the mix and spread of interventions. These levels include: primary prevention (focused on healthy people), secondary prevention (focused on risk factors) and tertiary prevention (focused on preventing and managing complications).

- The 'systems' map is necessarily a simplification of stakeholder views and is at a high level. The 'systems' map does not model the differential impact of diabetes by breaking down the stocks and flows by ethnicity, gender and age.
- The behaviour of the 'system' over time such as the increasing prevalence of diabetes and the increasing financial burden on the health system is determined by the structure of the 'systems' map. That is, by interacting balancing and reinforcing feedback loops. The 'systems' map contains at least five feedback loops, and the implications of these loops for the prevention of diabetes is discussed in the next section.

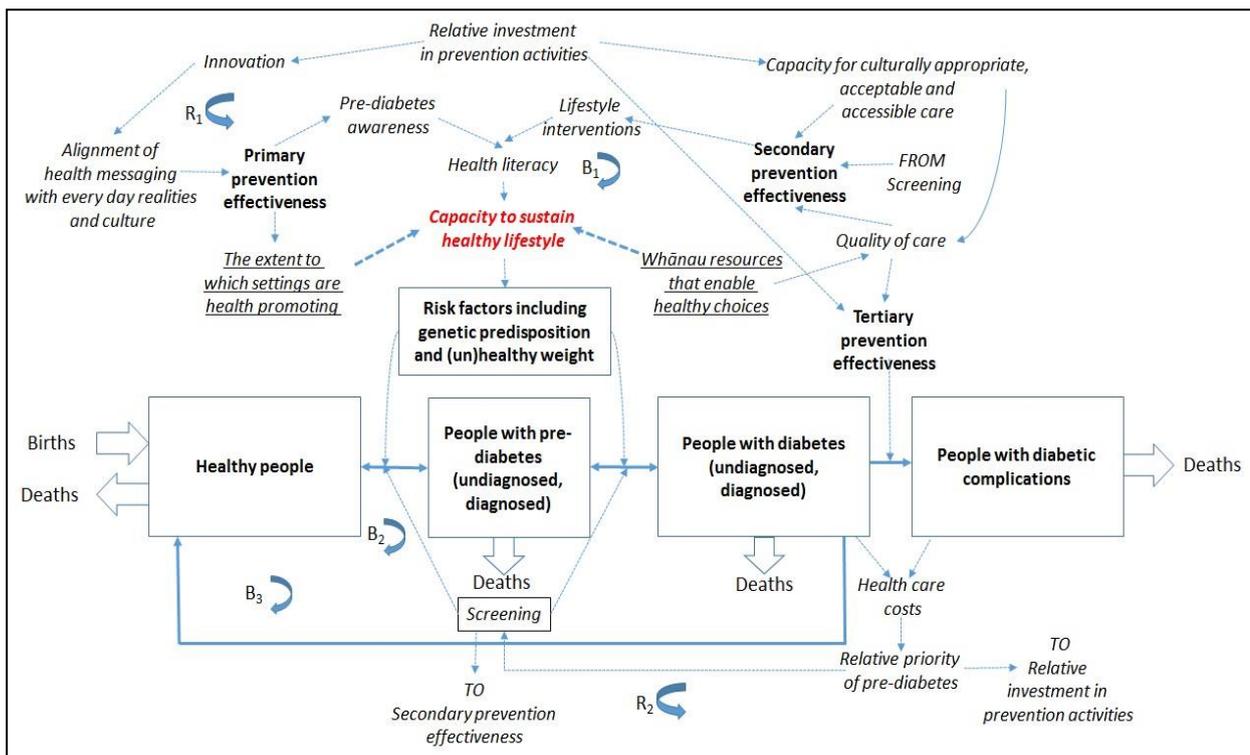


Figure 1: 'Systems' map

Key: Feedback loops

Reinforcing feedback loops are destabilising and tend to exhibit growth or decline over time. In contrast, a balancing feedback loop is stabilising and usually indicates a 'system' is self-maintaining

- *Building public health literacy (B₁):* This is a balancing loop. Currently diagnosis of pre-diabetes or diabetes triggers a discussion (in primary care) about lifestyle changes to delay or stop the progression of pre-diabetes to diabetes, or encourage self-management of diabetes to avoid complications. Healthy choices lead to healthy eating and exercise patterns which can reduce the risk of developing diabetes, and in some cases reverse pre-diabetes. However, knowledge about healthy diet and exercise is insufficient to bring about lifestyle change. The capacity to sustain a healthy lifestyle is influenced by resources to enable healthy choices (e.g., sufficient disposable income and patient/whānau peer support) and the extent that the settings where people 'live, work and play' make the healthy choice the easy choice (e.g., removing sugary drinks from schools). Public health literacy needs to be built at many different levels to avoid 'victim blaming' and stigmatising those with pre-diabetes and/or diabetes. This requires actions such as raising awareness of the social determinants of health amongst policy makers, health professionals and non-health stakeholders to establish healthy policies and practices.
- *Reversing the pre-diabetes epidemic (B₂):* This balancing loop is viewed by many stakeholders as a 'window of opportunity' to address the growing prevalence of diabetes, a point at which individuals are not as adversely affected by diabetes or its complications. Lifestyle changes and drug treatment may reverse pre-diabetes but the potency of this loop is undermined by difficulties in sustaining a healthy lifestyle which can increase the risk that those with pre-diabetes will go on to develop diabetes. Clinically, a 'one size fits all' approach may be ineffective. Some individuals with pre-diabetes could be 'resistant' to lifestyle interventions (e.g., weight-loss might not have the desired effect) and may benefit from taking glucose lowering drugs immediately (if acceptable) for maximum efficacy in the treatment of the disease. This loop assumes that early diagnosis of pre-diabetes will result in lifestyle change of the individual which will reverse the pre-diabetic diagnosis.
- *Recovery from diabetes (B₃):* This is a relatively weak balancing loop whereby people with diagnosed diabetes successfully manage to reverse diabetes, and is very much dependent on the effectiveness of secondary prevention activities to stop or delay the development of complications including cardiovascular disease and renal failure. Bariatric surgery (a tertiary prevention intervention) is the most effective method to-date for long-term amelioration of diabetes.
- *Moving beyond business as usual (R₁):* This is a reinforcing loop that identifies that growing concern about the prevalence of pre-diabetes leads to innovative ways of supporting people to adopt healthy lifestyles, at least some of which, such as community gardens, are outside the formal healthcare system. This enhances the effectiveness of primary prevention interventions which can raise awareness about pre-diabetes and positively impact on the levels of health literacy in the community. However, the inability to scale up (and out) primary preventive initiatives due to factors such as lack of evaluation and funding diminishes their ability to raise awareness about pre-diabetes and the need to adopt healthy diets and exercise patterns. The influence of health literacy is then reduced by lack of resources and presence of obesogenic settings which create barriers to healthy choices. This loop assumes value in a community development approach.
- *Growing awareness of pre-diabetes (R₂):* This is a reinforcing loop that shows that concerns about the growing number of people with pre-diabetes (undiagnosed and diagnosed) and financial implications for the health system, influence relative priority of pre-diabetes and resources allocated to early detection (more heart and diabetes checks), service improvement (e.g., self-management and shared care projects) and innovations outside formal healthcare services (e.g., diabetes innovation fund projects). These activities heighten the visibility of pre-diabetes which in turn influences its relative priority. This loop assumes primary care is an effective place to intervene.

Policy implications

The Ministry of Health's priority areas for action⁸ include a focus on pre-diabetes, enabling effective

self-management, improving service quality, early detection of diabetes and reducing complications, and integrated care between primary and secondary health services. Individually, all these strategies to a lesser extent will reduce the burden from diabetes including health disparities. Our 'systems map' focuses on the identification and management of pre-diabetes, and in this section we consider the extent that pre-diabetes is a powerful leverage point.

While addressing the diabetes epidemic by intervening early to reduce the number of new cases of diagnosed diabetes makes sense, the effectiveness of this strategy is diluted by the system dynamics depicted in Figure 1. Some insights include:

- Success at reducing the prevalence of pre-diabetes may not necessarily decrease prevalence of diabetes in the short term given that there is uncertainty whether any individual with pre-diabetes will go on to develop diabetes and in addition to an aging population where people with diabetes are living longer.
- Concerted effort to screen for pre-diabetes as represented by the 'growing awareness of pre-diabetes' loop (R_2) may result in unintended consequences associated with unnecessary medicalization including stigmatisation, victim blaming, patients adopting a fatalistic attitude to the onset of diabetes, increasing clinician workloads and potentially diverting scarce resources from the management and treatment of diabetes. A lack of understanding about why some pre-diabetic individuals do not go on to develop diabetes may mean some resources focused on individuals who did not need treatment. This highlights the opportunity for basic science research to aid in the identification of pre-diabetic individuals who will and will not progress to diabetes. A clinical approach will be right for some people but not others so monitoring the unintended consequences noted above is an important activity.
- Difficulties in translating lifestyle interventions from the context of a clinical trial into a 'real world' community setting may serve as a roadblock. There are questions about the ability of primary care workforce to deliver lifestyle interventions in the ways that have sufficient fit with Māori and Pasifika needs, aspirations and values. This is also true of non-health stakeholders such as sports and recreation clubs who struggle with 'low participation' groups. The existence of 'hard to reach' clients raises further questions about the potential of lifestyle interventions to further increase health inequities as these are more readily taken up by affluent and educated individuals. In addition, variations in the quality of care received by people with diabetes raises concern about the capacity of the primary care sector (rather than particular general practices or health services) to effectively address pre-diabetes.

⁸ Ministry of Health [Living well with diabetes: a plan for people at high risk of or living with diabetes 2015-2020](#). Ministry of Health, Wellington, 2015.

- A focus on lifestyle as represented by the 'building health literacy' loop (B_1) can downplay the significance of social, cultural, economic and political factors. The social determinants of health such as income, food security, safe neighbourhoods, education and housing have a powerful influence on the effectiveness of lifestyle interventions. Settings where people 'live, work and play' matter. There needs to be a shift from 'building health literacy' to 'building public health literacy' to understand how the social determinants of health impact on people's ability to make healthy choices.

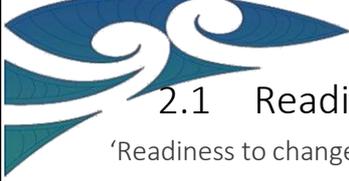
- An unhealthy weight is a risk factor that is shared with various chronic conditions, and lifestyle advice will be similar for each chronic condition.
- This analysis suggests that the effective prevention of diabetes requires both the development and testing of interventions to provide people with the necessary resources so that they have the opportunity to adopt healthy eating and exercise patterns, and capacity building of various settings in order to help people make healthy choices ('health by stealth'). This also involves raising awareness about the link between diet, exercise and diabetes, but importantly includes helping people to understand how structural issues such as food marketing and transport policy influence the availability, affordability and acceptability of healthy food and exercise opportunities. Cultivating such a systemic understanding is necessary to mobilise public support for deep interventions which may challenge the status quo.
- This analysis reinforces the need to strengthen the 'beyond business as usual' (R₁) loop through experimentation and evaluation. This will require inter-sectoral collaborations that actively engage with communities to co-design meaningful interventions that make a difference in everyday lives but also attend to wider influences on community health including socioeconomic factors.
- A focus on wellness rather than pre-diabetes provides an expansive frame to sweep in different cultural understandings of health (e.g., spiritual and whānau health) in order to inform the development of culturally appropriate, acceptable and accessible interventions.
- Lastly, engaging with those communities who are least likely to benefit from health interventions (and may even be considered by some as 'hard to reach') is necessary to ensure that any innovations do not unwittingly increase inequities. One such model is the He Pikinga Waiora Implementation Framework which prioritises self-determination and consists of four elements including cultural-centeredness, community engagement, systems thinking and integrated knowledge translation⁹.

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He Pikinga Waiora research project: hpwadmin@waikato.ac.nz**

⁹Oetzel, J., Scott, N., Hudson, M., Masters, B., Rarere, M., Foote, J., Beaton, A., and Ehau, T. (2017) Implementation framework for chronic disease intervention effectiveness in Māori and other Indigenous communities. *Globalization and Health*, 13(69). <https://doi.org/10.1186/s12992-017-0295-8>

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2.1 Readiness to change measure

'Readiness to change' is the degree to which members (of a community or an organisation) view a problem as important and are prepared to take action to address the problem. Part of this readiness relates to whether the community wants to address a particular health issue. A researcher may see that diabetes is a key issue for a community, but the community feels that drugs are the main issue to address right now. The other part of readiness is whether the members are prepared to take a particular action.

Recommendations

1. Assess the members' rating of the importance of a health issues. This can be done by examining key health statistics or other existing data or surveying the community.
2. Assess the member' rating of reading for implementing a change (see scale below)
3. After gather these data, have a conversation among the team, and other stakeholders to determine whether this is a viable project idea. Consider the following questions:
 - a) How important is this issue for the community?
 - b) Are the community members and researchers equally interested in this issue? Or is it the researchers primarily pushing the idea?
 - c) Are the community members and/or community organisations committed to implementing change?
 - d) What resources do we have available to create and implement change?

Readiness for Implementing Change Scale

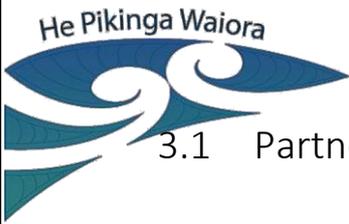
(using a five-point scale from 5 = completely to 1 = not at all)

1. We are committed to implementing this change.
2. We are determined to implement this change.
3. We are motivated to implement this change.

Source

Shea, C. M., Jacobs, S. R., Esserman, D. A., Bruce, K., & Weiner, B. J. (2014). Organizational readiness for implementing change: a psychometric assessment of a new measure. *Implement Sci*, 9(7), 1-15.

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3.1 Partnership Capacity Measure

Partnership has the foundational resources necessary to achieve project aims.

Partnership capacity is the foundation for long-term project success. When partnerships have skills, diverse membership, legitimacy, and connections to relevant stakeholders this facilitates commitment to culture-centeredness, which leads to stronger relationships, synergy, and community in research contributing to outcomes.

Recommendations:

1. Assess current level of partnership capacity to work with external decision-makers and other stakeholders (See survey questions below).
2. Develop vision of capacities you would like to achieve and strategies to reach them.
3. Develop plan for reflection on progress and determine if there are ways to build your capacities such as including new members or trainings.

Survey Questions

Measures on a 6-point Likert scale:

1. Skills and expertise
2. Diverse membership
3. Legitimacy and credibility
4. Ability to bring people together for meetings and activities
5. Connections to political decision makers, government agencies, other organizations/groups
6. Connections to relevant stakeholders

Sources:

Oetzel, J. G., Zhou, C., Duran, B., Pearson, C., Magarati, M., Lucero, J., Wallerstein, N., & Villegas, M. (2015). Establishing the psychometric properties of constructs in a community-based participatory research conceptual model. *American Journal of Health Promotion, 29*, e188-e202.

Engage for Equity, Center for Participatory Research, University of New Mexico:
<https://cpr.unm.edu/research-projects/cbpr-project/index.html>

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4.1 Health Equity Assessment Tool (HEAT)

The link to the HEAT tool is available:

<https://www.health.govt.nz/system/files/documents/publications/health-equity-assessment-tool-guide.pdf>

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1.1 Stakeholder analysis guide

What is a stakeholder?

- We follow Freeman (1984) and define a stakeholder as any individual, group or organisation that can affect or is affected by an intervention.
- Mana whenua and tangata whenua should not be considered stakeholders. While they may well have a 'stake' in an intervention, as a treaty partner, they hold a different status than stakeholders. As such the principles of participation, partnership and protection should be applied when considering Māori interests and values.

Why do stakeholders matter?

- Being aware of who might have a 'stake' an intervention and how it is implemented is critically important.
- Stakeholders may or may not be involved in the design, implementation and/or evaluation of the intervention.
- An intervention's success depends on a variety of stakeholders including patients, whānau, community, clinicians, managers, regulatory bodies, policy makers and politicians.
- Stakeholders provide resources, know-how and the intervention's social license to 'operate' and so their interests and values must be taken into account.

Who is a stakeholder?

- "The principle of who or what really counts" (Freeman, 1994).
- There are lots of different ways of categorising stakeholders. Ultimately, who counts as a stakeholder is a matter of perspective, and depends on how the boundaries are drawn around the intervention.
- But who should be included or excluded from a system of stakeholders?
- A helpful framework is set out by Mitchell et al. (1997) who distinguishes between stakeholders based on the *power* they have, how *legitimate* they are in the eyes of others, and the ability to command attention (*urgency*). In this way, stakeholders can be classified as definitive (having power, legitimacy and urgency), dominant (having power and legitimacy), dangerous (having power and urgency) and dependent (having legitimacy and urgency).

How are stakeholders identified?

- Bryson (1995) provides a simple way to determine stakeholders and 'stakes'.
 - Brainstorm potential stakeholders.
 - For each stakeholder:
 - Note their expectations about the intervention, how they can influence the intervention and the extent to which stakeholder expectations have been met; and,
 - Determine what would satisfy expectations in the short term and note long-term issues.

- This technique is useful for developing a shared understanding about stakeholder interests, values and priorities.
- The ‘power versus interest grid’ can provide additional insights into stakeholder dynamics
 - Brainstorm stakeholders (or draw on existing list of stakeholders);
 - Locate each stakeholder on a 2x2 grid set out in Figure 1;
 - Assess the extent that each stakeholder is a *player* (high interest and high power), a *subject* (high interest and low power), a *context setter* (high power and low interest) or part of the *crowd* (low power and low interest); and
 - Develop a stakeholder management plan. Actions include those to manage players, consult with context setters, involve subjects and monitor the crowd.
 - This technique is useful for creating robust stakeholder management plans and crafting strategic communications.

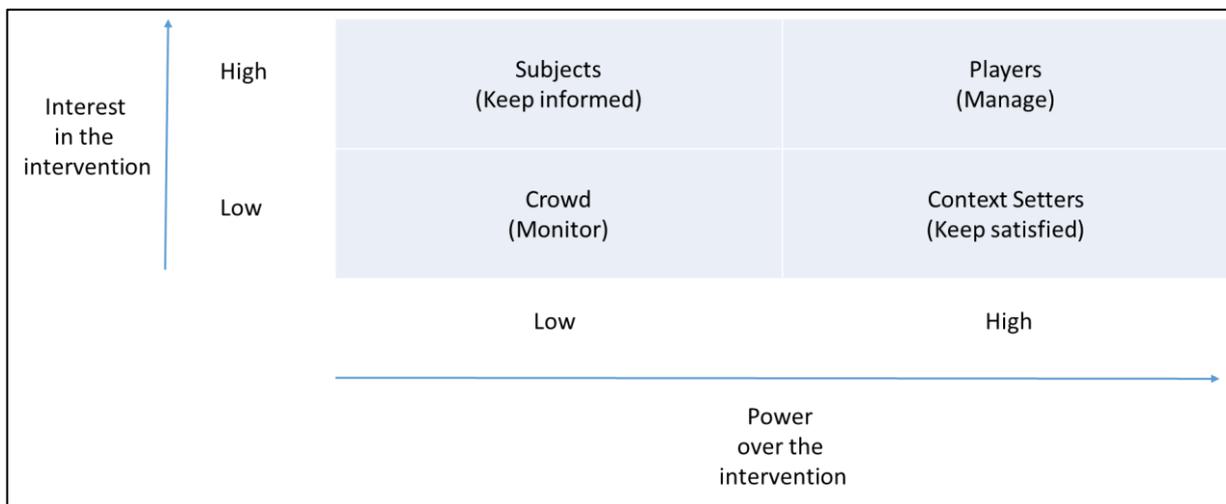


Figure 1: Power vs. interest grid (Ackermann et al., 2005)

What assumptions are made about stakeholders?

- All interventions including policies, programmes and/or pilots make assumptions about the interests, values and capacities of stakeholders. The extent to which these assumptions are valid can significantly impact on success of an intervention including its implementation.
- The assumption rating chart developed by Mason and Mitroff (1981) provides insight into stakeholder assumptions.
 - Brainstorm stakeholders (or draw on existing list);
 - Note what assumptions are made about each stakeholder
 - Locate each assumption on the assumption rating chart set out in Figure 2
 - Assumptions that are ‘least certain’ but ‘most important’ highlight weaknesses in the intervention. Assumptions that are ‘least important’ but ‘least certain’ lend themselves to monitoring and review.
- This technique is helpful to test and strengthen interventions.

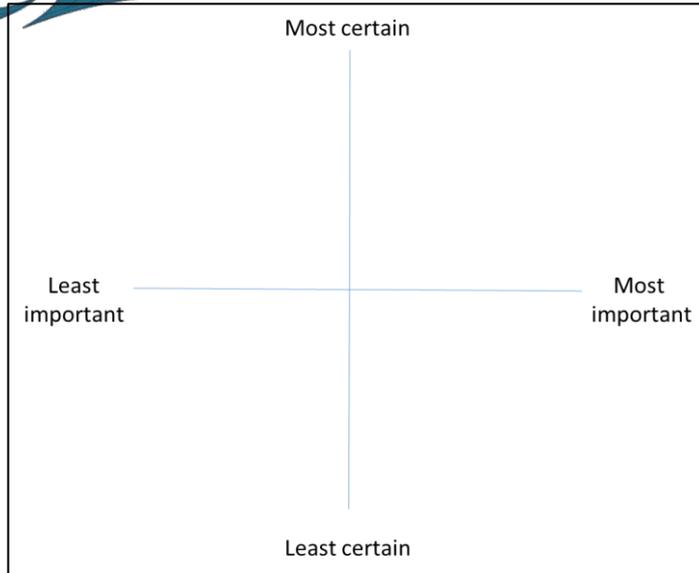


Figure 2: Assumption rating chart (Mason and Mitroff, 1981)

References

- Ackermann, F., Eden, C., and Brown, I (2005). *The practice of making strategy*. London: Sage.
- Bryson, J. (1995) *Strategic planning for public and non-profit organizations*. San Francisco: Jossey-Bass.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4), 853-886.

Further reading

- Bryson, J. M. (2004). What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Management Review*, 6(1), 21-53.
- Achterkamp, M. C., & Vos, J. F. (2007). Critically identifying stakeholders: evaluating boundary critique as a vehicle for stakeholder identification. *Systems Research and Behavioral Science*, 24(1), 3-14.

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6.1 Ensuring partnership represents the community

Representing and Defining the Community

Working in a participatory manner means identifying the community you are working with and who from the community should participate.

Here are a few questions to keep in mind when defining the community:

- 1) Who represents the community?
- 2) Which individuals, agencies or organizations have influence in the community and what is their sphere of influence?
- 3) Are key members community residents or do they work for community-based organizations?
- 4) Whom does the individual or community-based organization represent or report to?
- 5) Who has the time, resources and flexibility to attend partnership meetings and take responsibility for action items?
- 6) Who is defined as “outside” the community and should not be invited to participate?

It is important to keep in mind that no one organization or individual can represent an entire community. To ensure a diverse and representative partnership, members should be recruited from various sectors of the community.

Above from: Giachello AL, author; Ashton D, Kyler P, Rodriguez ES, Shanker R, Umemoto A, eds. 2007. *Making Community Partnerships Work: A Toolkit*. White Plains, NY: March of Dimes Foundation.

Representing the community is an iterative process. Holding a variety of “stakeholder”/partnership hui (meetings) can help explore who might have interest or influence in the issue and have time and resources to participate. Asking people who else should participate, who has influence, who has a valuable perspective, etc. can help identify key members. The danger of defining your partnership can be in deciding too quickly who wants to be a part of it rather than exploring who needs to be in the partnership.

Keep in mind that an effective partnership needs to be large enough to represent the community and small enough to be effective to get things done. Typically, an effective working partnership is between 5 and 15 members. This core group are the people doing the main work of the partnership. One way to involve a greater number of people is to include Advisory Boards who you might meet with quarterly (or the like) to keep informed on progress and receive feedback.



Key Discussion Questions:

Who might you involve in your partnership?

What process will you use to explore potential partners?

What structure might you use? (Core member and advisory groups)

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7.1 How to approach community members & organisations

Sometimes researchers start with clear ideas of the work that is needed and aren't sure exactly who they should work with. Coupled with some of the work identified in this web site about understanding of the principles of a partnership and assessing readiness and capacity to change, this section identifies some steps and tools to learn more about the community and approach potential community members and organisations. The following strategies will help you get started.

Step 1: Identify the community

A community is a group of people with shared identity and similar characteristics. They can be defined in terms of physical spaces, such as living in particular neighbourhood, or by shared elements, such as a health condition or a shared hobby. It is important to understand how the community defines itself so that you can work from their perspective. This helps you understand what makes them a community and the resources that they hold. Note that step 1 is also covered in the previous resource of ensuring the community is represented.

Step 2: Get to know the community

If you aren't aware of the community, you probably need to do some homework and find about it. Learn about the community's strengths, needs, history, culture, leaders and resources. This learning with help to show your interest in the community and your willingness to learn and be culturally humble.

Learning about the community is ongoing and takes time. A simple web search may provide some basic statistics and yet it isn't sufficient. You can read some of the local history or talk to community members. Check to see if partnerships already exist and what you might learn about them. Learn about previous work and how those worked and if there were any problems. Also, realize that you cannot determine the community's true priorities without obtaining the community's perspective.

Step 3: Connect with Gatekeepers and Key Informants

Entering a community can be daunting if you don't have established relationships. One way to start to establish relationships and learn about the community is to talk with gatekeepers and key informants.

Gatekeepers are key opinion leaders who know the community, its issues and its leaders. They may be leaders themselves. They usually work within the community and are well respected and well-known. Other people are key informants; these people aren't members of the community although have spent



significant time and gained some detailed knowledge about the community. During this process make sure you are respectful and observant of the culture of the community. Finally, makes sure you do not force your agenda; rather explore possibilities and see if it is a relationship that can be built on trust and common interests.

Step 4: Meet Community Stakeholders and Possible Partners

Hopefully some of the people you talk with in step 3 will help you plan a community meeting to share your thoughts about the project and needs. These meetings can help you get to know each other, let the community assess your sincerity and trustworthiness, and generate interest and support for the project. First impressions are very important are here are some suggestions for running them:

1. Listen to community members as they discuss their concerns and priorities. Good listening is critical as it helps to establish trust and shows your willingness to work with the community.
2. Do not force your agenda or dominate the speaking time. Also, don't counter argue with community members' viewpoints about the issues. It is important to provide a broad overview of your project goals and what you hope to accomplish; just don't make it a one-sided conversation.
3. Ask for feedback; seek about various viewpoints and alternative perspectives. The goal is to understand the community's needs and concerns. The community may support your perspective, but don't be surprised if you have a different perspective about the project. The next steps should be decided together.
4. Be honest about what you want to do and what the project can and cannot do. Community members don't easily forget the promises you make and will hold you accountable for these false promises.
5. Keep showing up. It takes time to establish a strong and trusting relationship.

Source: Giachello AL, Ashton D, Kyler P, Rodriguez ES, Shanker R, Umemoto A, eds. 2007. Making Community Partnerships Work: A Toolkit. White Plains, NY: March of Dimes Foundation.

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7.2 How to run codesign meetings (hui)

HOW TO RUN A CO-DESIGN MEETING?

Initial co-design meetings are held to engage a variety of stakeholders and explore possible solutions to health problems. Other resources describe the importance of representing and approaching the community. This resource focuses on how to structure the initial meeting(s) to help define the problem and identify solutions.

The initial co-design process is useful as it should bring a variety of different stakeholders and potential partners who might bring innovative ideas and fresh perspectives. After the initial meeting(s), you will find a common core of people who want to work on the problem. Some people will drop out because of lack of time or resources; others because they feel the direction moves them away from their organisation's core business. Sometimes we need to re-engage people who might be critical to the successful implementation of an intervention. The initial meeting(s) will help identify those key issues and people.

We recommend using Design Thinking methodology as it provides a problem-solving approach that is human centred. It is a useful process for addressing complex (or wicked) problems that are ill defined and/or lack an obvious solution. The focus is on understanding human need and the defining and framing the problem around these needs. From here, new ideas are generated and prototypes are created and tested.

There are five stages to work through. While they are listed as if they are linear, design thinking is non-linear and sometimes groups need to cycle back and skip stages. The length of time for the initial meeting can be as little as two hours and as long as two days depending on the availability of participants. Specific activities can be created to help explore and expand on each of these stages depending on participant availability.

Stage 1: Empathise.

The first stage is to try to empathise and understand the human aspects of the problem you are trying to solve. This can involve talking to community members, people who suffer from a condition, people who provide health services for a condition, etc. We could also spend time in the physical environment with the people who are affected by the condition. The easiest way to do this at an initial co-design meeting is to have people from the community with the condition participate and share their stories. Other members can interview and explore the problem with them. The key is to really gain a deep and emotional understanding of what people experience and feel with their condition and when they access services. Additionally, we need to make sure we have sufficient information before we move to the next step. So, the planner will need to organise the meeting carefully by ensuring the right people are present or perhaps structure the initial meetings where everyone goes away to gather more information before coming back for Stage 2. Further, as we move forward to other stages, we may realise that we have to cycle back to Stage 1 for more information to ensure we have empathic understanding.

Stage 2: Define the Problem

The focus on this stage is to analyse the information gathered to define the core problems that the team has identified. The problems should be defined in a human-centred way and not focus on what an organisation or



your team needs; rather it should focus on what the individuals and community needs. The problem should be noted in a statement or series of statements. For example, one such statement might be “Elders need access to safe environments, strong social connections and health services that treat them with respect.” The problem statements should be re-worked with the input of the affected populations who hopefully are represented at the meeting. It might be appropriate to seek out additional members to ensure the problem statement is clearly understood and widely accepted.

Stage 3: Ideate

Once we have a clear definition of the problem based on an empathic understanding of peoples’ experiences, you are ready to start generating ideas for solving the problem. The goal of this stage is to try and “think outside of the square” and come up with innovative ideas. The ideas should be phrased in terms of what can we do to address the problem statement. There are multiple techniques for stimulating free thinking such as brainstorming and “worst possible idea.” The purpose is to encourage free thinking and possibilities and not evaluate ideas initially. After the free thinking, ideas can be explored and evaluated in order to narrow the pool of ideas.

Stage 4: Prototype

Stage 4 is about building inexpensive prototype(s) with specified features in the product or service. The group may be divided into a number of teams if there are sufficient people present to develop competing or complementary prototypes. These prototypes should involve various art supplies that can be used to draw or build the prototype. If the solution is a service, a picture of what the service might look like can be drawn with some description provided. At the end of this stage, the group has a set of prototypes that are ready to be shared and tested. These can be narrowed down so there is only one prototype or test out multiple prototypes.

Stage 5: Test

The final stage is to thoroughly test the prototypes both within the group and also outside of the group. Testing likely involves a series of interviews and focus groups with key stakeholders who can identify potential limitations and constraints and also positive features of the prototypes. The results from the testing stage might stimulate additional ideas, help you learn more about the users, or needs for more information or problem definition (and hence why the process is non-linear).

References

Waloszek, G (2012). Introduction to Design Thinking. <https://experience.sap.com/skillup/introduction-to-design-thinking/>

Dam, R., & Siang (2019). 5 Stages in the Design Thinking Process. <https://www.interactiondesign.org/literature/article/5-stages-in-the-design-thinking-process>



8.1 HPW Visioning Tool

- Reflect and fill in the Visioning Tool individually
- Meet with partners and reflect on similarities and differences
- Plan next steps together
- After a period of time review processes together to see if you are following intentions

One project can involve multiple communities, e.g. a geographical community, an ethnic community, a community of practitioners. Complete a template for each community.

Do each column from intervention team and community perspectives — list both if they are different

Community voice

How groups, that the intervention is focused on are involved in defining the problem and solution

Reflexivity

Questioning the unstated and taken-for-granted power and privilege from which outsiders initiate contact with the community

Structural transformation and resources

Changing the nature of the system to better fit the community needs.

Community Engagement

The level of involvement, impact, trust and communication with community members

Integrated Knowledge Translation

How the intervention is implemented with regard to the degree that the knowledge users are equal partners with the intervention team

System perspectives

The degree to which the team demonstrate recognition that there are multiple ways of viewing issues and solutions depending on worldviews, values and interests

System relationships

Prioritises an understanding of relationships between variables/factors rather than taking a laundry list approach

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Variable	How can we ensure this happens now?	What can we do in the future?	How will we know if we are successful?
<p>Community voice How groups, that the intervention is focused on are involved in defining the problem and solution.</p>			
<p>Reflexivity Questioning the unstated and taken-for-granted power and privilege from which outsiders initiate contact with the community.</p>			
<p>Structural transformation and resources Changing the nature of the system to better fit the community needs.</p>			
<p>Community Engagement The level of involvement, impact, trust and communication with community members</p>			
<p>Integrated Knowledge Translation How the intervention is implemented with regard to the degree that the knowledge users are equal partners with the intervention team</p>			
<p>System perspectives The degree to which the team demonstrate recognition that there are multiple ways of viewing issues and solutions depending on worldviews, values and interests.</p>			
<p>System relationships Prioritises an understanding of relationships between variables/factors rather than taking a laundry list approach</p>			
<p>System levels Takes different levels of analysis into account and provides clear rationale for the choices of levels.</p>			



9.1 Creating Values and Principles

All partnerships are guided by a set of underlying values and principles even if they aren't articulated. Each partnership should developed a clear set of principles by which they work. The [HPW Visioning tool](#) is one approach to develop a common vision guided by principles. An additional approach is to brainstorm a set of values and principles that guide your partnership and draft a brief document or oral recording to articulate them. These should be viewed as dynamic and changing as the partnership grows.

To help you think about some principles, the resource includes a list of commonly accepted, general principles guiding community-based participatory research (CBPR). CBPR is an approach that is consistent with the HPW framework and in fact, HPW borrowed some of the work from the CBPR literature. This is available below.

CBPR Principles

These principles come from Israel et al 2018 and are directly quoted (pp. 32-34). The descriptions are paraphrased from the same source.

1. CBPR recognizes community as a unit of identity

Community is a key aspect of collective and individual identity. Communities develop a sense of belonging and boundaries that are relevant for its members and how they see themselves as unique and connected to others. Exploring how communities define themselves and what is important to them is a key focus on CBPR.

2. CBPR builds on strength and resources within the community

CBPR takes a strengths-based approach rather than a deficit approach. That is, researchers working from this perspective identify and build on the strengths and resources of the community to address health and social issues. These include individual skills, social relationships and commitments to the community.

3. CBPR facilitates cooperative, equitable partnership and all research phases and involves an empowering and power sharing process that attends to social inequalities

CBPR is about partnering during the entire stage of a research project from defining the "problem" to developing the research approach, collecting data, interpreting data, and applying the results. Co-design is a popular approach although CBPR suggests that it is not only co-design, but also co-implementation and co-evaluation and co-everything. The knowledge and expertise of the community members is key throughout this process.

4. CBPR promotes co-learning and capacity building among all partners

CBPR involves co-learning and mutual sharing among all partners. Academic and community researchers bring different expertise that is used in a project. The team develops further by all members benefiting from these various perspectives. Increasing capacity can help all members work on the specific project and also in other endeavours.

5. CBPR integrates and achieves a balance between research and action for the mutual benefit of all partners

CBPR is not just about researching something to better understand it. This understanding is important although CBPR emphasises an action-oriented approach. Research knowledge needs to be actively applied to address health and social wellbeing issues that matter to the community. CBPR strives to achieve social change intended to eliminate health inequities.

6. CBPR emphasizes public health problems of local relevance and ecological perspectives that attend to the multiple determinants of health and disease



CBPR addresses health problems that matter for the community. The community should determine and guide the choice of issues. In addition, the definition of the health problems should be focused on multi-level determinants—that is, there should be focus on individual choices, family relationship, community structures and social systems as they impact a holistic view of health.

7. CBPR involves systems development through a cyclical and iterative process

CBPR emphasises a systems perspectives that examines multi-level issues over a period of time. This process allows a health issue to be placed in the context of the larger social system. This process also emphasises a dynamic approach to address the system.

8. CBPR disseminates findings and knowledge gained to all partners and involves all partners in the dissemination process

From the CBPR perspective, it is important to share findings from the project with all partners involve to ensure that the community learns about what was found out. Further, this information should be shared in an ongoing process of getting feedback to better interpret and use the findings for social action. Community partners should be actively involved in this dissemination.

9. CBPR requires a long-term process and commitment to sustainability

Many of the health and social problems that exist today have developed over long periods of time and have created high levels of mistrust in social institutions. Thus, CPBR needs to make a long-term commitment to change and seek ways to make the research and outcomes sustainable.

10. CBPR addresses issues of race, ethnicity, racism and social class and embraces cultural humility

CBPR tends to be used with community partners from historically marginalised groups and ‘outside’ researchers and other institutional partners from more privileged backgrounds. CBPR partners need to strive to directly address and consider hard issues around ethnicity, racism and social class to combat historical wrongdoings. Cultural humility is being humble about this learning and show a willingness to grow and adapt. It is a commitment to self-reflect and examines one’s own biases.

Source

Israel BA, Schulz AJ, Parker EA, Becker AB, Becker AB, Allen AJ et al. Critical issues in developing and following CBPR principles. In: Wallerstein N, Duran B, Oetzel JG, & Minkler M. editors. Community- based participatory research for health: advancing social and health equity, 3rd edition. San Francisco: Jossey-Bass; 2018. p. 31-46.

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10.1 River of Life

The River of Life is a tool that can help a partnership reflect on its histories, motivations and influence on the partnership and how it has developed. This tool builds on the work of Paulo Freire to encourage reflexive dialogue. The purpose of the tool is to develop a communal narrative about what has brought the partnership together and the work it is doing. It provides the narrative using a set of guided questions and the metaphor of a river that allows partners to acknowledge, celebrate, reflect on, change and sustain the processes and goals for the project. It encourages a look at the internal partnership dynamics and also the external institutional, political, economic, and historical constraints and opportunities that shape the partnership.

The following is a brief summary of the exercise. For details, see facilitation guide and examples of Rivers of Life at: http://cpr.unm.edu/research-projects/cbpr-project/facilitation_tools.html

Objective:

To help partnerships reflect on the histories and influences that motivate partners to work together and also on the goals, processes and results of your partnership work.

Time:

60 minutes (few minutes to individually reflect, 45 minutes for teamwork and 15 minutes to reflect).

Materials:

Sheets of paper, coloured markers, flipchart, scissors, magazines, construction paper and glue.

Procedures:

Explain the value of a river as a symbol for many cultures as it reflects life, growth and change. As a partnership, engage in the following steps:

Step 1: Each member of the partnership reflects independently about: When and why did you join the partnership? What is important to know about your community? What important events and changes have you seen?

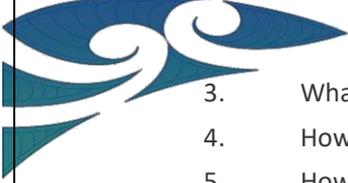
Step 2: Lay out a long sheet of paper and other art supplies so that together you can draw your partnership river of life.

Step 3: Draw the river of life considering the beginnings, the influences, the obstacles, and the peaceful moments.

Step 4: Make a historical timeline with dates below the river of life. Relate important historical events as well.

Step 5: Reflect on the river of life considering the following questions:

1. What stood out for you?
2. What were facilitators for the partnership?



3. What were some of the challenges?
4. How could you use this River of Life in your work?
5. How would you like the river to flow going forward?

Source: Sanchez-Youngman S, Wallerstein N. Partnership river of life: creating a history time line. In: Wallerstein N, Duran B, Oetzel JG, & Minkler M. editors. Community-based participatory research for health: advancing social and health equity, 3rd edition. San Francisco: Jossey-Bass; 2018. p. 375-378.

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10.2 Reflexive Dialogue and Critical Self-Reflection

The key aspect about critical self-reflection is to find a process that works well and challenges you to consider key issues that impact partnering and also address issues around health inequities. The key is to honestly push oneself to understand how your identities influence you and how that may be influencing the partnering process. It is about honestly assessing issues of ethnicity, culture, racism, power and privilege as these are issues that many partnerships are address if they are addressing health equity in Indigenous communities.

One approach to critical self-reflection is presented here and is based on the work of Cheryl Hyde (2018). It involves a four-step process of understand the self and exploring how that impacts on the partnership.

Step 1: Our Complex Cultural Selves

The first step is to explore and understand one’s own identities and how they impact us. These include the values, attitudes, beliefs, practices, and rituals that shape who we are and how we act all of which flow from the various groups of which we are members. As part of this exploration, the following inventory may be helpful. This can be completed directly or can simply be used as a reflective tool.

Cultural identity inventory

Identities	What values, actions or messages are associated with this identity?	How do you understand this aspect of yourself? How do others see you?	What privileges do you have? What privileges have you been denied? How have you responded?
Gender			
Ethnicity			
Class			
Sexual orientation			
Nationality			
Other _____			



Step 2: Privilege and Power

This step builds on the inventory in step one and considers that some of the identities are dominant or privileged. These privileged identities have power related to access to economic, political and education among other resources. By contrast, some of these identities have a subordinate status. These statuses related to social structures and social determinants of health and wellbeing. This step involves reflecting on how these identities are privileged and not privileged and how that may impact the partnership.

Step 3: Understanding Different Vantage Points

A key aspect of this step is to seek understanding of how we see ourselves and how others see us. These may not be the same—we may see ourselves as open and humble and other may experience us as closed and a “know-it-all.” Further, what you may consider to be a central part of your identity, others may not even consider. In completing the inventory, it is important to push yourself to consider an honest reflection about these different vantage points.

Step 4: Synthesis and Next Steps

Hyde suggests reviewing the inventory, your reflection and considering four questions:

- a) What are your overall reaction to this information?
- b) Does any dimension stand out as particularly important to your overall cultural identities?
- c) What have you learned about yourself?
- d) What next steps in this process do you see yourself taking?

Addressing these questions can help you move forward. For example, you may consider further education to better understand your identities or those of other groups. Perhaps there are some skills that you want to develop or relationships you want to build. To guide these next steps, you might want to consider ways that your identities are a) assets to your practice, b) challenges to your practice and c) areas for improvement.

Given that we are focusing on addressing health inequities, particularly in Indigenous communities, understanding identities, and particularly issues of power and privilege, are important. We need to understand the ways that our identities are reflected in the discussion and in the approach that we are taking to address the health issues. We need to make sure that we are not inadvertently silencing some viewpoints during our discussion. We also need to make sure that different perspectives are integrated into the work. Part of working effectively is to navigating these differences and ideally integrate these differences to enhance the quality of the work. Thus, a final part of this last step is to dialogue about our partnership processes to see how it reflects our identities and whether it is integrative of various identities.

Source: Hyde C. Challenging ourselves: Critical self-reflection on power and privilege. In: Wallerstein N, Duran B, Oetzel JG, & Minkler M. editors. Community-based participatory research for health: advancing social and health equity, 3rd edition. San Francisco: Jossey-Bass; 2018. p. 337-344.

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11.1 Developing Partnership Agreements

Many partnerships develop agreements for how they will work. These agreements can be informal or formal although a large study of US community-based research partnerships found that having a formal agreement was a promising practice that is associated with better resource and power sharing in particular (Oetzel et al, 2018). Agreements can include a variety of features and partnerships need to review what features matter to them. There are a variety of ways and approaches to develop agreements. This file is based on the suggestions of Rodriguez Espinosa and Richmond (2018) and considers a variety of features for formal agreements. Not all of these features have to be included and it is up to the parties to identify the most important features.

Purpose

A purpose statement provides a general overview of the aims of the partnership and what it is trying to accomplish. It may also provide a list of key terms and working definitions to provide clarity.

Mission and vision

A mission and vision statement can be an alternative to a purpose statement or provide further elaboration of it. A mission and purpose are very similar while a vision often provides an aspirational goal for what is a desired outcome (e.g., improved health equity).

Project Values and principles

Another resource in this web site provides an overview of key CBPR principles and encourage identifying key values and principles for the partnerships. Some formal agreements include those principles, while other partnerships leave them out of the formal documents.

Respective Responsibilities

Many agreements include the key responsibilities for each partner or stakeholder group involved in the partnership. These responsibilities provide a scope of work for each partner and help to organise efforts and also reduce misunderstandings about expectations and deliverables. These can be identified as specific deliverables, work responsibilities, key performance indicators or milestones. This section (or a separate section) should also specify how the resources are going to be distributed and who is responsible for making decisions about resources including the hiring of project staff. This section can also include the agreement period and specific deliverable dates.

Data-Related Issues

As these types of projects involve research, there are ethical responsibilities in data collection and management. The following are often considered:

Involvement in data collection

Data collection procedures must comply with research ethics protocols and usually are covered in separate documents. However, the formal agreement may specify who is involved in data collection efforts and the procedures they need to follow to adhere to ethical protocols.

Data ownership and data sharing



Data ownership, sharing and data use agreements are especially important for partnerships with multiple teams in order to avoid potential conflicts. Indigenous communities are especially concerned about data ownership and sharing given past misuse of data.

Data storage

Agreements may consider issues about who is going to store the data and how it will be done. This is particularly important for projects collecting identifiable data; agreements should outline steps for protecting participant confidentiality.

Procedures for project modifications

Given the fluid nature of CBPR research, it is not uncommon for changes to the project to occur. Agreements can be used to identify the procedures for introducing and approving modifications (e.g., establishing a committee to review and approve modifications).

Publication, Writing, and General Dissemination

Sharing of research findings through conference presentations, journal articles and reports for the community and stakeholders is a key aspect of partnered projects. Agreements often include elements to describe the process of identifying authorship and approval of publications to ensure equitable collaboration and honouring all who participate. Some of the specific elements that might be included are the following:

General dissemination

This aspect of an agreement might identify key milestones or responsibilities for sharing research findings (e.g., to community groups, to funders, to stakeholders, etc.). These might identify who is responsible for meeting the general dissemination responsibilities as well.

Publications, review processes, and opportunity for collaborative dissemination

This section identifies the process for reviewing and approving publications and other dissemination efforts. This might be done by a subcommittee of the partnership. This section should also specify how people can be involved in writing teams and the means by which information will be shared about ongoing writing opportunities, particularly for junior researchers and community members. Finally, it should also consider the criteria for authorship. Such criteria should likely consider journal publication standards as well, but could include: “a) Individuals who contribute substantially to the manuscripts concept, design, data analysis, or implications; b) Individuals who provide essential expertise for example academic, indigenous knowledge, historical, cultural relevancy; and c) Individuals who review or make substantive comments or edits on at least one draft.” (Rodriguez Espinosa & Richmond, 2018, p. 389). The criteria may also identify ways to identify the order of authors and student authorship around thesis/dissertation.

Publication guidelines acknowledgement

Some people contribute to a project and yet may not meet the criteria for authorship. Others may facilitate and support relationships that the project depends on. These contributions can be specified in an acknowledgement section that is included in all dissemination efforts. The agreement can specify the means by which this acknowledgement will be written.

Resolving grievances

CBPR partnerships often include various forms of conflict and thus a process for resolving grievances is often included. These can specify formal grievance processes (e.g., nominating a person or group for arbitration) or specify a set of principles for how the partnership is going to address conflict.



Some partnerships may be terminated and the conditions for such a termination should be specified.

Other sections to consider

An appendix listing those parties referred to in the agreement, subcommittee membership, health and safety plans, contingency plans and advisory boards may be helpful.

Example Agreements

For comprehensive example, see Engage for Equity (E2):

<http://cpr.unm.edu/common/new-engage-for-equity-data-publish-agreements-2017-.pdf>

For comprehensive tribal examples, see the Indigenous Wellness Research Institute (IWRI):

<http://health.iwri.org/tribal-colleges-universities-drug-and-alcohol-problems-and-solutions-study/>

See source below for further URLs identifying examples.

Source: Rodriguez Espinosa P, & Richmond A. Partnership agreements: A practical guide to developing data sharing, ownership and publishing agreements. In: Wallerstein N, Duran B, Oetzel JG, & Minkler M. editors. Community-based participatory research for health: advancing social and health equity, 3rd edition. San Francisco: Jossey-Bass; 2018. p. 385-392.

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12.1 Viable Systems Model

Viable System Model guide

- The Viable System Model (VSM) was developed by Stafford Beer and sets out the *necessary* and *sufficient* conditions required for organisational viability. That is, the capacity to successfully adapt to changes in social, economic, technological, cultural and political environments.
- The VSM provides a theoretically and methodological robust way to managing complexity.
- The VSM can be used to design high performing organisations or evaluate weaknesses that impact on organisational sustainability.
- The VSM presents a generic model of organisation and can be applied ‘system’ including teams, organisations, communities and economies. For example, Foote et al. (2014) used the VSM to help a diverse set of stakeholders design an integrated approach to addressing family violence in New Zealand.
- We recommend its application for complex public health interventions such as those developed using the He Pikinga Waiora framework.
- The VSM posits that a viable organisation requires five subsystems. These are:
 - **System 1 - Operations** (‘the doing bits of a system’) which deliver the goods and services to achieve the organisation’s purpose. Operational units interact with organisation’s external operating environment including clients, communities and other organisations.
 - **System 2 - Coordination** which ensures that the various operational units work together in a way that avoids ‘sub-optimisation’ (e.g., standardisation, scheduling of resources).
 - **System 3 - Management** which ensures that the various operational units are appropriately tasked, resourced, and held accountable for their performance. System 3 manages for ‘collective impact’ (cf: System 2). The management subsystem is responsible for ensuring that any organisational policies are communicated.
 - **System 4 - Intelligence** which tracks developments in the external operating environment, and identifies opportunities and threats.
 - **System 5 - Policy** which sets purpose and ethos of the organisation, and ensures that the ‘inside and now’ orientation of the System 3 - Management subsystem is balanced with the ‘outside and future’ orientation of the System 4 - Intelligence subsystem.
- These subsystems are organisational *functions* are not **necessarily** the responsibility of any one individual or group.
- The VSM also highlights the important role that information and control channels play in ensuring that the five subsystems are in *balance*. Key homeostats include:
 - **System 1 and 3 relationship** where operational goals, resourcing and accountability arrangements are determined;
 - **System 1, 2 and 3 relationship** that ensures the operational units have necessary autonomy to respond to any challenges;
 - **System 3 and 4 relationship** where decisions about *how* the organisation will adapt to changes in its external operating environment are made; and
 - **System 3, 4 and 5 relationship** which resolves conflict between short vs. long term and internal vs. external perspectives.
- Figure 1 sets out a viable system representation of a family violence prevention system.
- Organisational pathologies (‘problems’) occur when subsystems are missing, ineffective or not in balance. For example, a weakly developed (or non-existent) System 5 - Policy subsystem can lead to lack of agreement on organisational purpose leading to lack of clarity about what activities will make a difference.
- The VSM provides a template that can be applied at different levels defined by geography, target population etc (e.g., local, regional, national). This recursiveness considerably reduces the complexity associated with multi-level comprehensive public health interventions. In this way, a viable system at the national level can be decomposed into a number of viable systems at the regional level (e.g., regional services), which in turn can consist of a number of viable systems at the local level (e.g., specific services).

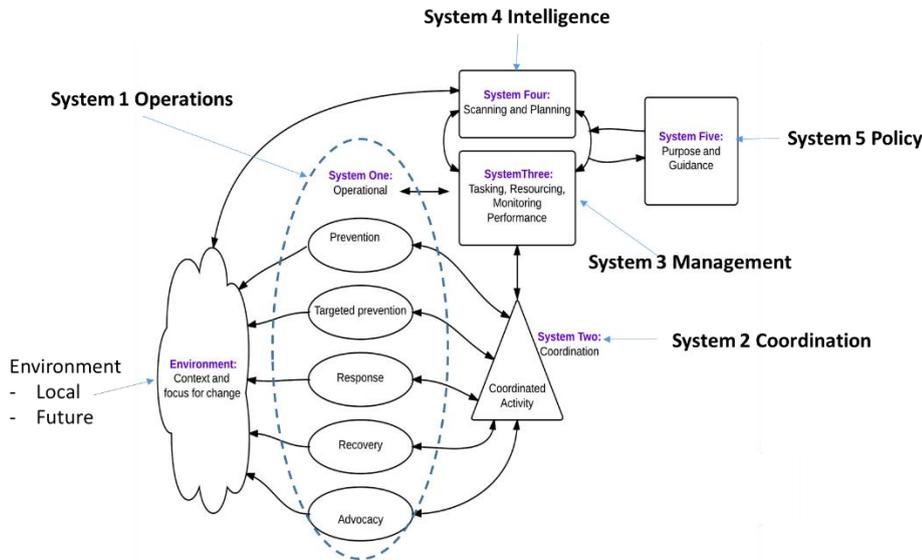


Figure 1: VSM (Adapted from Foote et al., 2014)

VSM Template

1. Identify a 'system in focus' e.g., public health intervention, a cross-sector collaboration, a health service.
2. Develop an appreciation of the 'system in focus'
 - a. Undertake a stakeholder analysis (see stakeholder analysis guide)
 - b. Identify key issues, problems and opportunities
3. Define the purpose of the 'system in focus'
 - a. Utilise PQR or CATWOE method (see soft systems methodology guide).
4. Collect views from key stakeholders about the presence and effectiveness of System 1 – 5 and homeostats. This template utilises Hildbran and Bodhanya's (2015)³ diagnostic questions:
 - a. What are the main operations of the system?
 - b. How do the operational units relate and work together?
 - c. How are the operational units coordinated? What mechanisms ensure operations run smoothly?
 - d. What are the important committees, procedures and structures that facilitate the good operation of the system?
 - e. Who is managing the system as a whole and through what mechanisms?
 - f. How are resources allocated, and accountability negotiated?
 - g. Who is looking at future trends, opportunities and threats, and investigates their impact on the system in the long term? How are plans made to deal with them?
 - h. Why does your system exist in the way it does, and what binds this system together?
5. Based on (4) identify organisational strengths and weaknesses including any pathologies.
6. Develop improvements to enhance the viability of the 'system in focus'.

Hildbrand, S., & Bodhanya, S. (2015). Guidance on applying the viable system model. *Kybernetes*, 44(2), 186-201.

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³ Hildbrand, S., & Bodhanya, S. (2015). Guidance on applying the viable system model. *Kybernetes*, 44(2), 186-201.



13.1 Soft Systems Methodology for Setting Purpose and Design

'Hard' and 'soft' systems

- Systems ideas have been applied to various problematic health issues including diabetes and obesity. Systems is relatively novel within public health and not without challenges.
- While all systems approaches are committed to understanding problems holistically, commitment to holism (i.e., whole greater than sum of the parts), the use and conceptualization of specific systems concepts varies depending on approach. There is a range of soft, hard, and critical traditions including general systems theory, system dynamics, cybernetics, complex adaptive systems, soft systems methodology, and critical systems thinking. For example, the concept 'system' provides illustration of differences between hard and soft approaches. From the hard perspective, a 'system' is an entity that exists in the real world such as a health system. Much of the literature on quality improvement in health adopts this perspective. In contrast, the soft approach regards a 'system' as a way of organising thinking about problematic situations.

Soft Systems Methodology

- Soft Systems Methodology (SSM) was developed by Peter Checkland and colleagues over a 30 year programme of action research (e.g., Checkland, 1981; Checkland and Scholes, 1990; Checkland and Poulter, 2006). SSM has been extensively used in areas such as health services research (e.g., Vandenbroeck et al., 2014), information systems development (Winter et al., 1995) and evaluation (e.g., Foote et al., 2009).
- For an accessible introduction to SSM principles, methods and practices see Checkland and Poulter's (2006) *Learning in action: a short definitive account of soft systems methodology and its use for practitioners, teachers and students*.
- SSM is an approach to addressing ill-defined problems. Such problematic situations are 'messes'. That is, complex sets of interacting issues that are resistant to definition and solution. Messes cannot be solved but need to be managed on an ongoing basis.
- SSM is used to:
 1. Gain insights into problematic situations
 2. Set intervention purposes and develop strategic objectives
 3. Develop shared understanding about issues and buy-in to actions
- Unlike 'hard' systems approaches, SSM is agnostic about whether systems exist in the real world. Instead, SSM draws on systems concepts to create a process of learning which examines the different viewpoints held about a problematic situation and encourages a shared understanding about what actions are desirable and feasible. That is, likely to led to improvement.
- A soft systems study is undertaken in collaboration with stakeholders and structured around four principles:
 1. Finding out about the problematic situation;
 2. Developing models of purposeful activity to direct inquiry about the problematic situation;
 3. Comparing (2) with (1) to develop a collective understanding about the problematic situation and determine what actions might constitute an improvement; and
 4. Structured dialogue about desirable and feasible changes.
- **Finding out about the problematic situation**
 - Information about the problematic situation is collected using a variety methods including interviews, hui, documentary analysis, observations and surveys. The complexity of issues is visually represented as a rich picture highlighting key inter-relationships and possible boundaries (see Figure 1 for an example). Analyses of the intervention including the context and power relations also deepen an appreciation of what change is desirable and feasible.



Figure 1: A rich picture of water use (Winstanley et al., 2016)

- **Developing models of purposeful activity**

- In SSM, problematic situations are explored using models of purposeful activity.
- SSM assumes that action to understand or improve a problematic situation is purposeful. That is, intentional.
- These models represent ‘relevant systems’ that might improve the problematic situation.
- Models of purposeful activity can be developed using PQR formula and sharpened up using CATWOE method.
 - The PQR formula expresses a ‘relevant system’ in terms of a “way to do [P], by [Q] in order to achieve [Q]”.
 - CATWOE stands for **C**(lient), **A**(ctor), **T**(ransformation), **W**(orldview), **O**(wner) and **E**(nvironment).
 - The T(ransformation) and W(orldview) set out the improvement and the perspective from which the improvement is seen as desirable The T(ransformation) is expressed in terms of moving from an undesired state to a desired state (“undesired state → desired state”)
 - The A(ctors) define who will carry out the T(ransformation).
 - The C(lient) defines who benefits (or is disadvantaged) from the T(ransformation), and the O(wner) determines who can stop the T(ransformation) from happening
 - The E(nvironment) details what must be taken as a given when undertaking the T(ransformation)
 - See Table 1 for an example.
- Multiple models of purposeful activity are created in order to prevent premature narrowing of perspectives on improvement.
- Models of purposeful activity are given expression as conceptual models which set out what activities have to logically occur in what order to give effect to the T(ransformation). Activities are brainstormed, expressed with verbs up-front, and placed in relationship to one another (see Figure 2 for an example).

Table 1: Developing a community environmental action plan (Adapted from Foote et al., 2009)

PQR: To develop a [community environmental action plan] by [pooling together the knowledge of stakeholders and Māori] in order to [achieve coordinated action]	
T(ransformation)	Community fail to understand the state of the environment → Community understand the environmental priorities

C(lient)	Fish and Game, Māori, community members, conservationists, recreationalists, farmers, individual landowners, environment
A(ctors)	Community leaders, Regional Council staff (e.g. engineers, scientists), government agencies, interest groups, business, Māori, individual landowners
W(orldview)	The role of the regional council is to support community (be on tap, not on top)
O(wner)	Powerful (articulate/'loud') actors with a negative view of the community action plan, government agencies, council elected representatives
E(nvironment)	Funding, time, information or understanding, willingness of participants to resolve issues

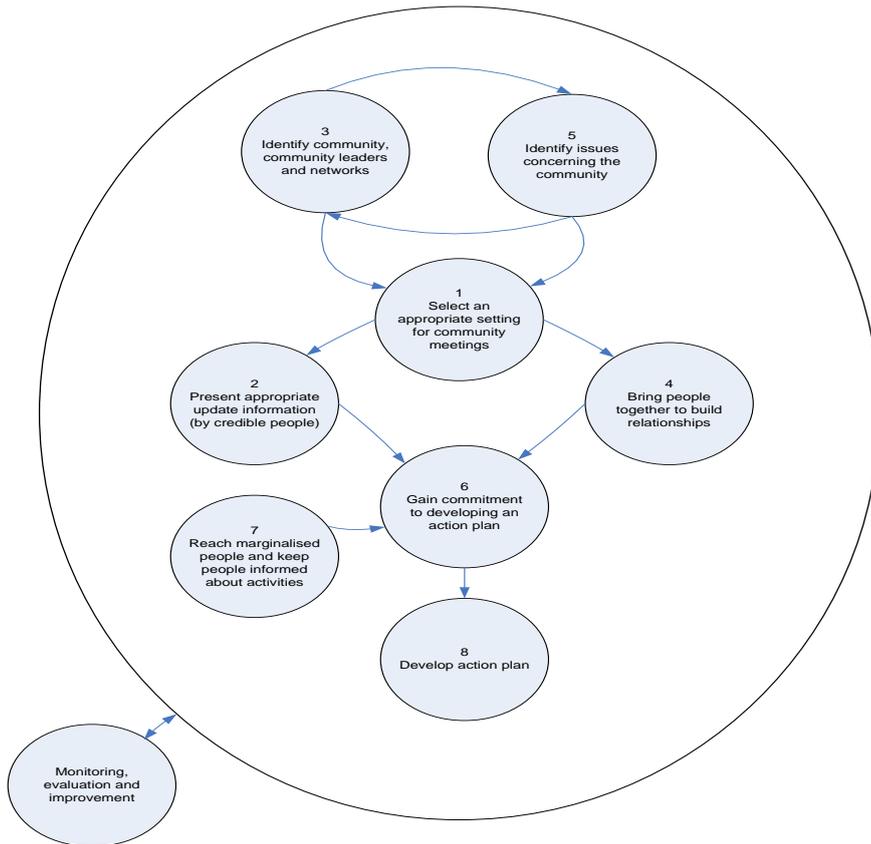


Figure 2: Conceptual model of creating a community environmental plan (Foote et al., 2009)

- **Comparing models of purposeful activity with the problematic situation**
 - The models of purposeful activity provide a structure way to inquire about the problematic situation.
 - Activities set out in the conceptual model are checked against the 'rich picture' to determine:
 - Does the activity occur in practice?
 - If not, should the activity be done?
 - If yes, how well is the activity done? How might the activity be improved?
- **Structured dialogue about desirable and feasible changes**
 - The process of systematically comparing the models of purposeful activity with the problematic situation will surface a number of actions that may lead to improvement. SSM encourages accommodation rather than consensus. That is, actions that participants can live with.
 - Actions are then implemented and evaluated.

References

Checkland, P. (1981). *Systems thinking, systems practice*. Chichester: Wiley.



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Vandenbroeck, P., Dechenne, R., Becher, K., Eyssen, M., & Van den Heede, K. (2014). Recommendations for the organization of mental health services for children and adolescents in Belgium: use of the soft systems methodology. *Health Policy*, 114(2-3), 263-268.

Winter, M., Brown, D. H., & Checkland, P. B. (1995). A role for soft systems methodology in information systems development. *European Journal of Information Systems*, 4(3), 130-142.

Winstanley, A., Ahuriri-Driscoll, A., Hepi, M., Baker, V., & Foote, J. (2016). Understanding the impact of democratic logics on participatory resource decision-making in New Zealand. *Local Environment*, 21(10), 1171-1184.

Creating a rich picture (Walton and Foote, 2016)

- All perspectives are valid
- No judgements on the quality of drawing
- Use pictures first, and words second to clarify (if needed)
- One pen, one 'artist' at a time.
- Ask questions. Discuss. Engage.

Developing purposeful activity systems

- Review the 'rich picture' and identify potential improvements

Potential improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

- Use PQR formulae or CATWOE method (or both) to clearly articulate what is meant by EACH potential improvement.
- If PQR:
 - Unpack the improvement in terms of "do [P], by [Q] in order to [R]"
 - [P] is the change that results in an improvement, [Q] is the means by which the change is brought about, and [R] is the rationale (or 'pot of gold') for the improvement

The change [P]: _____

The means [Q]: _____

The reason [R]: _____

- If CATWOE
 - Start by unpacking the improvement in terms of the T(ransformation) and the W(orldview)
 - Express the T(ransformation) in terms of undesired state → desired state.
 - Brainstorm possible W(orldviews). That is, any assumptions that makes the T(ransformation) meaningful.
 - Brainstorm remaining elements including C(lients), A(ctors), O(wner) and E(nvironment)

T(ransformation): _____

W(orldview): _____

C(lients): _____

A(ctors): _____

O(wner): _____

E(nvironment): _____



- Create conceptual models for each PQR and/or CATWOE
 - Brainstorm 7 ± 2 logical activities that *have to take place* to bring about the T(transformation)
 - Remove any duplicates, identify activities which can happen independently of others and identify those which dependent are other activities
 - Place activities in sequence and add any significant relationships
 - Review conceptual model for clarity
 - Include monitoring and evaluation activity to complete the conceptual model

Activities:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Independent activities:

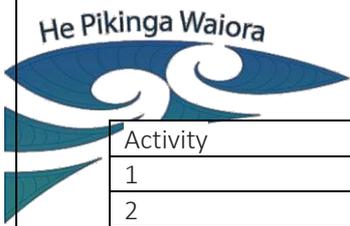
1. _____
2. _____
3. _____
4. _____

Dependent activities

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Comparing models of purposeful activity with the problematic situation

- Review rich picture and conceptual models
- Systematically compare the activities in the conceptual models with what is known about the problematic situation
 - Does the activity occur in practice?
 - If not, should the activity be done?
 - If yes, how well is the activity done? How might the activity be improved?
- Brainstorm and record possible actions



Activity	In practice?	Evaluation	Possible actions
1			
2			
3			
4			
5			
6 etc			

Structured dialogue about desirable and feasible changes

- Review possible actions noted above
- Debate: to what extent are the actions desired and feasible?

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14.1 Power Mapping

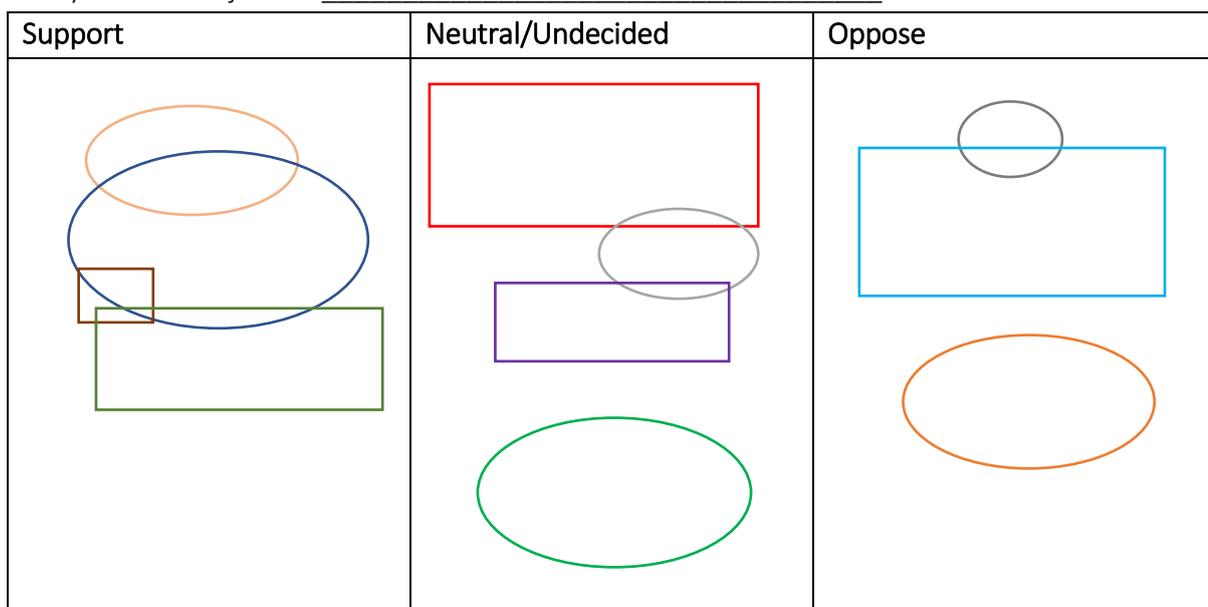
Power mapping is being increasingly used in participatory research by partnerships that wish to shape or change the local, regional and national policies. Power mapping involves the identification of key organisational, community and individual players in the policy making environment. These are people who have strength and influence in supporting or opposing a particular policy change. The exercise is ideally designed for a small group of people (Falbe et al., 2018).

The first step is to select a specific policy that your group wants to help pass or defeat. As a group, complete the following steps:

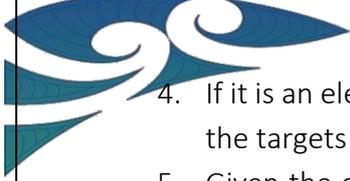
1. Identify the policy targets or those people and organisations that have power to make a policy change.
2. Identify other key stakeholders or players in this situation—people, communities or organisation that may be affected by the problem or policy and have potential influence. Some of these stakeholders may present later once the policy issue is more prominent so it is important to try to anticipate those parties too.
3. Write your policy objective on the top of a sheet of paper and draw three columns: supporters on the left, neutral/undecided in the middle, and opposition on the right. Put targets in circles (power to make change) and put other players in squares. The size of the circles and squares should indicate the relative power and/or stake that people have; larger shapes are for entities with a lot of power or a lot at stake and smaller with less power or less at stake. The relative size can consider the resources, size, skills and intensity of the issue for the entity. Draw the shapes as overlapping when entities have shared interests.

Example Power Map Template

Policy Goal or Objective: _____



Adapted from Falbe et al. (2018)



4. If it is an election or decision year, consider the donations or perks that have been received by the targets and players in a position of influence.
5. Given the current understanding, choose the three most important entities to influence and consider the following:
 - a. What is most important: strengthen supporters, persuade the neutral/undecided or weaken the opposition?
 - b. When should you approach these entities (if at all)?
 - c. Is more information needed to make the map more accurate?

For an example of the use of a power map, see the following source:

Source: Falbe J, Minkler M, Dean R, & Cordeiro J Power mapping: A useful tool for understanding the policy environment and its application to a local soda tax initiative. In: Wallerstein N, Duran B, Oetzel JG, & Minkler M. editors. Community-based participatory research for health: advancing social and health equity, 3rd edition. San Francisco: Jossey-Bass; 2018. p. 405-410.

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15.1 Stakeholder Hui Evaluation Instructions

Background information

Stakeholder engagement is a key part of the He Pikinga Waiora Implementation Framework. Specifically, the research shows that intervention quality and implementation effectiveness are stakeholders are engaged throughout the process. One key tool for this engagement is the use of stakeholder hui; meetings where multiple stakeholders are brought together to learn about the complexity of particularly health problems and also attempt to develop interventions to address the complex issues identified.

The Stakeholder Hui Evaluation Tool is designed as process evaluation and help the team move forward with further stakeholder engagement. The tool is composed of three sections:

1) usefulness and open-ended feedback, 2) closed-ended questions measuring three key areas—system thinking, engagement and participation, and outcomes, and 3) demographic information. This tool should be administered at the end of the hui and participants should complete it anonymously. It can also be administered electronically through a survey-monkey type device. If in person, the data need to be entered into a spreadsheet for analysis (e.g., SPSS, Excel, etc.). The remainder of this document discusses how to use the information for evaluation purposes.

Using the information for evaluation

The information gathered from this tool should be used to reflect on what worked well in the hui and how to move forward if future meetings are required. The first step is identify where you partnership is at (i.e., data analysis). The second step is to figure out what it means and what next steps should be (i.e., reflecting on the data).

Data Analysis

The data can be analysed in multiple ways. Qualitative data can be read with common responses noted. There are a number of open-ended questions in the tool which allow you to get people's perspectives in their own words. Usually, the analysis of the qualitative data is to get a flavour of how people felt about the hui—what they liked and didn't like.

Quantitative data (closed-ended questions) usually provide descriptive information about perceptions related to the three areas in section 2. The descriptive information about perception can consider individuals items within the three categories or at broad category level (average of each of the items for systems thinking, engagement & participation, and outcomes). Typically, a mean and standard deviation from all of the participants are provided. The scores of each item or average will range from 1 (not at all) to 6 (complete extent). Scores that are in the 5-6 range generally indicate high performance on the item or area. Scores in the 3-4 range indicate room for improvement, while scores in the 1-2 range demonstrate problematic areas. High standard deviation (>1) indicates a lot of difference in the responses, while low standard deviation ($<.5$) indicates consistent responses. The first item in section one is rated on a 1-5 scale so scores >4.5 are high, 3.5-4.5 as somewhat high, and <3 as need for improvement.

Frequency counts can be obtained for the demographics. We don't recommend comparing the information in section 2 along demographic lines as these hui usually don't involve more than 20 people.



Reflecting on the Data

The data analysis simply tells us what is and where there might be some areas of concern. The next step is to take the data back to the participants, organisers or other collaborators and have a conversation about the meaning of the data. This opportunity for reflection is critical to the development of strong stakeholder hui. These meetings have strengths and areas for improvement and if future meetings are planned, some adjustments in the structure or participants may be indicated from the data. For example, we have one hui where participants really like the hui and perspectives shared and also suggested that a broader range of stakeholders and end users be included in future hui. This reflection doesn't have to be a major undertaking—sometimes a short meeting can be sufficient to self- evaluation, reflect and move to the work.

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15.2 Stakeholder Hui Evaluation

Thank you for your contribution to this hui/workshop. Answers to this questionnaire will be used to evaluate the strengths and weaknesses of the methods we have used in the hui/workshop.

Section 1

1. How useful was this hui/workshop for you? Please tick appropriate box.

Not at all useful Not very useful Neutral Somewhat useful Very useful

- What are 3 ways it was useful?

2. What is the thing you liked best about this workshop?

3. What is the thing you liked least?

Section 2

Workshops can achieve a number of different purposes (although no one hui/workshop can achieve all purposes). Please help us to understand what purposes were achieved in this workshop by answering the following questions organised around 3 different categories.

To what extent do you agree or disagree with the following statements? Please tick appropriate box.

<u>Statement</u>	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
<i>Understanding about the System and Big Picture</i>						

1. Participation in this hui has helped me to recognise that there are many different points of view on pre-diabetes/diabetes.						
2. Participation in this hui has helped me to gain a better idea about different influences on pre-diabetes/diabetes.						
3. Participation in this hui has helped me to think more clearly about positive and possible changes.						
4. Participation in this hui has helped me to express my own 'cultural' viewpoint (i.e. as Māori, Pākehā, other ethnicity).						
5. Participation in this hui has helped me to see the complexity of the issues.						
6. The intervention we are developing targets changes at multiple levels.						
Any other comments about understanding the big picture?						

<u>Statement</u>	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
<i>Engagement & Participation</i>						
1. The discussion in this hui built on resources and strengths in the community.						
2. This hui emphasizes what is important to the community (culture, environmental and social factors) that affect wellbeing.						
3. Suggestions I made within this hui were seriously considered.						
4. This hui allowed us to communicate in a respectful manner.						
5. To what extent has the hui involved the end users of the intervention?						
6. To what extent have the barriers and facilitators for adoption been considered for this intervention?						
7. To what extent have relevant stakeholders been included in the development of the intervention?						



16.1 HPW Process Evaluation Instructions

Background Information

The type of partnerships we are considering for this tool are between the community and researchers who are working to improve community health, particularly for Māori. The community is whomever the intervention is targeting change. For example, it might involve patients if the target is health gain or behaviour change, clinicians if the target is health services, or the larger community if the target is enhance population health. The community is often represented by individuals and/or organisations that serve the community. The researchers are usually academics or other organisations whose primary aim is to conduct research about health interventions. The questions can be changed to reflect the specific partners in your project.

The questions centre around the core elements of the He Pikinga Waiora implementation framework: community engagement, culture-centeredness, systems thinking, and integrated knowledge transfer. This framework identifies positive practices for engaging in these type of partnerships.

Most of the items should be assessed at the early stages of the partnership and then regularly (e.g., annually) throughout the development. There are a few items that should be assessed after the partnership has developed its intervention (or at least close to developing the intervention).

This tool should be administered to all members of the research team in an anonymous manner. A simple approach is to provide it as an on-line survey which also makes it easy to compile responses. A paper-pencil version can be use although it means data entry has to be done separately.

Using the Information for Evaluation

The information gathered from this tool should be used to reflect on what is working in your partnership and what might need to be changed or improved. The first step is identify where you partnership is at (i.e., data analysis). The second step is to figure out what it means and what next steps should be (i.e., reflecting on the data).

Data Analysis

The data can be analysed in multiple ways. Qualitative data can be thematised or simply having common responses noted. Quantitative data can be considered along the following levels:

- a) Rate the performance of the partnership
- b) Identify areas for disagreement in perceptions
- c) Compare demographic groups

Rating Performance



The first step is often to rate the performance of the partnership. We want to determine whether our partnership is doing well. When rating the performance, you can consider multiple levels:

- a) Individual items
- b) Broad category level (average of each of the items for community-engagement, culture-centerendess, systems thinking, and integrated knowledge transfer)
- c) Sub-category level (for the sub-categories of community-engagement and culture-centerendess; average of items in each of the sub-categories)

The scores of each item or average will range from 1 (not at all) to 6 (complete extent). Scores that are in the 5-6 range generally indicate high performance on the item or area. Scores in the 3-4 range indicate room for improvement, while scores in the 1-2 range demonstrate problematic areas.

Looking for Disagreements

Sometimes some partners think things are going very well, while others perceive problems. Identifying points of disagreement offers an opportunity to identify why there is difference and where that difference lies. There are two straightforward ways to identify difference:

- a) Measures of variation such as standard deviation
- b) Frequency counts

Standard deviation is quickly calculated by excel or other software packages. A standard deviation of 1 or above usually indicates there is a good deal of variability in the partnership on the respective item or category.

Frequency counts means counting the number of responses each category received (e.g., how many say complete extent on a specific item). When most people select a response or nearby response (complete extent and very great extent), we conclude very little variability. When people are responding across the categories or there is a mix of high and low responses, we conclude there is a lot of variability.

Demographic Comparisons

If we identify differences, we often are interested in why those exist. We don't want to signal out individuals, but we may want to know if there are some patterns to the responses. In this case we can compare the demographic groups that we think are important. For example, do community members and researchers differ in how much influence they think they have? Or, do Māori and Pākehā have different perspectives about how much capacity is being built.

Reflecting on the Data

The data analysis simply tells us what is and where there might be some areas of concern. The next step is to take the data back to the partners and have a conversation about the meaning of the data.



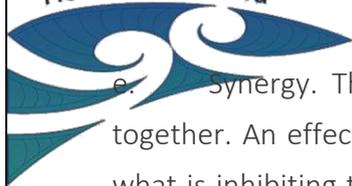
This opportunity for reflection is critical to the development of the partnership. All partnerships have challenges and disagreements as well as periods of low productivity and feeling stuck. This process evaluation provides an opportunity for the partnership to identify areas that might need to be improved, changed or addressed. Without this evaluation, the partnership runs the risk of letting key problems fester and develop, which may hurt the effectiveness of implementing an intervention. This reflection doesn't have to be a major undertaking—sometimes a short meeting can be sufficient to self-evaluation, reflect and move to the work.

If problems or challenges are identified, the partnership will need to think about what to change in their own process. Here are a few guides to consider within the categories and sub-categories of the process evaluation tool.

Community engagement

Collectively, these items related to the strength of community engagement as a shared endeavour. Community engagement is highest when all partners share responsibility and control of all the phases of the project. The specific items relate to sub-categories of community engagement.

- a. Readiness to Change. These items reflect the degree to which the community or community organisations are ready to change. If these items are low, especially as rated by the community, it is very important for the partnership to identify why there isn't readiness to change. Perhaps there are constraints that can be resolved. Not being ready to change will likely leads to challenges in later stages.
- b. Commitment to Engagement. These items reflect the degree to which partners are committed to the principles of strong community engagement. Such commitment reflects a willingness to work as equal partners. If these items are low, it would be worth revisiting the nature of the partnership and whether this commitment can be changed. Low commitment to engagement will likely lead to an unequal relationship and resentment later in the partnership.
- c. Trust. These items reflect the level of trust in the partnership. If these items are low, it is worth having a dialogue about why trust isn't present. Sometimes having a good intense discussion or conflict about trust can be enough to demonstrate commitment to work together and help to establish trust (i.e., if we can get through some tough conversations, we can work together). Low trust that isn't addressed usually ends up hurting the effectiveness of the partnership.
- d. Influence. These items reflect the degree of influence that all partners have. All partners should have the ability to influence the partnership. If these items are low, consider changing the agreements or the way that meetings are run to make sure all partners have a say in the workings of the partnership. If low influence continues, partners often withdraw and limit their effort to the partnership because they don't think their work really matters.



e. Synergy. These items reflect the level of connectedness and ability to work effectively together. An effective partnership achieves synergy. If these items are low, it is worth discussing what is inhibiting the achievement of synergy. Usually the quality of relationships and dialogue is low in these situations so it might be worth thinking about improving communication in the partnership.

f. Shared Control of Resources. These items reflect whether there is shared control of resources. Ideally, the community and the academic partners should have some control of resources. If these are low, consider developing MOUs or subcontracts that enable partners to have some control over resources.

g. Personal Capacity. These items reflect the level of capacity that individuals develop. One component of community engagement is that all partners should benefit from their work. If some individuals aren't developing skills and capacity, consider implementing some trainings or send partners to training to develop skills. If these items are low early in the partnership, it may not be a problem as these are longer-term outcomes.

h. Organisation Capacity. These items reflect the level of capacity that the organisations participating in the partnership are developing. Similar to personal capacity, the partnership should benefit the organisations represented. If these items are low, ask your partner how they can benefit more from the partnership. If these items are low early in the partnership, it may not be a problem as these are longer-term outcomes.

i. Sustainability. These items reflect the degree to which the partnership is sustainable beyond the initial funding period. If these are low, consider whether you want to sustain the partnership and if so, seek ways to integrate the work into the strategic plans/mission of the organisation(s). Further additional funding sources can be sought to sustain the work.

Culture-centeredness

Collectively, these items relate to the degree to which the community has agency and power to create change in the community and whether that change is reflective of the cultural perspectives of the community. The specific items compose several sub-categories.

a. Agency/Community involvement. These items reflect the degree of community involvement in the phases of the research and intervention. When there is high level of community involvement, we can assume there is agency to define the problem and identify solutions that fit the culture of the community. If these items are low, identify ways that the community members can be more involved in the work of the project. Often they are only consulted about these components and they should be doing the work.

b. Reflexivity. These items relate to the level of collective reflection about the nature of the partnership and the relationships among the partners. This reflection can be about the quality of the relationships and communication and also about whether positions of privilege are addressed



and discussed. If these items are low, consider ways to integrate reflection into regular work meetings. Such reflection can improve the quality of the working relationships among members.

c. Power Sharing. The items reflect the level of power sharing that exists in the partnership. Community members should have power to implement all aspects of the project in conjunction with academic partners. If these items are low, consider ways that power is implicitly communicated by academic partners and ways to diminish that implicit power.

d. Partnership Capacity. These items reflect the level of skills and resources the partnership has to carry out the work of the partnership. If these items are low, consider adding additional stakeholders to the partnership either as members or as part of advisory boards.

e. Community Transformation. These items reflect the level of change that occurs as a result of the work of the partnership. The items assume that the goal of the project is to create some level of improvement in the health or conditions of the community. If these items are low early in the partnership, it really isn't a problem as these are longer-term outcomes. You might ask whether you think you are going to transform the community. If it is later in the partnership, you might consider changes to the work or intervention.

Systems Thinking

Collectively, these items reflect the level of "big picture" thinking about the context and problem being addressed. Systems thinking involves the complexity of the larger structures in society and how those affect the work of the partnership. It also involves integrated multiple perspectives and multiple level of analysis. In short, systems thinking involves addressing complex relationships and realising that health problems do not get resolved with simple fixes. If these items are low, it might be worth involving additional stakeholders who can help you think about the problem from a different perspective.

Integrated Knowledge Transfer

Collectively, these items reflect the degree to which end users of an intervention are involved in the creation of the intervention. For example, you might be developing a new "wrap around care service" for diabetes patients that nurses are to implement. High-level of integrated knowledge transfer would involve nurses early in the process to help create and trouble shoot the new intervention. When the end users are not collaborators, they tend to be resentful for lack of involvement and/or have problems implementing the new intervention because they don't understand it. A colleague of mine used to say, "when you build a better house, you might want to ask the occupants what they'd like to see in that house since they are the ones who are going to use it." If these items are low, involve the key end users in the partnership.



16.2 HPW Process Evaluation Framework

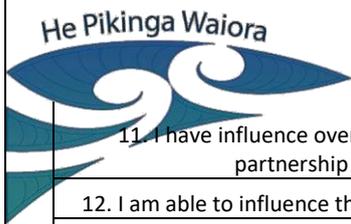
PROCESS EVALUATION TOOL

The following questions are useful for partnerships to self-evaluate their progress in developing interventions. All of the items are self-report and based on how you feel the partnership is doing at the current time. Please tick the box use the following scale for most of the items:

- 1) Not at all
- 2) To a small extent
- 3) To a moderate extent
- 4) To a great extent
- 5) To a very great extent
- 6) To a complete extent

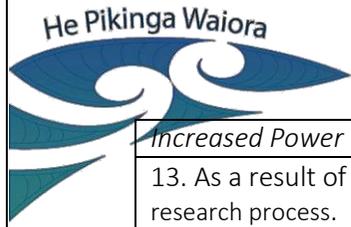
Community Engagement

Item	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
Readiness to Change						
1. The community (organisation) is committed to implementing this change.						
2. The community (organisation) is determined to implement this change.						
3. The community (organisation) is motivated to implement this change.						
Commitment to Community Engagement						
4. This project builds on resources and strengths in the community.						
5. This project emphasizes what is important to the community (culture, environmental and social factors) that affect well-being.						
6. This project views community-engagement as a long term process and a long term commitment.						
Trust						
7. I trust the decisions others to make about issues that are important to our project.						
8. I can rely on the people that I work with on this project.						
9. People in this partnership have confidence in one another.						
Influence						
10. Suggestions I make within this partnership are seriously considered.						



11. I have influence over decisions that this partnership makes.						
12. I am able to influence the work on this project.						
13. My involvement influences the partnership to be more responsive to the community.						
Partnership Synergy						
14. Develop goals that are widely understood and supported in this partnership.						
15. Recognize challenges and come up with good solutions.						
16. Respond to the needs and problems of your stakeholders or community as a whole.						
Shared Control of Resources						
17. Both community and academic partners hire personnel on the project.						
18. Both community and academic partners decide how to share financial resources.						
19. Both community and academic partners decide how to share in-kind resources.						
Items for later stages in partnership	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
Personal Capacity						
1. Participating in this project enhanced my own reputation						
2. Participating in this project developed my capacity or expertise.						
3. Participating in this project increased my ability to acquire additional financial support.						
Agency Capacity						
4. Participating in this project enhanced my organisation's reputation.						
5. Participating in this project enhanced my organisation's ability to affect public policy.						
6. Participating in this project increased utilisation of my organisation's expertise or services.						
Sustainability						
7. I am committed to sustaining the community-academic relationship with no or low funding						
8. This intervention is likely to continue forward after this funding is over.						
9. In trying to sustain our partnership, we carefully evaluate funding opportunities to make sure they meet both community and academic partners' needs.						

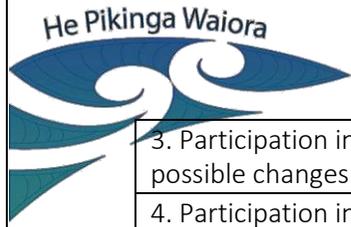
Item	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
<i>Community Involvement/Agency in Research</i>						
1. Community partners are involved with developing community-based theories of the problem or intervention.						
2. Community partners are involved with background research.						
3. Community partners are involved with choosing research methods.						
4. Community partners are involved with interpreting study findings.						
5. Community partners are involved with recruiting study participants						
6. Community partners are involved with implementing the intervention.						
7. Community partners are involved with designing interview and/or survey questions.						
8. Community partners are involved with writing reports and journal articles.						
9. Community partners are involved with giving presentations at meetings and conferences						
<i>Reflexivity</i>						
10. Our partnership has discussions about our partnership's role in promoting strategies to address social and health equity						
11. Our partnership evaluates together what we've done well and how we can improve our collaboration.						
12. Our partnership reflects on issues of power and privilege within the partnership.						



<i>Increased Power</i>						
13. As a result of this project, community members have increased participation in the research process.						
14. As a result of my participation in this project, I can talk about the project in other settings such as a community or political meeting.						
15. Community members can voice their opinions about research in front of researchers/clinical experts.						
<i>Partnership Capacity to Create Change</i>						
16. The partnership has diverse membership to work effectively towards its aims.						
17. The partnership has legitimacy and credibility to work effectively towards its aims.						
18. The partnership has ability to bring people together for meetings and activities						
19. The partnership has connections to relevant stakeholders to work effectively towards its aims.						
Items for later stages in partnership	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
<i>Community Transformation</i>						
1. The project has resulted in policy or practice changes.						
2. This project has improved the overall health status of individuals in the community						
3. This partnership has acquired additional resources to meet its aim						
4. This project has improved the overall environment in the community.						

Systems Thinking

Item	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
1. Participation in this project has helped you to recognise that there are many different points of view on pre-diabetes/diabetes.						
2. Participation in this project has helped you to gain a better idea about different influences on.						



3. Participation in this project has helped you to think more clearly about positive and possible changes.						
4. Participation in this project has helped you to express your own 'cultural' viewpoint (i.e. as Māori, Pākehā, other ethnicity).						
5. Participation in this project has helped you to see the complexity of the issues.						
6. The intervention we are developing targets changes at multiple levels.						
7. Participation in this project has helped you to see the complexity of the issues.						

Integrated Knowledge Transfer

Item	Not at all	Small extent	Moderate extent	Great extent	Very great extent	Complete extent
1. To what extent has the project involved the end knowledge users in the intervention and evaluation design?						
2. To what extent are the knowledge users committed to considering application of the findings when they become available and is this application achievable in the particular practice, program and/or policy context?						
3. To what extent will the project's findings be transferable to other practice, programs and/or policy contexts?						
4. To what extent has the barriers and facilitators been considered for adoption in other contexts?						
5. To what extent has the reasons needed for wider-scale adoption been considered?						
6. To what extent has relevant stakeholders been included in the development of the intervention?						



Thank you so much for participating in this interview. The purpose of this study is to take an in-depth look at the process we have been using in our participatory research project. We hope to better understand what is working and what may need improvement in our project.

1. What do you think is working well in this project?
2. What do you think could be improved?
3. How well are we following the implementation framework in our work?
4. How are the working relationships between the academics/researchers and the community?
5. How successful do you think this project will be?

Demographic Questions

1. Are you a community partner? Yes No
2. Are you an academic/research partner? Yes No
3. Gender? Male Female Other
4. Which ethnic group do you belong to? Please tick all that apply:
 - New Zealand European
 - Māori
 - Samoan
 - Cook Island Māori
 - Tongan
 - Niuean
 - Chinese
 - Indian
 - Other (such as DUTCH, JAPANESE, TOKELAUAN). Please state:

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1.1 Outcome Evaluation Tool

HE PIKINGA WAIORA OUTCOME AND IMPLEMENTATION EVALUATION FRAMEWORK FOR PRE-DIABETES/DIABETES AND RELATED HEALTH CONDITIONS

The He Pikinga Waiora Outcome & Implementation Evaluation Framework consists of three key components: a) levels of health intervention (Maunga model from our research team), b) the model of hauora: whare tapa wha⁴ and c) the model of health promotion: Te Pae Mahutonga⁵. Figure 1 illustrates the connection of these three elements.

The Maunga model is guided by socio-ecological theory and public health philosophy that individual behaviour and public health are shaped by facets at multiple levels and often beyond the control of individuals. The model includes four levels of health intervention where the top of the model has maximal impact on few individuals and the bottom of the model has small impacts on lots of people. Health equity impacts are found more at the bottom of the model.

- a) Individual—interventions are targeted at individual behaviour change and health improvements. They might include highly individualised interventions such as bariatric surgery or slightly broader lifestyle interventions for self-managed care. These interventions have great effect for those who receive the intervention and yet smaller impacts on health equity.
- b) Clinical—interventions are targeted at improving health services and connecting people to care. These interventions might include new systems for data collection and monitoring of patient-level data, the development of new service pathways, and introduction of best practice guidelines for people newly diagnosed with diabetes or pre-diabetes.
- c) Community—interventions are targeted at the neighbourhoods, maraes, etc. These interventions target change in the quality of the community overall such as enhanced walking trails, community gardens, and improvement in the obesogenic environment such as healthy kai in stores and schools.
- d) Population—interventions are targeted at the large-scale population. These include policies that tax sugary beverages or efforts to improve socio-economic conditions.

⁴ Durie, M. (1998). *Whaiora: Māori health development*. Auckland, NZ: Oxford University Press.

⁵ Durie, M. (1999, December). Te Pae Mahutonga: a model for Māori health promotion. *Health Promotion Forum of New Zealand Newsletter* 49, 2-5.

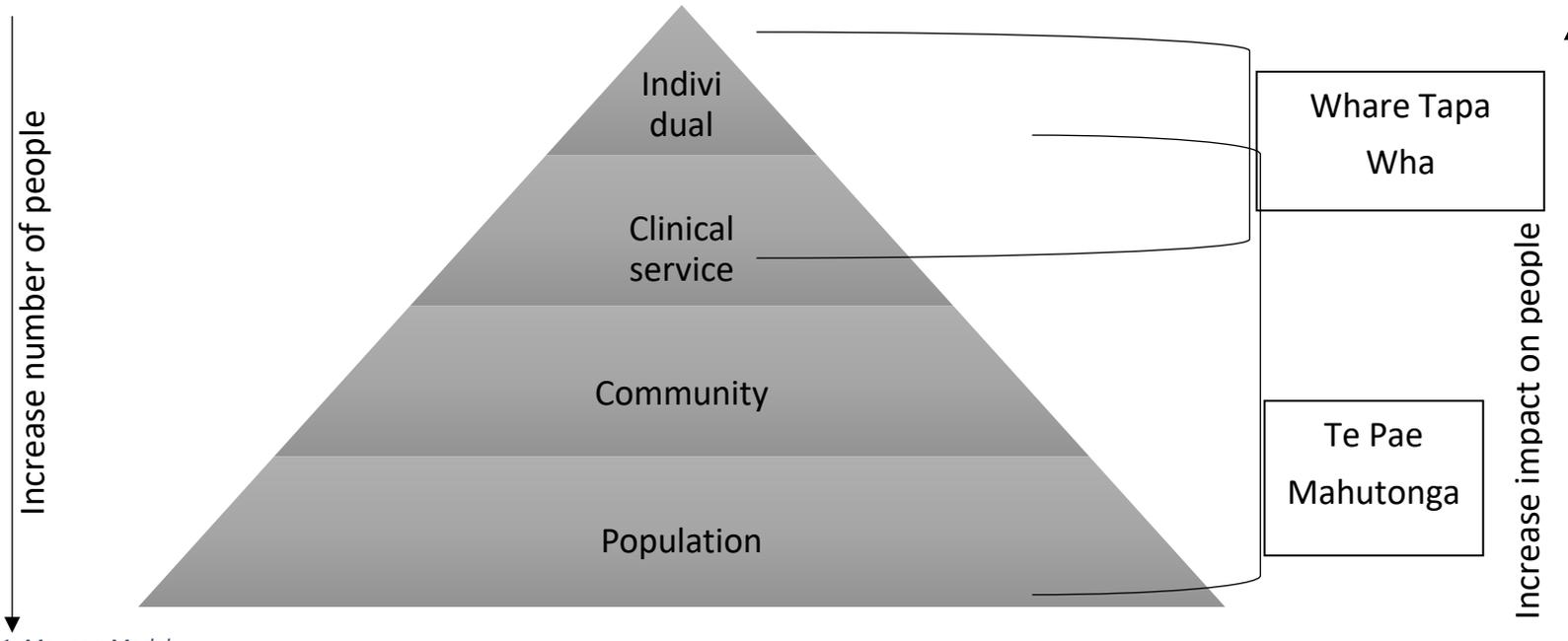
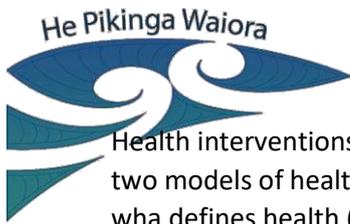


Figure 1: Maunga Model



Health interventions impact various health and health equity outcomes. Our framework considered two models of health that explain key outcomes within each of the levels of the model. Whare tapa wha defines health (haurora) from a holistic perspective consisting of four core elements:

- a) Tinana—physical wellbeing
- b) Hinengaro—mental and emotional wellbeing
- c) Wairura—spiritual wellbeing
- d) Whānau—social wellbeing

These elements generally frame the outcomes of individual, and to some extent, clinical interventions.

Te Pae Mahutonga is a model of health promotion that fits well with the community and population interventions with some relevance to individual and clinical interventions as well. The model includes the four central stars of the Southern Cross represent four key tasks of health promotion, and two pointer stars represent leadership and governance) of health promotion:

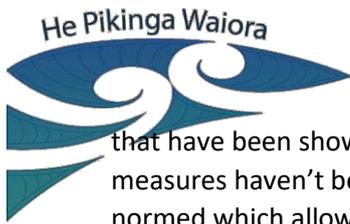
- a) Mauriora (cultural identity)—access to language, culture and cultural institutions
- b) Waiora (physical environment)—access to a healthy physical environment
- c) Toiora (healthy lifestyles)—positive development and harm reduction that is culturally relevant
- d) Te Oranga (participation in society)—participation in the economy, education, research, and decision making
- e) Ngā Manukura (community leadership)—effective community and health leadership with good communication among stakeholders
- f) Te Mana Whakahaere (autonomy)—control and self-governance of research and health promotion activities

Within this framework, we have developed a list of measures for elements within the model. The list is meant to be comprehensive so as to provide options for researchers and practitioners so that they can determine the best fitting constructs for their intervention and their local context. It is not an exhaustive list and can be added to. It is organised around questions and measures for patients/community members, clinicians, and researchers (i.e., community and population-level assessments). There is a table for each of these targets for intervention outcomes and also implementation processes. For each table, there is a summary matrix with elements/constructs related to the model, specific scale, number of items and sources. Under that table are the specific items for review.

List of Tables:

1. Outcome Measures for Patients/Community Members
2. Outcome Measures for Clinicians
3. Outcome Measures for Researchers
4. Implementation Measures for Patients/Community Members
5. Implementation Measures for Clinicians
6. Implementation Measures for Researchers

These tables only include measures and items that have demonstrated validity; in other words, it measures accurately what it is supposed to be measuring. These measures also have reliability or similar items measure in a consistent fashion. Further, where possible, we have chosen measures



that have been shown to be valid and reliable with Māori samples (e.g., most implementation measures haven't been used with Māori). Finally, we have also included some measures that are normed which allows you to compare the scores in your study to those of another study. Most measures are not normed across populations as that requires rigorous testing across multiple studies. If you use a normed scale, you want to use it in its full form. If you are using another validated measure, ideally you want to use it in its full form although it can be altered and you can re-establish validity and reliability through your own statistical analysis. It is possible to include other measures in evaluation that may better fit your needs. When selecting measures, consider whether there is evidence of validity, reliability and normed scoring provided. Validity includes factorial, construct, concurrent and divergent validity. Reliability is usually assessed by test-retest or Cronbach's alpha.

To apply the evaluation measures, there are several key statistical comparisons to be made to help determine impact of the intervention. The first is to administer the measure before an intervention and then again after the intervention. The difference between pre- and post-test scores should be in the expected direction (e.g., increased exercise or decreased blood pressure). The second is to compare a group who received the intervention and a group that didn't receive the intervention. The group that received the intervention should have score that are higher (or lower) than the group that didn't receive the intervention.

Table 1. Outcomes Measures for Patients/Community Members

Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Tinana	Medical outcomes	Y	Y	Varies	Varies
Tinana, Hinengaro	Health service utilisation	Y	Y	8	NZ Health Survey; http://www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey
Tinana, hinengaro	Quality of Life: Medical Outcome Study	Y	Y	5	Wu, A. W. (1999). <i>MOS-HIV health survey user's manual</i> . Self-published. Available: http://chipts.cch.ucla.edu/assessment/pdf/assessments/MOS-HIV%20Users%20Manual%20%20Draft.pdf
Wairua	Spirituality	Y	N	3	Te Kupenga, Māori Social Survey: http://www.stats.govt.nz/survey-participants/a-z-of-our-surveys/te-kupenga-2013-questionnaire.aspx (alternative also provided)
Whānau	Social support	Y	N	4	Unger JB, McAvay G, Bruce ML, et al. Variation in the impact of social network characteristics on physical functioning in elderly persons: MacArthur Studies of Successful Aging. <i>Journals of Gerontology Series B-Psychological Sciences & Social Sciences</i> 1999;54(5):S245-51 (alternative also provided)
Mauriora	Cultural connection	Y	N	12	Dyall, L., Kēpa, M., Teh, R., Mules, R., Moyes, S., Wham, C., et al. (2014). Cultural and social factors and quality of life of Māori in advanced age. Te puawaitanga o nga tapuwae kia ora tonu—Life and living in advanced age: a cohort study in New Zealand (LiLACS NZ). <i>NZ Medical Journal</i> , 127, 62-79
Toiora	Healthy lifestyle—exercise, nutrition	Y	N	7, 12	1. Exercise: NZ Health Survey; http://www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey



					2. Nutrition: NZ Adult Nutrition Survey 2008/09 https://www.health.govt.nz/system/files/documents/publications/ans_questionnaire.pdf
Waiora	Access to community/personal garden	N	N	3	Created for this study
Te oranga	Social determinants: Deprivation, economic wellbeing, food security	Y, Y, Y	Y, N, N	8, 3, 8	1. NZiDEP: Salmond, C., Crampton, P., King, P., Waldegrave, C. (2007, update 2014). NZiDep: An index of socioeconomic deprivation for individuals 2. Economic wellbeing: Te Kupenga, Māori Social Survey: http://www.stats.govt.nz/survey-participants/a-z-of-our-surveys/te-kupenga-2013-questionnaire.aspx 3. Food Security: https://www.health.govt.nz/system/files/documents/publications/ans_questionnaire.pdf
Te oranga	Trust in others and institutions	Y	N	7	Te Kupenga, Māori Social Survey: http://www.stats.govt.nz/survey-participants/a-z-of-our-surveys/te-kupenga-2013-questionnaire.aspx
Demographics	Age, gender, ethnicity, address, income	Y	N	5	Created for this study

MEDICAL OUTCOMES

Choose from list below that fit study

BMI, HbA1C, Blood pressure, waist circumference, cardio-vascular risk assessment, medications (prescribed vs. take), Rongoa, smoking, prescription of nicotine replacement therapy

Reformatted from NZ Health Survey; <http://www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey>

Do you have a GP clinic or medical centre that you usually go to when you are feeling unwell, unless or are injured?	Yes	No
In the past 12 months, have you seen a GP, or been visited by a GP, about your own health (physical or mental)?	Yes	No
In the past 12 months, was there a time when you had a medical problem but did not visit a GP because of cost?	Yes	No
In the past 12 months, was there a time when you had a medical problem but did not visit a GP because you had no transport to get there?	Yes	No
In the past 12 months, was there a time when you got a prescription for yourself but did not collect one or more prescription items from the pharmacy or chemist because of cost?	Yes	No
In the last 12 months, have you yourself used a service at, or been admitted to, a <u>public</u> hospital as a patient? This could have been for a physical or a mental health condition.	Yes	No
In the past 12 months, how many times did you go to an after hours or A & E medical centre about your own health?		
In the past 12 months, how many times did you go to an emergency department at a public hospital about your own health?		

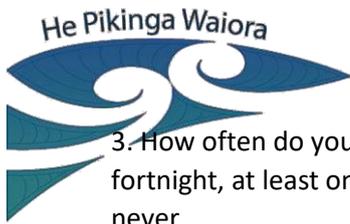
QUALITY OF LIFE: Medical Outcomes Study general health perceptions

In general, how would you rate your health?	Excellent	Very Good	Good	Fair	Poor
I am somewhat ill.	Definitely true	Mostly true	Not sure	Mostly false	Definitely false
I am as health as anybody I know.	Definitely true	Mostly true	Not sure	Mostly false	Definitely false
My health is excellent.	Definitely true	Mostly true	Not sure	Mostly false	Definitely false
I have been feeling bad lately	Definitely true	Mostly true	Not sure	Mostly false	Definitely false

Please note that an alternative version are the SF-12 and SF-36. SF-12 and SF-36 are available and either require a license from Optum (<http://campaign.optum.com/optum-outcomes/what-we-do/health-surveys.html>) or can be used for free from RAND (https://www.rand.org/health/surveys_tools/mos.html) depending on the version used. Also, the MOS is available in a longer form with more dimensions (see reference above or the RAND website for more details).

SPIRITUALITY

1. How important is spirituality in your life? Very important, quite important, somewhat important, a little important, not at all important
2. How important is religion in your life? Very important, quite important, somewhat important, a little important, not at all important



3. How often do you attend religious worship services? At least once a week, at least once a fortnight, at least once a month, several times a year, at least once a year, less than once a year, never

An alternative measures, but not validated with Māori is Daaleman, T. P. & Frey, B. B. (2004). The Spirituality Index of Well-Being: A new instrument for health-related quality of life research. *Annals of Family Medicine*, 2, 499-503. 2 subscales—only life scheme is included (strongly agree to strongly disagree 1-5)

1. I haven't found my life's purpose yet.
2. I don't know who I am, where I came from, or where I am going.
3. I have a lack of purpose in my life.
4. In this world, I don't know where I fit in.
5. I am far from understanding the meaning of life.
6. There is a great void in my life at this time.

SOCIAL SUPPORT

Unger JB, McAvay G, Bruce ML, et al. Variation in the impact of social network characteristics on physical functioning in elderly persons: MacArthur Studies of Successful Aging. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences* 1999;54(5):S245-51 Original is yes/no scale

1. When you need extra help, can you count on anyone to help with daily tasks like grocery shopping, cooking, house cleaning, telephoning, giving you a ride? (always, most of the time, sometimes, never, I don't need help)
2. Could you have used more help with daily tasks than you received? (always, most of the time, sometimes, never)
3. Can you count on anyone to provide you with emotional support? (always, most of the time, sometimes, never, I don't need emotional support)
4. Could you have used more emotional support than you received? (always, most of the time, sometimes, never)

Another option for social support:

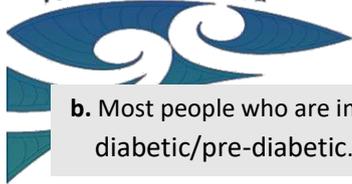
2 subscales on social support and social undermining

Oetzel, J. G., Wilcox, B., Archiopoli, A., Avila, M., Hell, C., Hill, R., & Muhammad, M. (2014). Social support and social undermining as correlates of health-related quality of life in people living with HIV/AIDS. *Journal of Health Communication*, 19, 660-675.

8. The following statements are about your relationships with your family and friends. Please circle the number under the answer that best matches your feeling about each statement.

Strongly Disagree Disagree Neutral Agree Strongly Agree

- | | | | | | |
|--|---|---|---|---|---|
| a. I can talk to my friends or relatives about my worries. | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|

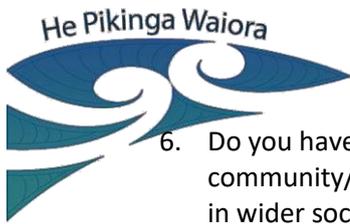


b. Most people who are important to me know that I'm diabetic/pre-diabetic.	1	2	3	4	5
c. My friends or relatives often let me down when I'm counting on them.	1	2	3	4	5
d. My friends or relatives understand the way I feel about things.	1	2	3	4	5
e. There is someone I know who would lend me a car or drive me.	1	2	3	4	5
f. My friends or relatives often get on my nerves.	1	2	3	4	5
g. I can relax and be myself around my friends or relatives.	1	2	3	4	5
h. My friends or relatives argue with me often.	1	2	3	4	5
i. My friends or relatives drink or use drugs too much.	1	2	3	4	5
j. My friends or relatives really appreciate me.	1	2	3	4	5
k. My friends or relatives make too many demands on me.	1	2	3	4	5
l. There's someone I know who would lend me money if I needed it in an emergency.	1	2	3	4	5
m. I feel isolated from others.	1	2	3	4	5
n. There's someone I know who will attend social activities with me.	1	2	3	4	5
o. My friends or relatives criticize me often.	1	2	3	4	5
p. I often avoid family gatherings.	1	2	3	4	5
q. My friends or relatives really care about me.	1	2	3	4	5
r. When I do go to family gatherings, I'm likely to leave early.	1	2	3	4	5
s. There's someone I know whom I could count on to check in on me regularly.	1	2	3	4	5
t. I can rely on my friends or relatives for help if I have a serious problem.	1	2	3	4	5

CULTURAL CONNECTION

Dyall L, Kerse N, Hayman K, Keeling S. Pinnacle of Life- Māori living to Advanced Age. *New Zealand Medical Journal* 2011;124(1331):75-86; Dyall, L., Kēpa, M., Teh, R., Mules, R., Moyes, S., Wham, C., et al. (2014). Cultural and social factors and quality of life of Māori in advanced age. *Te puawaitanga o nga tapuwae kia ora tonu—Life and living in advanced age: a cohort study in New Zealand (LiLACS NZ)*. *NZ Medical Journal*, 127, 62-79).

1. Do you live in the same area as your hapu /extended family / where you come from? (yes, no)
2. How important is your hapu to your wellbeing? (not at all, a little, moderately, very, extremely)
3. How important is your iwi to your wellbeing? (not at all, a little, moderately, very, extremely)
4. How well do you understand your tikanga? (not at all, a little, moderately, completely)
5. How much has colonisation affected the way you live your life today? (not at all, a little, moderately, very, extremely)



6. Do you have a specific role in a) your family/whanau/hapu, b) your local community/neighbourhood, c) your tribal/marae activities and d) other Maori organisations in wider society? (yes, no)
7. How satisfied are you with the role(s)? (not at all, a little, moderately, very, extremely)
8. How important is your family/whanau to wellbeing? (not at all, a little, moderately, very, extremely)

Cultural questions drawn from the te hoa nuku roa scale (Stevenson B, To He Nuku Roa. Te Hoe Nuku Roa: a measure of Maori cultural identity. Palmerston North: Te Pitahi a Toi, School of Maori studies, Massey University, 1996.)

1. How often over the last 12 months have you been to a Marae? (< yearly, once, a few times, more than once a month)
2. In general, would you say that your contacts are with: mainly Māori, some Maori few Māori, no Māori?
3. Could you have a conversation about a lot of everyday things in Māori? (yes, no)
4. Where do you speak Māori/other language? – response menus including; On the marae, in my community, at home, in meetings or at work, other.

HEALTHY LIFESTYLE

Exercise (NZ Health Survey; <http://www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey>)

During the last 7 days, on how many days did you walk at a brisk pace – a brisk pace is a pace at which you are breathing harder than normal? This includes walking at work, walking to travel from place to place, and any other walking that you did solely for recreation, sport, exercise or leisure.

Think only about walking done for at least 10 minutes at a time.

_____ days per week (range 0-7) [if A3.06=0 go to moderate activity A3.08]

- .K Don't know [go to A3.08]
- .R Refused [go to A3.08]

A3.07 How much time did you typically spend walking at a brisk pace on each of those days?

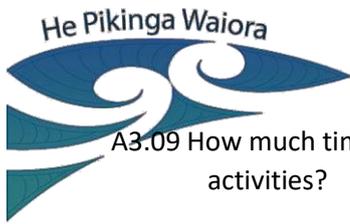
_____ hours (range 0-24) _____ minutes (0-60)

- .K Don't know
- .R Refused

A3.08 During the last 7 days, on how many days did you do moderate physical activities? 'Moderate' activities make you breathe harder than normal, but only a little – like carrying light loads, bicycling at a regular pace, or other activities like those on Showcard page XX. Do not include walking of any kind. Think only about those physical activities done for at least 10 minutes at a time.

_____ days per week (range 0-7) [if A3.08=0 go to vigorous activity A3.10]

- .K Don't know [go to A3.10]
- .R Refused [go to A3.10]



A3.09 How much time did you typically spend on each of those days doing moderate physical activities?

_____ hours (range 0-24) _____ minutes (0-60)

- .K Don't know
- .R Refused

A3.10 During the last 7 days, on how many days did you do vigorous physical activities? 'Vigorous' activities make you breathe a lot harder than normal ('huff and puff') – like heavy lifting, digging, aerobics, fast bicycling, or other activities like those shown on Showcard page XX. Think only about those physical activities done for at least 10 minutes at a time.

_____ days per week (range 0-7) [if A3.10=0 go to all activities A3.12]

- .K Don't know [go to A3.12]
- .R Refused [go to A3.12]

A3.11 How much time did you typically spend on each of those days doing vigorous physical activities?

_____ hours (range 0-24) _____ minutes (0-60)

- .K Don't know
- .R Refused

A3.12 Thinking about all your activities over the last 7 days (including brisk walking), on how many days did you engage in:

- at least 30 minutes of moderate activity (including brisk walking) that made you breathe a little harder than normal, OR
- at least 15 minutes of vigorous activity that made you breathe a lot harder than normal ('huff and puff')?

_____ days per week (range 0-7)

- .K Don't know
- .R Refused

Nutrition

Dietary questions (C1) :

https://www.health.govt.nz/system/files/documents/publications/ans_questionnaire.pdf;

Note: The survey is very long and only select items are included. You can focus on certain items to include in the survey

c.07 How often do you remove excess fat from meat (before eating it)?

- a. never
- b. rarely
- c. sometimes
- d. regularly
- e. always
- f. don't know



c.08 How often do you remove the skin from chicken (before eating it)?

- a. never
- b. rarely
- c. sometimes
- d. regularly
- e. always
- f. don't know

c.09 How often do you eat processed meat products? Processed meat includes ham, bacon, sausages, luncheon, canned corned beef, pastrami, and salami?

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.10 How often do you eat fresh or frozen fish or shellfish? Do not include battered/fried or canned fish or shellfish?

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.11. How often do you eat battered or fried foods (e.g., fish and chips)?

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.13 On average, how many servings of fruit do you eat per day? Please include all fresh, frozen, canned and stewed fruit. Do not include fruit juice or dried fruit. A 'serving' = 1 medium piece or 2 small pieces of fruit or ½ cup of stewed fruit. For example, 1 apple + 2 small apricots = 2 servings.

- 1 I don't eat fruit
- 2 Less than 1 per day
- 3 1 serving per day
- 4 2 servings per day
- 5 3 servings per day
- 6 4 or more servings per day
- .K Don't know

c.14 On average, how many servings of vegetables do you eat per day? Please include all fresh,



frozen and canned vegetables. Do not include vegetable juices. A 'serving' = 1 medium potato/kumara or ½ cup cooked vegetables or 1 cup of salad vegetables. For example, 2 medium potatoes + ½ cup of peas = 3 servings.

- 1 I don't eat vegetables
- 2 Less than 1 per day
- 3 1 serving per day
- 4 2 servings per day
- 5 3 servings per day
- 6 4 or more servings per day
- .K Don't know

c.22 How often do you eat fast food or takeaways from places like McDonalds, etc. Think about breakfast, lunch, dinner and snacks. Do you include times when you have only purchased a drink/beverage.

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.23 How often do you drink fruit juices and drinks. Do not include diet or diabetic varieties.

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.24 How often do you drink soft drinks or energy drinks? Do not include diet varieties.

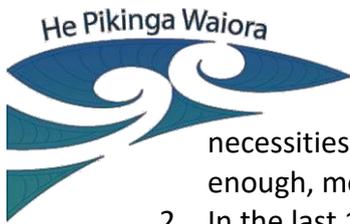
- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

c.25. How often do you eat lollies, sweets, chocolate, and confectionary?

- a. Never
- b. Less than once per week
- c. 1-2 times per week
- d. 3-4 times per week
- e. 5-6 times per week
- f. 7 or more times per week
- g. Don't know

(item created by the research team)

How often do you check the food labels for nutritional information?



necessities. Would you say you have not enough money, only just enough money, enough, more than enough money?

2. In the last 12 months, have you not paid electric, water bill on time because of a shortage of money? (not at all, once, more than once)
3. Imagine that you come across an item in a shop you'd really like to have. It costs \$300. It is not an essential item for housing, food, clothing or other necessities. It's an extra. If this happened in the next month, how limited would you be in buying this item? (not at all limited, a little limited, quite limited, very limited, couldn't buy it)Income and do they get all benefits entitled to; measure??

Food Security (C3):

https://www.health.govt.nz/system/files/documents/publications/ans_questionnaire.pdf

I now want to ask you some questions about particular foods you choose, and the buying of food or gifting of food. We are interested in whether you feel you always have sufficient resources to have the food you need for yourself and the people you live with. We are not concerned with your budget, or how you spend money, but we are more interested in finding out about how people get the food that they need for their household to eat and share.

CFS1.01 First of all, we know that some people can't afford to eat properly and we are interested in whether you think your household has enough money to eat properly. It's what you think eating properly is – not what I think or anyone else thinks.

We can afford to eat properly.

- 1 Always
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused

CFS1.02 We are interested in whether you run out of basics, like bread, potatoes, etc because you do not have enough money. We are NOT referring to treats or special foods.

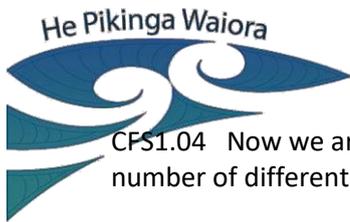
Food runs out in our household due to lack of money. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused

CFS1.03 Now we are interested in whether a lack of money leads you to sometimes have smaller meals than you would like or whether a lack of money means there isn't enough food for seconds or you sometimes skip meals?

We eat less because of lack of money. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused



CFS1.04 Now we are going to talk about the variety of foods you eat. By variety, we mean the number of different kinds of food you have.

The variety of foods we are able to eat is limited by a lack of money. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused

CFS1.05 Some people rely on support and assistance from others for supplying their regular food and we are interested in finding out how many people fall into this group.

We rely on others to provide food and/or money for food, for our household, when we don't have enough money. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know

CFS1.06 Also, some people have to rely on other sources of help such as food grants or food banks.

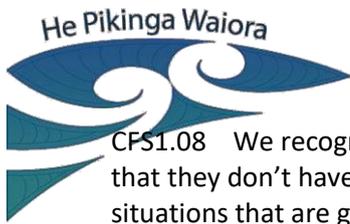
We make use of special food grants or food banks when we do not have enough money for food. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused

CFS1.07 We know that some people get quite stressed and worried about providing enough food even though they don't actually go without food.

I feel stressed because of not having enough money for food. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused



CFS1.08 We recognise that for some people food and sharing with others is important, to the point that they don't have enough food for themselves. In this question we are only interested in social situations that are gatherings within, or outside, the household. As a result people may find themselves stressed/whakamā (embarrassed) about their koha (gift) when providing food for others.

I feel stressed because I can't provide the food I want for social occasions. How often has this been true for your household over the past year?

- 1 Often
- 2 Sometimes
- 3 Never
- .K Don't know
- .R Refused

TRUST IN OTHERS AND INSTITUTIONS

Where zero is people can never be trusted and ten is people can always be trusted, how much of the time do you think most people in New Zealand can be trusted?

Where zero is the public institution can never be trusted, and ten is the public institution can always be trusted, how much do you trust _____ to treat people fairly?

- a. Health system
- b. Education system
- c. System of government
- d. Police
- e. Courts
- f. Media

DEMOGRAPHICS

Age, gender, ethnicity, address, income

Table 2: Outcome Measures for Clinicians

Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Te oranga, Waiora	Health system	Y	N	5	
Ngā manukura	Community Leadership	N	N	10	Oetzel, J. G., Zhou, C., Duran, B., Pearson, C., Magarati, M., Lucero, J., Wallerstein, N., & Villegas, M. (2015). Establishing the psychometric properties of constructs in a community-based participatory research conceptual model. <i>American Journal of Health Promotion</i> , 29, e188-e202.

HEALTH SYSTEM DATA

Data collected from the clinic: Number of enrolments, number of pre-diabetes/diabetes patients, % of patients screened with referrals to programme/pharmacology, % of patients completing the programme/pharmacology, patient monitoring of HbA1C/renal disease, patient admissions for diabetes conditions, whether patient progress is monitored for different ethnic groups (i.e., gaps in best practice treatment along)

COMMUNITY LEADERSHIP

How much did your project have leadership in the following areas: 1 (strongly disagree)-5 (strongly agree)

1. Taking responsibility for moving the project forward
2. Encouraging active participation of academic and community partners in the decision-making
3. Communicating the goals of the project
4. Working to develop a common language
5. Fostering respect between partners
6. Creating an environment where differences of opinion can be voiced
7. Resolving conflict among partners
8. Helping the partners be creative and look at things differently
9. Recruiting diverse people and organizations into the project
10. Providing orientation to new partners as they join the project

Table 3. Outcome Measures for Researchers

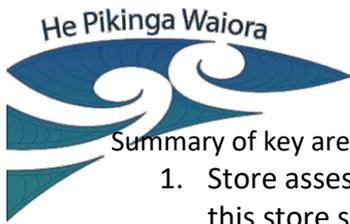
Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Te oranga, Waiora	Health equity assessment tool (HEAT)	Y	N	10	Signal, L., Martin, J., Cram, F., and Robson, B. <i>The Health Equity Assessment Tool: A user's guide.</i>
Waiora	Community health environmental scan survey (CHESS)	N	N	51	Wong, F., Stevens, D., O'Connor-Duffany, Siegal, K., & Gao, Y. (2011). Community health environment scan survey (CHESS): A novel tool that captures the impact of the built environment on lifestyle factors. <i>Global Health Action</i> , 4: 5276.
Ngā manukura	Distal community outcomes	N	N	5	Oetzel, J. G., Zhou, C., Duran, B., Pearson, C., Magarati, M., Lucero, J., Wallerstein, N., & Villegas, M. (2015). Establishing the psychometric properties of constructs in a community-based participatory research conceptual model. <i>American Journal of Health Promotion</i> , 29, e188-e202.

HEALTH EQUITY ASSESSMENT TOOL

1. What inequalities exist in relation to the health issues under consideration?
2. Who is most advantaged and how?
3. How did the inequalities occur? What are the mechanisms by which the inequalities were created, maintained or increased?
4. Where/how will you intervene to tackle this issue?
5. How will you improve Māori health outcome and reduce health inequalities experienced by Maori?
6. How could this intervention affect health inequalities?
7. Who will benefit most?
8. What might the unintended consequences be?
9. What will you do to make sure the intervention does reduce inequalities?
10. How will you know if inequalities have been reduced?

CHESS: COMMUNITY HEALTH ENVIRONMENTAL SCAN SURVEY

For full scale see: Wong, F., Stevens, D., O'Connor-Duffany, Siegal, K., & Gao, Y. (2011). Community health environment scan survey (CHESS): A novel tool that captures the impact of the built environment on lifestyle factors. *Global Health Action*, 4: 5276.



Summary of key areas of assessment and questions:

1. Store assessment: What kind of store is this? What does this store mostly sell? Does this store sell fresh fruit and/or vegetables? Does this store sell tobacco products? Is there a “no sale to minor” sign? Are there healthy food options at the register?
2. Restaurant scan: The food service is.....; Are there any smoke-free or no-smoking signs visible? Are there any people smoking inside? Is there nutritional information posted on the menu/menu board?
3. Street vendors: Number of other street vendors in view; What foods are available at this stall?
4. Recreational facilities: Type of facility; hours of operation, Is the facility in use? Is the facility less than .5km from public transportation? Is there a food vendor on premises? What foods are available at this vendor? Does it have indoor facilities? Is this open to the public year round? Is this facility free to the public? What type of facilities are available? Is the facility designated as smoke-free? Is part of the facility smoke free with restricted smoking areas indoors? Are there any smoke-free or no-smoking signs visible? Are there any people smoking inside? If there are people smoking, are they in the restricted area?
5. Parks/gardens: Type of facility; Hours/days of operation; Is the park/garden in use? Is the facility less than .5km from public transportation? Does the park have exercise equipment for public to use that is free? Does the park have space or grassy area large enough for physical activity? Is there a food vendor on premises? What foods are available at this vendor?
6. Vending machines: Where is the vending machine located? Which options are available in this vending machine? Are healthy options identified as healthy?
7. Information environment: What do you see? For which risk factors? Is the message positive or negative? What kind of message/advertisement/point of decision prompt/regulation? Is a brand mentioned?
8. Streets: Cycle path/trail, bike lanes, Side walk, Safety, Lack of pollution, Trees along sidewalk, Neighbourhood is generally free from litter

DISTAL COMMUNITY OUTCOMES

Community Transformation

How much did your project: 1 (strongly disagree)-5(strongly agree)

1. Result in policy or practice changes
2. Improve the overall health status of individuals in the community
3. Result in acquisition of additional financial support
4. Improve the overall environment in the community

Community health improvement

1. Overall, how much did or will your research project (insert name) improve the health of the community? 1 (not at all)- 5 (a lot)

Table 4. Implementation Measures for Patients/Community Members

Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Toiora	Perception of innovation adoption	N	N	13	Created for this study although influenced from Pankratz, MD, Hallfors, D, & Cho H. (2002). Measuring the



					perceptions of innovation adoption: The diffusion of a federal drug prevention policy. Health Education Research, 17, 3, 315-326. Alternative option is a 30-item scale: Atkinson, NL. (2007). Developing a questionnaire to measure perceived attributes of eHealth innovations. American Journal of Health Behavior, 31, 612-621.
Te mana whakahaere	Readiness to change: Change commitment, change efficacy and change valence	N	N	14	Shea, C. M., Jacobs, S. R., Esserman, D. A., Bruce, K., & Weiner, B. J. (2014). Organizational readiness for implementing change: a psychometric assessment of a new measure. Implement Sci, 9(7), 1-15.

PERCEPTION OF INNOVATION ADOPTION

- *Relative advantage*—the degree to which an innovation is perceived as better than the idea it supersedes. The higher the perceived relative advantage, the more likely the innovation will be adopted.
 1. The whānau-based lifestyle intervention programme is better than a diet.
 2. The whānau-based lifestyle intervention programme is more effective for making healthy lifestyle choices than other programmes I’ve used in the past. (or if you haven’t done anything else, better than nothing)
 3. The whānau-based lifestyle intervention programme has benefits compared to what we have been currently been doing.
- *Compatibility*—the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters. If the innovation is perceived as an extreme change, then it will not be compatible with past experiences and is less likely to be adopted.
 1. The whānau-based lifestyle intervention programme is consistent with my personal beliefs and values.
 2. The whānau-based lifestyle intervention programme is useful.
 3. The whānau-based lifestyle intervention programme is credible.
- *Complexity*—the degree to which an innovation is perceived as relatively difficult to understand and use. Innovations that are perceived as complex are less likely to be adopted.
 1. The whānau-based lifestyle intervention programme is easy to use.
 2. The whānau-based lifestyle intervention programme is clear.
 3. The whānau-based lifestyle intervention programme content is relevant.
- *Observability*—the degree to which the results of an innovation are visible to others. If the observed effects are perceived to be small or non-existent, then the likelihood of adoption is reduced.
 1. The whānau-based lifestyle intervention programme has benefits that are obvious.
 2. The evidence of the whānau-based lifestyle intervention programme is readily available.



- **Trialability**—the degree to which an innovation may be experimented with on a limited basis. This may include trying out parts of a program or having the opportunity to watch others using a new program. Trialability is positively related to the likelihood of adoption.
 1. The whānau-based lifestyle intervention programme can be tried out without requiring extensive involvement.
 2. The whānau-based lifestyle intervention programme can be adapted or modified to suit my needs.

READINESS TO CHANGE

(Strongly agree to strongly disagree)

Change Commitment

1. We are committed to implementing this change.
2. We are determined to implement this change.
3. We are motivated to implement this change.
4. We will do whatever it takes to implement this change.
5. We want to implement this change.

Change Efficacy

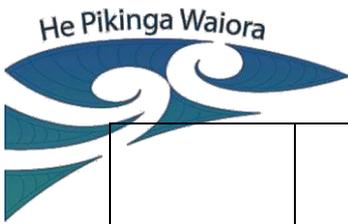
1. We can manage the politics of implementing this change.
2. We can support people as they adjust to this change.
3. We can coordinate tasks so that implementation goes smoothly.
4. We can handle the challenges that might arise in implementing this change.
5. We can keep track of progress in implementing this change.

Change Valence

1. We feel this change is compatible with our values.
2. We believe this change will benefit our community.
3. We believe this change will make things better.
4. We feel that implementing this change is a good idea.

Table 5: Implementation Measures for Clinicians

Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Toiora; Te mana whakahaere	Causal Factors of Implementation	N	N	27	Peters, M. A. J., Harmsen, M., Laurant, M. G. H., & Wensing, M. <i>Ruimte voor verandering? Knelpunten en mogelijkheden voor verandering in de patiëntenzorg</i> [Room for improvement? Barriers to and facilitators for improvement of patient care]. Nijmegen: Centre for Quality of Care Research (WOK), Radboud University Nijmegen Medical Centre, 2002.
Te mana whakahaere	Readiness to change: Change commitment, change efficacy and change valence	N	N	14	Shea, C. M., Jacobs, S. R., Esserman, D. A., Bruce, K., & Weiner, B. J. (2014). Organizational readiness for implementing change: a psychometric assessment of a new measure. <i>Implement Sci</i> , 9(7), 1-15.
Ngā manukura	Organisational Support	N	N	14	Duckers, MLA, Wagner, C., & Groenewegen, PP (2008). Developing and testing an instrument to measure the presence of conditions for successful implementation of quality improvement collaboratives. <i>BMC Health Services Research</i> , 8, 172.
Toiora	Perception of innovation adoption	N	N	13	Created for this study although influenced from Pankratz, MD, Hallfors, D, & Cho H. (2002). Measuring the perceptions of innovation adoption: The diffusion of a federal drug prevention policy. <i>Health Education Research</i> , 17, 3, 315-326. Alternative option is a 30-item scale: Atkinson, NL. (2007). Developing a questionnaire to measure perceived attributes of



					eHealth innovations. American Journal of Health Behavior, 31, 612-621.
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CAUSAL FACTOR OF IMPLEMENTATION

(Strongly agree to strongly disagree)

Innovation

1. This innovation leaves enough room for me to make my own conclusions
2. This innovation leaves enough room to weigh the wishes of the patient
3. This innovation is a good starting point for my self-study
4. Working to the innovation is too time consuming
5. The innovation does not fit into my ways of working at my practice.
6. The lay-out of this innovation makes it handy to use.

Provider

7. I did not thoroughly read nor remember the innovation.
8. I wish to know more about the innovation before I decide to apply it.
9. I have problems changing my old routines.
10. I think parts of the innovation are incorrect.
11. I have a general resistance to working according to protocols.
12. Fellow doctors do not cooperate in applying the innovation.
13. Other doctors or assistants do not cooperate in applying the innovation.
14. Managers/directors do not cooperate in applying the innovation.
15. It is difficult to give preventive care because I am not trained in giving preventive care.
16. It is difficult to give preventive care because I have not been involved in setting up the preventive care.

Patient

17. Patients do not cooperate in applying the innovation.
18. It is difficult to give preventive care to patients with a different cultural background.
19. It is difficult to give preventive care to patients who seem healthy.
20. It is difficult to give preventive care to patients with low socio-economic status.
21. It is difficult to give preventive care to older patients (60+)
22. It is difficult to give preventive care to patients who rarely visit the practice.

Organizational/Structural

23. Working according to this innovation requires financial compensation.
24. It is difficult to give preventive care if there is not enough supportive staff.
25. It is difficult to give preventive care if the instruments needed are not available.
26. It is difficult to give preventive care because the timing of the preventive care is awkward.
27. It is difficult to give preventive care if the physical space is lacking.

READINESS TO CHANGE

(Strongly agree to strongly disagree)

Change Commitment

1. We are committed to implementing this change.
2. We are determined to implement this change.
3. We are motivated to implement this change.
4. We will do whatever it takes to implement this change.
5. We want to implement this change.

Change Efficacy



1. We can manage the politics of implementing this change.
2. We can support people as they adjust to this change.
3. We can coordinate tasks so that implementation goes smoothly.
4. We can handle the challenges that might arise in implementing this change.
5. We can keep track of progress in implementing this change.

Change Valence

1. We feel this change is compatible with our values.
2. We believe this change will benefit our community.
3. We believe this change will make things better.
4. We feel that implementing this change is a good idea.

ORGANISATIONAL SUPPORT SCALE

(strongly agree to strongly disagree)

Organisational Support

1. In the department where the project is implemented, we see that the project is important to the strategic management.
2. In the department where the project is implemented, we see that the strategic management support the project actively.
3. The hospital gives the support we need in the department to make the project a success.
4. The hospital does everything in its power to increase willingness to change.
5. The board pays attention to the activities of the project team.

Team organisation

6. There is good communication in the project team
7. The division of tasks is perfectly clear in the project team
8. Everyone is doing what he or she should do in the project team.
9. The project team is responsible for progress of the project.
10. The project team is in charge of project implementation.

External Change support

11. At collaborative meetings, I always gain valuable insights.
12. External change agents provide sufficient support and instruments.
13. External change agents raised high expectations about performance and improvement potential.
14. External change agents made clear from the beginning what the goal of the project is and the best way to achieve it.

PERCEPTION OF INNOVATION ADOPTION

See Table 4 for specific items

Table 6: Implementation Measures for Researchers

Construct	Scales	Validated with Māori	Normed	Number of Items	Source
Ngā manukura	RE-AIM (reach, effectiveness, adoption, implementation, maintenance)	N	N	14	http://www.re-aim.hnfe.vt.edu/resources_and_tools/measures/index.html
Ngā manukura	Adoption	N	N	4	Li, R et al. (2004). Organizational factors affecting the adoption of diabetes care management processes in physician organizations. <i>Diabetes Care</i> , 27, 2312-.
Ngā manukura	Cost	N	N	10	Drummond, MF, O'Brien, B, Stoddard, GL, Torrance, GW. (1997) <i>Methods for the economic evaluation of health care programmes</i> . Oxford: Oxford University Press. P. 305.
Ngā manukura	Fidelity	N	N	47	Monroe-DeVita, M. et al (2011). The TMACT : A new tool for measuring fidelity to assertive community treatment. <i>Journal of American Psychiatric Nurses Association</i> , 17, 17-29.

RE-AIM

There is a check list to guide this evaluation from the source.

1. Reach (Individual Level): What percent of potentially eligible participants a) were excluded, b) took part and c) how representative were they?
2. Efficacy or Effectiveness (Individual Level) What impact did the intervention have on a) all participants who began the program; b) on process intermediate, and primary outcomes; and c) on both positive and negative (unintended), outcomes including quality of life?
3. Adoption (Setting Level) What percent of settings and intervention agents within these settings (e.g., schools/educators, medical offices/physicians) a) were excluded, b) participated and c) how representative were they?
4. Implementation (Setting/agent Level) To what extent were the various intervention components delivered as intended (in the protocol), especially when conducted by different (nonresearch) staff members in applied settings?
5. Maintenance (Individual Level) What were the long-term effects (minimum of 6-12 months following intervention)? b) What was the attrition rate; were drop-outs representative; and how did attrition impact conclusions about effectiveness?
Maintenance (Setting Level) a) To what extent were different intervention components continued or institutionalized? b) How was the original program modified?



ADOPTION

Created an index of the number of different element adopted by the organization (out of 4): clinical practice guidelines, case management, physician feedback, diabetic patient registries

COST

10-item checklist on cost effectiveness

FIDELITY

47 item scale/checklist to what extent they follow the intervention guidelines. Needs to be tailored for specific study.

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18.1 Other Resources

List URLs for other guides should people want more information (from Engage for Equity Website including the following)

<https://www.ccphhealth.org/cbpr-curriculum/> (requires membership though)

<https://cpr.unm.edu/research-projects/cbpr-project/index.html> Engage for Equity

He Pikinga Waiora Publications

Teng, A., Blakely, T., Scott, N., Jansen, R., Masters-Awatere, B., Krebs, J., & Oetzel, J. (in press). What protects against pre-diabetes progressing to diabetes? Observational study of integrated health and social data. *Diabetes Research and Clinical Practice*.

Beaton, A., Manuel, C., Tapsell, J., Foote, J., Oetzel, J., Hudson, M. (2019). He Pikinga Waiora: Supporting Māori health organisations to respond to pre-diabetes. *International Journal for Equity in Health*, 18: 3.

Click here for PDF: <https://rdcu.be/bfD8o>

Oetzel, J. G. (2018). Addressing health inequities in cardiovascular health in indigenous communities: Implementation process matters as much as the intervention itself. *International Journal of Cardiology*, doi:10.1016/j.ijcard.2018.07.036

Oetzel, JG, Wihapi, R., Manuel, C. Rarere, M. (2018). An integrated approach to prevent chronic lifestyle diseases in Māori men. *International Journal of Integrated Care*, 18(S2), A73.

Oetzel, J.G., Scott, N., Hudson, M., Masters-Awatere, B., Rarere, M. Foote, J., Beaton, A., & Ehau, T. (2017). Implementation framework for chronic disease intervention effectiveness in Māori and other indigenous communities. *Globalization and Health*, 13: 69. DOI: 10.1186/s12992-017-0295-8

Oetzel, J.G., Scott, N., Hudson, M., Masters-Awatere, B., Rarere, M. Foote, J., Beaton, A., & Ehau, T. (2017). Implementation framework for chronic disease intervention effectiveness in Māori and other indigenous communities. *Globalization and Health*, 13: 69. DOI: 10.1186/s12992-017-0295-8

Beaton A, Manuel C, Tapsell J, Oetzel J, Hudson M, Scott N, Rarere, M. (2017). Identifying strategic opportunities for Māori community organisations to respond to pre-diabetes: Building a platform for integrated care to deliver change that matters to communities. *International Journal of Integrated Care*, 17(5), A166.

Oetzel, J.G., Scott, N., Hudson, M., Masters-Awatere, B., Rarere, M. Foote, J., Beaton, A., & Ehau, T. (2017). He Pikinga Waiora Implementation framework: A tool for chronic disease intervention effectiveness in Māori and other Indigenous communities. *International Journal of Integrated Care*, 18(S1), A68.



Resources for researchers in implementation science

There are a number of resources available, a small selection is provided here for guidance:

Journals covering research in the area, e.g. [Implementation Science](#)

[Implementation Research in Health: A Practical Guide](#) (Peters, D. et al 2013)

[Implementation research: what it is and how to do it](#) (Peters, D. et al 2013)

[Writing implementation research grant proposals: ten key ingredients](#) (Proctor, E. 2012)

[Dissemination and Implementation Research in Health: Translating Science to Practice](#) (Brownson, R. et al 2012)

[A guide to implementation research in the prevention and control of noncommunicable diseases](#) (World Health Organization 2016)

[Implementation research toolkit](#) (WHO/TDR 2014)

[Nine steps for developing a scaling-up strategy](#) (WHO 2010)

[RE-AIM Framework](#) (Glasgow et al)

[An introduction to implementation science for the non-specialist](#) (Bauer, M. et al 2015)

Other Useful References and Links

For further reading you might consider some of the following resources. Also, a closely related approach to the HPW framework is community-based participatory research (CBPR). Many of the resources suggested in this site come from CBPR literature.

Wallerstein N, Oetzel, J, Duran, B, Belone, L, Tafoya, G, Rae, R. CBPR: What predicts outcomes? In: Minkler M, Wallerstein, N, editors. Community-based participatory research for health: from process to outcomes, 2nd edition. San Francisco: Jossey-Bass; 2008. p. 371-92.

Wallerstein, N., Duran, B., Oetzel, J.G., & Minkler, M. (2018). Community-based participatory research for health (3rd ed.). San Francisco: Jossey-Bass.

Israel BA, Eng, E., Schulz, A. J., & Parker, E., editors. Methods in community-based participatory research for health, 2nd edition. San Francisco: Jossey-Bass; 2013.

Oetzel JG, Zhou C, Duran B, Pearson C, Magarati M, Lucero J, et al. Establishing the psychometric properties of constructs in a community-based participatory research conceptual model. Am J Health Promot. 2015; 29:e188-202.



Community-Campus Partnerships for Health: <https://www.ccphealth.org/cbpr-curriculum/>

Detroit Community-Academic Urban Research Center: <https://www.detroiturc.org/resources.html>

Engage for Equity: <https://cpr.unm.edu/research-projects/cbpr-project/index.html>

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