The Health Equity Assessment Tool:

A User's Guide

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Acknowledgements

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Introduction

> We all have a role to play in reducing inequalities in health in New Zealand. Regardless of how we measure health … we find that particular groups are consistently disadvantaged in regard to health. And these inequalities affect us all.[1]

Health inequalities or health inequities (the terms are used interchangeably) are avoidable, unnecessary and unjust differences in the health of groups of people.[1] Reducing health inequalities is greatly assisted by tools that enable the assessment of interventions such as policies, programmes and services. Such tools examine the potential of these interventions to contribute to reducing health inequalities. From such an assessment, informed decisions can be made about how to build and strengthen policies, programmes and services.

This Guide is designed to facilitate the use of one such tool: the Health Equity Assessment Tool (HEAT).[2] HEAT aims to promote equity in health in New Zealand. It consists of a set of 10 questions that enable assessment of policy, programme or service interventions for their current or future impact on health inequalities. The questions cover four stages of policy, programme or service development.

1. Understanding health inequalities.
2. Designing interventions to reduce inequalities.
3. Reviewing and refining interventions.
4. Evaluating the impacts and outcomes of interventions.

HEAT was developed for use in Ministry of Health funded workshops to increase the capacity of the health sector to contribute to health equity. The workshops introduced Ministry of Health staff and District Health Board (DHB) staff and board members to the use of the tool.[3] Inclusion of HEAT both in the Ministry of Health policy process and in the reporting requirements for DHBs since 2004 means that it has been increasingly used throughout New Zealand. The development of this Guide was recommended in a review of the use of equity tools in the health sector.[4]

HEAT is a flexible tool that can be used in its entirety or, alternatively, selected questions or groups of questions can be asked for specific purposes. For example, questions one to three can promote the consideration of health inequalities and their causes, while question five can assist with assessing a policy, service or programme's responsiveness to Māori.

The HEAT questions can be used to provide a quick overview of potential issues and gaps in policies, services and programmes, such as gaps in information or stakeholder involvement. Alternatively, more in-depth responses to the HEAT questions can assist in developing an evidence base for policy, service and programme development and/or evaluation.

This Guide contains five main sections.

- Section 1 presents a brief overview of health inequalities. The goal of this section is to give an introduction to health inequalities and provide a context for using HEAT.

- Section 2 introduces HEAT and its use. The goal of this section is to provide an overview of the tool and orient the user to its use.
- Section 3 looks in more depth at each of the HEAT questions. It suggests methods for framing the answers to these questions. The goal of this section is to guide readers through the 10 HEAT questions.
- Section 4 provides two case examples of the use of HEAT.
- Section 5 is devoted to reference material and appendices. It includes a copy of HEAT (see Appendix A).
- A glossary of terms and a feedback form are also supplied at the end of this Guide.

1 Reducing inequalities in health

> Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.[5]

There is considerable local and international evidence of significant inequalities in health. These inequalities are found between socioeconomic groups, between ethnic groups, between people living in different geographical regions and between males and females.[1, 6, 7] Research indicates that the poorer you are, the worse your health will be. And in some countries with a colonial history, including New Zealand, indigenous people have poorer health than non-indigenous people.

The World Health Organization recognises that reducing inequalities in health is important because health is a fundamental human right.[8] Reducing health inequalities has been identified as a key goal of governments internationally[9–13] and is a priority for our own government. The *New Zealand Health Strategy* acknowledges the need to address health inequalities as 'a major priority requiring ongoing commitment across the sector'.[10]

This section will provide you with an overview of health inequalities and the rationale for reducing them.

1.1 Concept of health

The World Health Organization defines health as 'not merely the absence of disease or infirmity'.[5] The Ottawa Charter identifies several fundamental conditions and resources for health, including shelter, education, income, sustainable resources, social justice and equity. According to the Charter, 'improvement in health requires a secure foundation in these basic prerequisites'.[14]

Similarly, many Māori views on health focus on wellbeing and see health as more than the absence of disease. This view encompasses tinana (the physical element), hinengaro (the mental state), wairua (the spirit) and whānau (the immediate and wider family).[15] These aspects occur in the context of te whenua (land providing a sense of identity and belonging), te reo (the language of communication), te ao tūroa (environment) and whanaungatanga (extended family).[16]

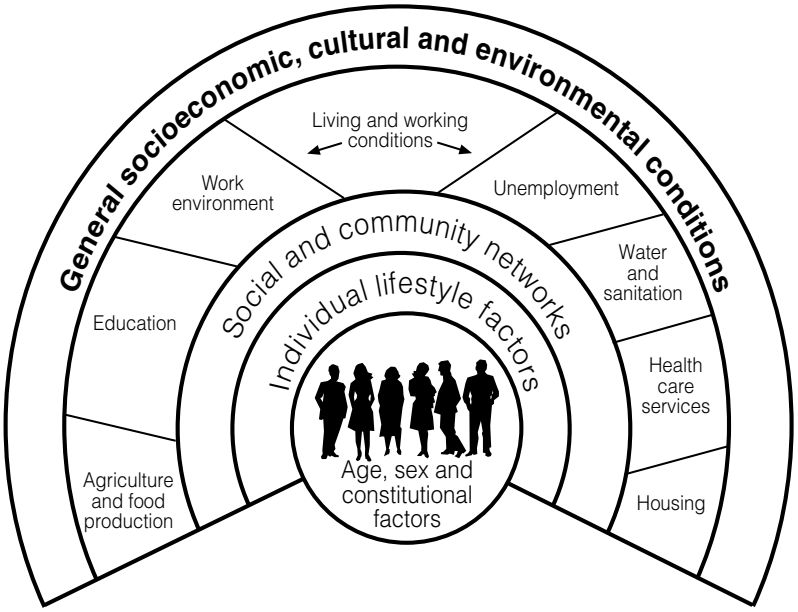
1.2 Causes of health inequalities

Inequalities arise from, and are maintained by, the unequal distribution of the determinants of health,[17] such as income, employment, education, housing, health care and social support (see Figure 1 below). It is the privileging of some people and groups over others – by factors such as ethnicity, class, gender, geography or 'ableism' – that generates social inequalities. Inequalities are therefore the unfair and unjust result of social and economic policies and practices. And just as inequalities have developed, they can be reduced.[18]

This Guide is consistent with this social approach to the causes of health inequalities, reflecting the shift in international literature in recent years away from biological explanations.[19] This change is represented by a move towards a stronger acknowledgement

of factors such as living and working conditions and socioeconomic conditions that instigate and maintain health inequalities (see Figure 1 below).

Figure 1. The main determinants of health



Source: Dahlgren and Whitehead 1991.[20]

1.3 Health inequalities in New Zealand

In New Zealand, inequalities in health, and in the determinants of health, are pronounced.[6, 7, 21] Of particular concern are the large and persistent inequalities experienced by Māori. These inequalities increased throughout the 1980s and 1990s, but the situation has improved from 1999 to 2004 with relative inequality for Māori compared to European/Other reducing slightly, and absolute inequality declining more notably.* As Blakely et al note, this is 'a turnaround of major importance if it can be sustained'.[7] The life expectancy gap between Māori and non-Māori has closed slightly to 7.6 years in 2000–02 (a reduction of 0.6 years on the period 1995–97).[21]

Pacific peoples experience persistent health inequalities compared to non-Māori, non-Pacific people. These inequalities are, however, less pronounced than for Māori. Like Māori, Pacific peoples experienced increased inequalities throughout the 1980s and 1990s, but these have also declined since 1999, although the decline has not been as significant as it has for Māori.[7]

According to Blakely et al, New Zealand, like all other societies:

> exhibits a socioeconomic gradient in mortality, with low-income groups experiencing higher risks of dying at every age than their more privileged counterparts. Mortality fell for all income groups from 1981–84 to 2001–04, however, and at much the same rate, with the result that absolute inequality remained stable while relative inequality necessarily increased over the period as a whole.[7]

* Absolute inequalities are differences in mortality rates. Relative inequalities are the ratio of these mortality rates.

1.4 Reducing inequalities outcomes

Given that significant, persistent, unfair and unjust health inequalities in New Zealand can be reduced through more equitable distribution of resources led by fairer social and economic policy, it is critical to do so. Successfully meeting this challenge will result in:

- a fairer society where everyone has the opportunity for good health
- an inclusive society, where everyone has a sense of belonging and feels that their contribution is valued
- improved health and wellbeing for the population as a whole, not just for those groups who are currently experiencing relatively poor health, and
- a stronger economy because a healthier population can contribute to a richer social and economic life.[18, 22]

2 The Health Equity Assessment Tool (HEAT)

The Health Equity Assessment Tool (HEAT) helps users to tackle health inequalities when making health decisions. The challenge is to reduce inequalities and, therefore, to create greater opportunity for all New Zealanders to enjoy good health.

This section will provide you with an overview of HEAT and a rationale for using it.

2.1 What it is

HEAT is a planning tool that improves the ability of mainstream health policies, programmes and services to promote health equity. It was developed in 2002 as a set of 12 questions which were then trialled and reviewed. The present tool consists of 10 questions (see Appendix B for a brief history of the tool's development).

HEAT enables health initiatives to be assessed for their current or future impact on health equity. The questions challenge users to think broadly about equity issues. The 10 questions are listed below and discussed in more depth in the next section.

1. What inequalities exist in relation to the health issue 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 outcomes and reduce health inequalities experienced by Māori?
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?

These questions prompt users to consider the health inequalities that exist in a particular area of health, how to intervene to address them, and finally to evaluate whether the intervention has been successful in reducing health inequalities.

2.2 When to use it

HEAT can be used on any policy, programme or service that affects the health and equity of New Zealanders. It is intended primarily to improve mainstream health delivery, that is, generic services for the entire population rather than those that are targeted to particular priority groups. Ideally the tool should be used prospectively; however it has been effectively used for retrospective review of existing initiatives.[4] It is hoped that all existing health sector initiatives will be scrutinised for equity concerns.

HEAT can be used throughout the policy, programme and service planning process from initial issue identification, through design and implementation, to evaluation of effectiveness. By ensuring a strong equity focus in decision-making, HEAT works alongside other strategic, planning, implementation and evaluation tools such as prioritisation frameworks,[23] Health Impact Assessment[24] and Whānau Ora Health Impact Assessment.[25]

2.3 Who uses it

HEAT is designed for use by people in the health sector. It is most frequently used by people making funding, planning and policy decisions. It is well used in public health and has potential for use throughout the health sector. Use in the clinical services area (for example, in hospital services) has been limited to date, but interest in its use is increasing.[4]

HEAT has also been used or may also be used by:

- non-governmental organisations, such as the National Heart Foundation of New Zealand
- community groups, to assess the health equity of proposed or current initiatives and inform their input to government agencies
- targeted services, in arguing for the continuation or extension of their services or in considering addressing inequalities within the communities they work with
- other sectors with a significant impact on health, wellbeing and equity, such as housing, welfare and education
- local government, to assist with meeting statutory obligations under the Local Government Act 2002 to promote community social, cultural, economic and environmental wellbeing.

HEAT is best used by a group that includes people who can speak to the equity issues for their own communities. Given the inequalities that exist for Māori, Pacific and low-income New Zealanders, it will be critical that they are well represented in any use of the tool.

2.4 Guidance for beginners

HEAT may appear simple to administer, but users should be mindful that to fully answer questions requires information and research that may not always be to hand. It is recommended that people using this Guide for the first time work with others who are experienced in its use, or work with people with experience in addressing health inequity, or undertake equity training.

3 A guide to the HEAT questions

The first part of this section looks at some overarching key points about using HEAT, followed by a brief discussion about the need for research and information when answering the HEAT questions. The 10 HEAT questions are then explored in more detail. For ease of understanding the questions are grouped together in four parts.

Part 1: Understanding health inequalities (questions one to three).

Part 2: Designing interventions to reduce inequalities (questions four and five).

Part 3: Reviewing and refining the intervention (questions six to nine).

Part 4: Evaluating the impacts and outcomes of the intervention (question ten).

This section will guide you through answering the HEAT questions.

Key points about using HEAT

- HEAT is flexible and can be adapted to the needs of its users. It may be appropriate to work sequentially through all the HEAT questions when, for example, a policy, service or programme is being developed from scratch. At other times, some questions or parts may be more relevant than others for the task at hand.
- HEAT can be used either for rapid assessment or in a more in-depth way. The choice is up to the users and their requirements.
- The process of applying HEAT is as important as the outcome, because the process is an opportunity to involve stakeholders and allow them to take ownership of the analysis.
- For each question, identify information that can be accessed and stakeholders who can be involved in the discussion of the question. Each question should be discussed as widely as possible, and participants should be prepared to have their assumptions and their thinking challenged by others in the group or by evidence that is presented, or both.
- At various stages – from initial issue identification, through design and implementation, to evaluation of effectiveness – some HEAT questions will be more relevant than others. While emphasis can be placed on these relevant questions, also consider what your intended audience needs to know (eg, the answers to all questions).
- Record any discussion and the key answers or findings for each question for later reference. This record will help make your use of HEAT transparent and accountable to stakeholders. It will also help provide the rationale for your decision-making.
- Share the record of your answers to the questions with those involved in applying HEAT and with other key stakeholders. Be open to feedback and the possible need to revise your answers.
- HEAT can be used alongside other tools that have a similar equity agenda (eg, health impact assessment (HIA)). Health impact assessments can provide evidence of inequalities so are useful in addressing questions one to three of HEAT. Equity-focused HIAs can be used to analyse the impact of proposed interventions at questions six to nine.

Information and research

You will need to use evidence to back up your answers to the HEAT questions. This is likely to include qualitative and quantitative information on a) inequalities that exist; b) how to effectively intervene; and c) evaluations of the effectiveness of interventions. Increasingly, data is available about the nature of health inequalities in this country, but there is still limited information about how to intervene.[26–29]

If you do not have enough data at any stage during the use of HEAT it may be possible to pause and analyse existing data, seek community input or commission new research. Once this is done, working through the tool can continue. Gathering further data may not be possible, in which case steps should be taken to notify decision-makers about the need for such data. In the absence of good data the tool should be used cautiously, with particular attention paid to representation by groups most likely to suffer the burden of health inequalities.

3.1 Understanding health inequalities

The first part of HEAT helps to develop an understanding of health inequalities. Once you have identified the health issue to which you are going to apply the tool, answer questions one through three. Some discussion may be required about when to assemble your group of stakeholders or participants. For example, it may be appropriate to get stakeholders together:

- at the very start, to make a decision about the issue that HEAT is applied to
- after data on question one has been collated so that the stakeholders can discuss inequalities, and/or
- after Part 1, when answers to questions one to three have been prepared to inform group discussion.

It is important that you are flexible when introducing a stakeholder group to the HEAT process, as that group may decide to revisit steps taken and decisions made before coming together.

Question one: What inequalities exist in relation to the health issue under consideration?

Good data is critical to provide a basis for a meaningful answer to this first, focusing question. Increasingly, this data is available nationally and locally. DHB needs assessments often provide a good starting point. Good baseline data is also required at this initial project development stage if the evaluation question, question 10, is to be answered in a meaningful way. A wide-ranging discussion is valuable at this stage to ensure that the full extent of inequalities is explored.

You may start thinking about a health issue in terms of just one or two inequalities, but exploring a broad spectrum of inequalities will help you gain a full understanding of the nature of the health issue. Inequalities to be considered include:

- ethnic
- gender
- socioeconomic
- geographical
- inequalities experienced by people with disabilities.

Several health websites offer access to information and publications on inequalities. They include:

- Ministry of Health – www.moh.govt.nz
- Māori Health – www.maorihealth.govt.nz
- Public Health Intelligence – www.phionline.moh.govt.nz
- New Zealand Health Information Service – www.nzhis.govt.nz
- District Health Boards – www.moh.govt.nz/districthealthboards.

Note that inequalities interact in complex ways to affect health. Inequalities experienced in early life influence people in later life, and inequalities take a cumulative toll on an individual's health over their lifetime.[1]

Question two: Who is most advantaged and how?

Here HEAT seeks to identify who is advantaged in relation to the health issue being considered and in what ways this advantage plays out. The focus is deliberately on who is advantaged or privileged, rather than on the 'victims' of inequity. A focus on 'victims' risks locating the origin of inequity in the supposed deficits and failings of individuals rather than in the social institutions and practices that have caused the inequity.[29, 30] A focus on who is advantaged, on the other hand, examines the unearned privilege that some groups have acquired as a result of inequalities. For further discussion of this point see page 5 of Robson et al.[21]

Question three: How did the inequalities occur? What are the mechanisms by which the inequalities were created, maintained or increased?

This question focuses on how inequalities have occurred and therefore what needs to change for them to be addressed. When answering this question explore what factors have created the inequalities over time and what factors operate to maintain or increase the inequalities today. Note the earlier discussion that argues that inequalities arise from, and are maintained by, the unequal distribution of the determinants of health. The categories of the determinants of health you may want to consider for their unequal distribution include:

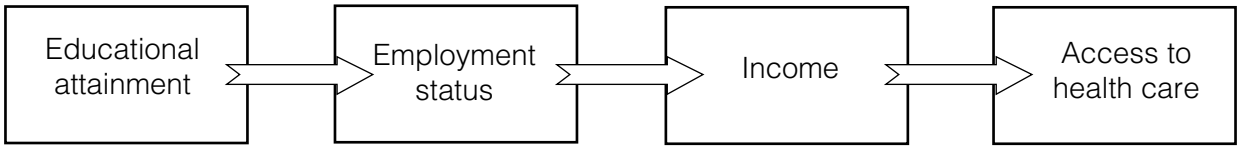
- socioeconomic factors (eg, income level)
- social and cultural factors (eg, social support, discrimination)
- environmental factors (including living and working conditions)
- population-based services (eg, childcare, health care)

- individual/behavioural factors (eg, life skills)
- biological factors (eg, biological age).[25]

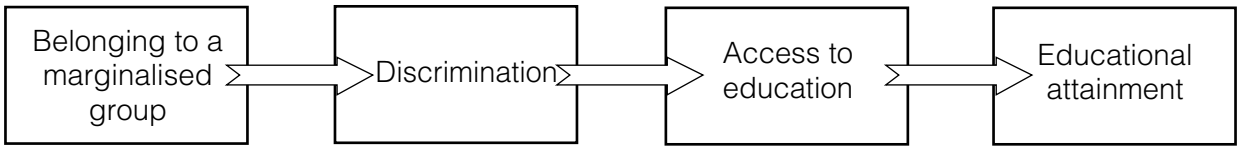
To prompt thinking about the causes of inequalities, Appendix C provides a list of possible determinants of health. (This list is neither exhaustive nor prioritised.)

When answering question three it may be useful to brainstorm causes to reach an understanding of the chain of causation. That is, what causes led to other causes which, in turn, led to other causes? In this way you may be able to link issues together to explain how more distant issues are connected to close issues in a causal relationship that affects health equity. Often these relationships are backed up by theory and research evidence.

For example, we might posit that educational attainment is linked to employment status which in turn is linked to income and a person's ability to afford health care. In this way poor educational attainment can be linked to poor health outcomes as outlined below.



We can then explore the causes of educational attainment and this might lead to another set of causal linkages, such as:



Task one: Understanding health inequalities

Brainstorming (through the review of the data and discussion) the answers to questions one to three can be recorded using the template below (which is also in Appendix D). The template can be adapted to include the types of inequality that are specific to the issue you are examining. It may also be worthwhile to include any instances where particular inequalities do not exist for your issue.

Type of inequality	1. What inequalities exist?	2. Who is most advantaged and how?	3. How did the inequality occur?
Consider the range of inequalities.	**What do you know about inequalities in relation to this health issue?**	**Who is advantaged in relation to the health issue being considered and how?**	**What causal chain(s) leads to this inequality?**
Ethnic			
Gender			
Socioeconomic			
Geographical			
Disability			

3.2 Intervening to reduce health inequalities

Question four: Where/how will you intervene to tackle this issue?

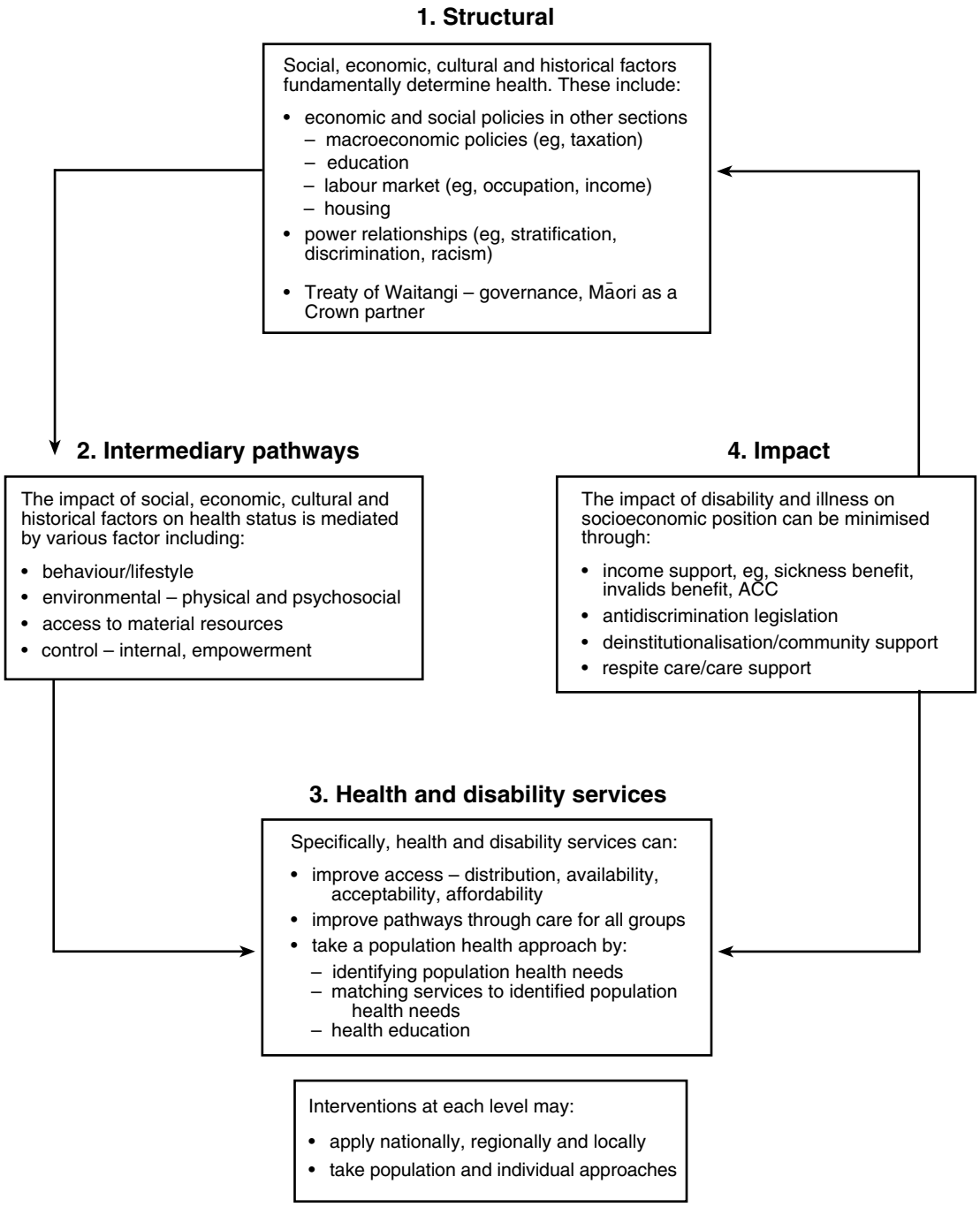
Now that health inequalities have been identified and better understood, HEAT focuses on how to intervene and tackle them. The Intervention Framework to Improve Health and Reduce Inequalities (Intervention Framework) (see Figure 2 below) provides a way of looking at how to intervene.[1] It presents a comprehensive approach to intervention at the following four levels of society:

1. *Structural*: tackling the root causes of health inequalities – the social, economic, cultural and historical factors that fundamentally determine health. Specific examples of action include policies that ensure equitable education, labour market, housing and other social outcomes; monitoring of health inequalities and social determinants; and use of health impact assessment tools to assess policy in sectors other than health.
2. *Intermediary pathways:* targeting material, psychosocial and behavioural factors that mediate the impact of structural factors on health. Specific examples of action include community development programmes, housing initiatives, local authority policies, and settings-based programmes such as healthy cities and health-promoting schools.

3. *Health and disability services:* undertaking specific actions within health and disability services. Specific examples of action include improving access to appropriate, high-quality health care and disability services; addressing provider conduct to ensure equitable delivery of optimal health care and disability services to all population groups; and building collaborative partnerships within the health sector and intersectorally.
4. *Impact:* minimising the impact of disability and illness on socioeconomic position. Specific examples of action include income support, disability allowance, antidiscrimination campaigns and education, and good quality follow-up care.

The Intervention Framework challenges the health sector to consider its role in the **structural** causes of inequalities in health, while acknowledging that issues at this level are often not directly within the control of the sector. It argues that the sector should: actively support policies which contribute positively to the determinants of health and reduce inequalities; work collaboratively with other sectors; and use Health Impact Assessment.[24, 25, 32] The Intervention Framework also focuses on the health sector's role in the **intermediary pathways** that cause inequalities in health. This role can be both direct, in areas such as community development and health protection, and indirect, on issues such as housing initiatives and local government policies. The Intervention Framework also focuses **health and disability services** on their own role in contributing to, and maintaining, health inequalities with solutions such as equal access to services, improved pathways through care, and taking a population health approach. Lastly, it identifies the ability of the sector to contribute to minimising the **impact** of disability and illness on socioeconomic position, and ultimately on access to the determinants of health.

Figure 2. Intervention framework to improve health and reduce inequalities



Source: Ministry of Health 2002.[1]

Users should note that the Intervention Framework focuses on improving health and reducing inequalities. This means that interventions to improve health at each of the four levels may not reduce inequalities. Using the Intervention Framework within HEAT, however, reduces this risk because HEAT has a specific focus on inequalities. The suggestion to use the Intervention Framework does not exclude the use of other comprehensive frameworks for intervention, such as the Ottawa Charter for Health Promotion.[14]

Task two: Intervening in inequalities

The linkages in the causal chain(s) proposed in response to question three above can be distributed across the four levels of the Intervention Framework, namely:

1. structural
2. intermediary pathways
3. health and disability services
4. impact.

In the example given on page 11, 'education attainment', 'discrimination' and 'employment status' would be assigned to level one – structural, while 'access to health care' would be assigned to level three – health and disability services.

Once you have assigned your linkages across the four levels, brainstorm intervention strategies at each level that might contribute towards alleviating health inequalities. The aim is to generate a wide range of intervention ideas, some of which the health system will be best placed to implement and some of which should be the responsibility of other agencies. Having a full understanding of the determinants of health, alongside possible points for intervention, will:

- inform specific health and disability service interventions, and
- facilitate conversations and collaborations with other agencies aimed at the reduction of health inequalities.

The answers to question four can be recorded using the template below (also in Appendix E).

Question 4: Where/how will you intervene to tackle this issue?		
Level	**Determinants**	**Intervention**
Consider each level of the Intervention Framework	**Distribute the causes of inequalities (answers to question 3) across the levels as appropriate**	**Brainstorm possible interventions at each level. These interventions may or may not be the responsibility of the health system.**
1. Structural		
2. Intermediary pathways		
3. Health and disability services		
4. Impact		

Question five: How will you improve Māori health outcomes and reduce health inequalities experienced by Māori?

Given the magnitude of inequalities experienced by Māori, improving Māori health outcomes and reducing health inequalities experienced by Māori is an urgent priority. Addressing inequalities experienced by Māori should be considered throughout all the HEAT questions. Question five provides an opportunity to pause and take stock.

He Korowai Oranga, the Māori Health Strategy, provides the direction for Māori health development.[33] The overall aim of He Korowai Oranga is whānau ora: Māori families supported to achieve their maximum health and wellbeing. It identifies four pathways to action that should be considered when determining interventions to address inequalities for Māori.

Te ara tuatahi – Pathway one

Developing whānau, hapū, iwi and Māori communities

The Crown will work collaboratively with whānau, hapū and iwi and Māori communities to identify what is needed to encourage health as well as prevent or treat disease. This includes improving health and wellbeing by supporting whānau development and participation in both Te ao Māori and wider New Zealand society.

Te ara tuarua – Pathway two

Māori participation in the health and disability sector

The goal is active Māori participation at all levels of the health and disability sector in decision-making, planning, developing and delivering health and disability services. This pathway supports Māori provider and workforce development.

Te ara tuatoru – Pathway three

Effective health and disability services

This pathway aims to ensure that whānau receive timely, high-quality, effective and culturally appropriate health and disability services to improve whānau ora and reduce inequalities.

Te ara tuawhā – Pathway four

Working across sectors

This pathway directs the health and disability sectors to take a leadership role across the whole of government and its agencies to achieve the aim of whānau ora by addressing the broad determinants of health.[33]

Reducing inequalities is a key thread of He Korowai Oranga.[33] By using the pathways outlined above to develop health policy, programmes and services; you will be likely to strengthen the effectiveness of initiatives in improving Māori health outcomes and reducing inequalities for Māori.

In addition, DHBs are required to comply with Part 1, section 4 of the New Zealand Public Health and Disability Act 2000. Section 4 states that:

> In order to recognise and respect the principles of the Treaty of Waitangi, and with a view to improving health outcomes for Māori, Part 3 provides for mechanisms to enable Māori to contribute to decision-making on, and to participate in the delivery of, health and disability services.

He Korowai Oranga elaborates on each of the principles.

- Partnership: Working together with iwi, hapū, whānau and Māori communities to develop strategies for Māori health gain and appropriate health and disability services.
- Participation: Involving Māori at all levels of the sector, in decision-making, planning, development and delivery of health and disability services.
- Protection: Working to ensure Māori have at least the same level of health as non-Māori, and safeguarding Māori cultural concepts, values and practices.[33]

For a template to assist in considering the principles of the Treaty see page 51 of the Public Health Advisory Committee's 'A Guide to Health Impact Assessment' on their website http://www.phac.health.govt.nz/moh.nsf/indexcm/phac-hia.[24]

Task three: Responsiveness to Māori

Discuss the questions related to each of the pathways within He Korowai Oranga and record your responses in the template below (also in Appendix F).

Question five: How will you improve Māori health outcomes and reduce health inequalities experienced by Māori?		
Pathway	**Questions**	**Responses**
Tuatahi – Developing whānau, hapū, iwi and Māori communities	How have Māori been involved in the use of HEAT? Have Māori health inequalities been fully considered?	
Tuarua – Māori participation in the health and disability sector	How will you involve Māori in the health and disability service interventions? How will you build Māori workforce capability?	
Tuatoru – Effective health and disability services	How will you ensure that the health and disability service intervention(s) proposed are timely, high-quality, effective and culturally appropriate for Māori?	
Tuawhā – Working across sectors	How will you work collaboratively with other sectors to reduce Māori health inequalities?	

3.3 Reviewing and refining your intervention

Answering HEAT questions six to nine for a selection of health and disability service interventions will assist decision-making about which inequality-reducing interventions are feasible and worth investing in.

In the last section of this Guide, HEAT question 10 asks you to think about how your intervention(s) can be evaluated. Sections 3.3 and 3.4 together will help you think through and refine your proposed intervention(s) in relation to their impact on health inequalities.

Question six: How could this intervention affect health inequalities?

This question begins the process of reflecting on the decisions proposed or made. Because health inequalities are caused by a complex range of factors change in one factor, or even a number of factors, may not result in desired changes in health inequalities. This question helps users to be vigilant about this by exploring the likely effects of the intervention before it is put in place.

Question seven: Who will benefit most?

Question seven prompts users to reflect on who will benefit most from the intervention. Users should note that it cannot be assumed that all groups benefit equally from mainstream health policies, programmes and services unless particular attention is paid to understanding and removing barriers to developing and implementing them equitably.

Question eight: What might the unintended consequences be?

Consider the possible unintended consequences of the intervention, and their likely impact on inequalities. Have a wide-ranging discussion and build on past experience in this or other arenas. Consider who to consult to assist you in answering this question.

Question nine: What will you do to make sure the intervention does reduce inequalities?

If questions six to nine have identified limitations in the effectiveness of the intervention in addressing health inequalities, question nine reminds users to act to mitigate these limitations and therefore avoid the risk of maintaining or increasing inequalities. Risk mitigation may require changes to the intervention or how it is being implemented. It may also require additional interventions specifically targeting those in most need.

Task four: Thinking through the intervention

Record your answers to questions six to nine in the table below (also in Appendix G).

Question		Responses
6. Health inequalities outcomes	*What are the predicted outcomes of this intervention for health inequalities?*	
7. Groups benefiting	*Who stands to benefit the most from this intervention?*	
8. Unintended consequences	*Are there unintended consequences that can be foreseen?*	
9. Risk mitigation	*What needs to be done to ensure that the benefits go to those most in need?*	

3.4 Evaluating the impacts and outcomes of the intervention

Question 10: How will you know if inequalities have been reduced?

Evaluating and measuring initiatives – policies, programmes and services – is essential to ensure that they are effective and fair. This will be likely to include evaluation of effectiveness by ethnicity, deprivation, gender, geography and disability. As noted under question one, this should be planned from the initial development stage.

Just as the causes of inequalities can be linked in a causal chain (question three), the outcomes of any intervention can be placed in a hierarchy of outcomes that will ultimately connect to, and contribute towards, a reduction in health inequalities. In developing an outcomes hierarchy for your intervention, consider what short-term impacts lay the foundation for the achievement of which long-term outcomes, which, in turn, provide a basis for a reduction in inequalities.

Each outcome will also be linked with one or more indicators that describe the information that needs to be collected to be able to tell whether an outcome has been achieved. For example, your intervention may be about making a primary health-care provider more accessible for people with disabilities, in order to contribute to a reduction in primary

health-care disparities for people with disabilities. You might propose that short-term impacts around 'access' lead to a long-term outcome of 'better health-care delivery' which, in turn, contributes to a reduction in disparities.

How will you know that the short-term impact of access has been achieved? What will you measure to assess the success of the service in achieving this outcome? These measures or indicators might include, for example, attendance rates and measures of consumer satisfaction. Similarly, the long-term outcome. How will you know that it too has been achieved? You may need to look at patient records for health improvements over the time that they have been attending the clinic.

The aim of evaluation is to gather evidence to be able to confidently attribute changes to a planned intervention.

Task five – Measuring intervention outcomes

Think about the short-term impacts that you are expecting to see as a result of your intervention. How will you know that these impacts have been achieved? What measures of success will you use?

When these short-term impacts are achieved, what are the long-term outcomes that you would then want to see? How will you know that these outcomes have been achieved? What measures of success will you use?

How will you monitor whether health inequalities have been reduced?

Record your answers to question 10 in the template below (also in Appendix H).

Question 10: How will you know if inequalities have been reduced?		
Outcomes hierarchy	**Outcomes**	**Measuring outcomes**
What is the outcomes hierarchy proposed for your intervention?	**What are the outcomes that you want your intervention to achieve?**	**How will you measure whether these outcomes have been achieved?**
Short-term impacts		
Long-term outcomes		
Outcome for health inequalities		

4 Examples of the use of HEAT

These case studies indicate how HEAT has been used. They are by no means a full and final report on the issue under consideration. They include participants' comments on the workshop and their learning from using HEAT. It is hoped they provide some insights into how the tool can be applied and to its value.

4.1 Case study: Northland District Health Board tobacco control interventions

This Northland-based case study was undertaken by a group of key stakeholders in a half-day workshop. Outlined below are their deliberations on the HEAT questions in relation to tobacco-control interventions in Northland. The discussion drew on the information available at the time including a draft paper on improving access to quit support in Northland.[34]

1. What inequalities exist in relation to the health issue under consideration?

This question elicited considerable and, at times, challenging discussion about the range of inequalities. It was noted that Northland has one of the highest smoking rates of all DHBs in New Zealand. The proportion of Māori who smoke is twice that of non-Māori.

The group focused on the inequality between Māori and non-Māori.

Issues discussed included the nature of evidence and the need to include knowledge from 'grey' literature (eg, unpublished research reports) as well as from NGOs and key informants who work with the target groups.

2. Who is most advantaged and how?

The workshop participants agreed that the ethnic group most advantaged is non-Māori.

3. How did the inequalities occur? What are the mechanisms by which the inequalities were created, maintained or increased?

The workshop participants had a challenging discussion on one mechanism by which these inequalities may be maintained or increased. That is, the ongoing funding of generic approaches to tobacco control.

The learning from this phase was about both the necessity of involving and hearing the voices of those groups who endure inequity, and the importance of reaching a consensus on the evidence relating to how inequalities occur and are maintained or increased.

4. Where/how will you intervene to tackle this issue?

The discussion focused largely on the role of health and disability services because of the earlier focus on the funding of tobacco-control initiatives (Box 3 of the Intervention Framework). Possible issues relating to intervention included:

- the need for Māori interventions based on knowledge about Māori smoking and cessation, tapping into 'local' knowledge
- the need for Māori owned tobacco control services – generating own funding or receiving own funding
- the need for Māori decision makers to determine how to intervene
- the value of using Māori partnerships for tobacco control (eg, with PHOs)
- that providers of health services to Māori include non-Māori organisations, so they need to ensure they are culturally competent and trained in smoking cessation.

Other suggestions included:

- a tobacco-free Te Tai Tokerau (Northland region)
- strengthening Smokefree policies.

5. How will you improve Māori health outcomes and reduce health inequalities experienced by Māori?

The group decided not to focus on this question in the workshop as the focus of the entire discussion had been aimed at addressing this question and time was limited.

6. How could this intervention affect health inequalities?

The workshop focused on an option presented in the discussion document: making quit support, including Nicotine Replacement Therapy (NRT), more widely available in Northland. This quit support could be funded through fee-for-service financial payments (weighted for high-needs groups) to PHOs, Māori health providers, midwives and pharmacists.[34]

The group discussed at length the likely effect of this intervention. Improving access to quit support and NRT was seen as a way to reduce barriers to quitting. It was thought likely that more Māori would quit than currently do, and that more Pākehā might also quit. The group concluded that the intervention had the potential to reduce inequalities between Māori and non-Māori provided that the intervention was equally acceptable to both groups, particularly as the prevalence of smoking amongst Māori is much higher than amongst Pākehā. This intervention would improve the health of those who quit and their whānau/families. However, it may maintain or increase inequalities between Māori and non-Māori if Māori are not able to access quit support and NRT more effectively than non-Māori.

7. Who will benefit most?

Those who quit and their whānau/families. Those who can access quit support and NRT. Those for whom quit support and NRT works most effectively.

8. What might the unintended consequences be?

Gaps may widen between Māori and non-Māori if Pākehā access quit support and NRT more than, or at the same level as, Māori.

9. What will you do to make sure the intervention does reduce inequalities?

There is a need to involve the target group in designing the intervention (that is, to identify the 'risks' and 'hard to reach groups').

There is also a need to wrap other supports around the community or region in addition to quit support and NRT.

Interventions need to be informed by community knowledge and preferred practice models as well as by the literature on inequalities. For this reason it is necessary to gather together a wide group of participants to discuss how to intervene to address inequalities in health.

10. How will you know if inequalities have been reduced?

Process evaluation will be important to assess whether the way the intervention is delivered effectively meets the needs of Māori.

Mention was also made of the value of qualitative or story-telling methods of data collection (for example, stories of the most significant change).

Conclusion

Overall, workshop participants gained insights into which questions of HEAT to use at various points in the development of a policy, service or programme. There were also learnings regarding applying HEAT, such as its implication for planning process design; how and when it should be applied; the organisational structures required to support the tool (eg, clarity of where HEAT fits within the Northland DHB funding prioritisation policy and tools); the involvement of trained users; and the importance of communicating key messages to people using the tool.

4.2 Case study: Ministry of Health oral health policy for children aged 0–18

This case study was undertaken by the oral health team at the Ministry of Health in a half-day workshop. Outlined below are their deliberations on the first four questions of HEAT in relation to oral health policy for children aged 0–18 years. The discussion drew on the information which they had available.

1. What inequalities exist in relation to the health issue under consideration?

This question elicited considerable discussion about the range of inequalities in children's oral health. Inequalities identified included ethnic, socioeconomic and geographic inequalities and inequalities for children with disabilities. The group had no evidence on gender inequalities. It was noted that this was an area where data may be needed.

2. Who is most advantaged and how?

From this discussion the group were then able to focus on who was most advantaged in children's dental health. They identified:

- non-Māori, non-Pacific children
- children who live in higher income areas
- children who attend higher decile schools
- children who live in areas with fluoridated water (more likely to be children who live in urban areas)
- children without disabilities.

3. How did the inequalities occur? What are the mechanisms by which the inequalities were created, maintained or increased?

This question produced a wide-ranging discussion. The following mechanisms were identified in relation to each area of inequality.

Ethnic:

- children do not have fluoridated water
- there is not the dental health workforce to meet their needs
- the system may not address their needs
- their parents may not bring them into the service.

Socioeconomic:

- level of access to nutritious food
- perceptions that there is a cost to the service (especially in new immigrant groups)
- negative perception of school-based service
- level of access to fluoridated toothpaste & toothbrushes
- school wealth.

Geographic:

- quality of roading and distance needed to travel
- lack of investment in mobile clinics
- lack of fluoridation in water supplies.

Children with disabilities:

- clinics built without fully considering the needs of these children
- workforce not skilled to work effectively with these children.

4. Where/how will you intervene to tackle this issue?

The group answered this question by completing the template for question four as outlined below.

Level	Determinants	Intervention
Consider each level of the Intervention Framework	**Distribute the causes of inequalities (answers to question 3) across the levels as appropriate**	**Brainstorm possible interventions at each level. These interventions may or may not be the responsibility of the health system.**
1. Structural	Socioeconomic status.	Advocacy on taxation policy. Advocacy on increasing commerce and opportunities for employment, improving roading, better location of services. Use of Whānau Ora HIA to assess policies of non-health agencies.
2.Intermediate pathways	Availability of nutritious food. A school and community environment that promotes nutritious food.	Fruit in Schools Programme. Health Promoting Schools. Working with local businesses to increase employment opportunities which may lead to increased income which may lead to increased expenditure on nutritious food.
3. Health and disability services	Workforce recruitment. Location of services. How services are provided.	Build workforce through provision of scholarships. Review provision and location of services. Target services (within universal entitlement to care).
4. Impact	Access policies.	Universal, free care through primary schools. Full benefit entitlements for beneficiaries. Transport policies improved. Consider adults' WINZ dental benefits.

The workshop ended at this point due to time constraints. It provided the team with a record of their discussions which they recorded on the templates provided. Insights gained from the team were:

> The HEAT guide provides users with the necessary context and guidance to undertake a well thought-out analysis. The guide helps users to really 'get under the layers', avoiding 'glazing over the surface', to determine what will really make a difference to Māori health status.
>
> The Heat Tool helps you take away perceptions and structures your thoughts.

5 Glossary

Ableism	Discrimination against people with disabilities by the able-bodied.
Deprivation	The lack of adequate resources to participate meaningfully in society. Deprivation may be either material (referring to food, clothing, housing, environment, location and work) or social (referring to rights in relation to employment, family and community activities, social institutions, recreation and education).[19]
Determinants of health	The range of personal, social, economic and environmental factors that determine the health status of individuals and populations.
Ethnic identity	The current official (Statistics New Zealand) definition of an ethnic group is a social group whose members: • share a sense of common origin • claim a common and distinctive history and destiny • possess one or more dimensions of collective and cultural individuality such as unique language, religion, customs, mythology or folklore • feel a sense of unique collective solidarity.
Health equity	Absence of unnecessary, avoidable and unjust differences in health.
Health impact assessment (HIA)	Combined procedures, methods and tools by which a policy, programme or project may be assessed and judged for its potential effects on the health of the population, and the distribution of those effects within the population.[37]
Health inequality/ health inequity	Differences in health that are unnecessary, avoidable and unjust.
Mainstream health services	Generic services for the entire population.
Pacific peoples	The New Zealand population of Pacific Islands ethnic origins (for example, Tongan, Niuean, Fijian, Samoan, Cook Island Māori, and Tokelauan). Includes people of Pacific Islands ethnic origin born in New Zealand as well as those born overseas.
Targeted services	Services that have been established to meet the needs of specific populations.

Source: Based on: Ministry of Health. 2002.[1]

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Appendices

Appendix A: The Health Equity Assessment Tool

There is considerable evidence, both internationally and in New Zealand, of significant inequalities in health between socioeconomic groups, ethnic groups, people living in different geographical regions and males and females.[1–8] Research indicates that the poorer you are the worse your health. In some countries with a colonial history, indigenous people have poorer health than others. Reducing inequalities is a priority for government. The New Zealand Health Strategy acknowledges the need to address health inequalities as 'a major priority requiring ongoing commitment across the sector'.[9]

Inequalities in health are unfair and unjust. They are also not natural; they are the result of social and economic policy and practices. Therefore, inequalities in health are avoidable.[10]

The following set of questions has been developed to assist you to consider how particular inequalities in health have come about, and where the effective intervention points are to tackle them. The questions can be used in conjunction with the Ministry of Health's Intervention Framework.[6]

1. What inequalities exist in relation to the health issue 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 outcomes and reduce health inequalities experienced by Māori?
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?

Based on Bro Taf Authority, 2000 Planning for Positive Impact: Health Inequalities Impact Assessment Tool. Bro Taf Authority: Cardiff.

Citation: Te Rōpū Rangahau Hauora a Eru Pōmare, Ministry of Health and Public Health Consultancy (2008). A Health Equity Assessment Tool. 2nd Edition. Public Health Consultancy, University of Otago: Wellington.

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Appendix B: Origins of HEAT

HEAT was adapted by academics at the University of Otago, Wellington, and staff at the Ministry of Health from a health inequalities impact assessment tool developed in Wales.[35] It can be used in conjunction with the Intervention Framework to Improve Health and Reduce Inequalities developed by the Ministry of Health in 2002 (see page 14).[1] HEAT was first trialled in health sector equity workshops in 2002–2003 and then refined. It was amended by the Ministry of Health in 2004. It has been used across the health sector and has proved useful in a variety of contexts in promoting health equity.[4]

A review of equity tools in 2005 recommended modification to HEAT and the development of this Guide.[4] HEAT has been changed accordingly with a reduction in the number of questions from 12 to 10 to avoid redundancy. It has also been updated to include recent policy developments such as the changes to discussion about addressing health inequalities for Māori. This Guide was drafted based on the research which called for a simple document with clear examples. It was trialled in workshops in Northland DHB and the MoH using real situations. Participants in the trials provided feedback on the Guide throughout the trial. This is the first edition of the Guide. A user's feedback sheet is provided at the back of this Guide. Feedback will be used to revise this document as required.

Tools, or aids to practice, such as guidelines, frameworks and checklists are used in many spheres to guide policy, programme or service development, implementation and evaluation. However, equity tools are rare internationally. One such tool, *Four Steps Towards Equity*, is a health promotion equity tool developed in New South Wales, Australia.[35] Like HEAT, it focuses on building equity considerations throughout the planning cycle. It also considers equity principles, organisational capacity, and further supports such as equity websites and key readings.

Appendix C: Selected examples of health determinants

Categories of determinants of health*	Examples of specific health determinants
Wider socioeconomic factors	• employment • education level and opportunities for skill development • creation and distribution of wealth • income levels • affordable, quality, housing
Social and cultural factors	• social support, social cohesion • participation in community and public affairs • family connection, whakapapa • cultural participation • expression of cultural values and practices • racism and discrimination • links with marae and cultural resources • perception of safety • attitudes to disability
Environmental factors	• housing conditions and location • working conditions • quality of air, water and soil (including pollution) • waste disposal • energy • land use • biodiversity • climate • sites of cultural significance (eg, wāhi tapu, urupā, sacred or historic sites) • public transport • urban design • communication networks • noise • accidental injuries • public safety • transmission of infectious disease (eg, exposure to pathogens)

Population-based services	Access to, and quality of, services such as: • public transport • health care • disability support services • social services • child care • leisure services.
Individual and behavioural factors	• personal behaviours (eg, diet, physical activity, smoking, alcohol intake) • life skills • autonomy • employment status • educational attainment • stress levels • self-esteem and confidence
	• age, sex, genes

* This table builds on work cited in 1) Public Health Advisory Committee. 2005. *A Guide to Health Impact Assessment: a policy tool for New Zealand*. Public Health Advisory Committee: Wellington. 2) McCormick J. 2002. *Framework for a Rapid Health and Wellbeing Impact Assessment Tool for the Victorian Indigenous Family Violence Strategy*, October 2002 (produced as part of the BA. Sci (Honours) degree), Deakin University, Australia. 3) National Health Committee. 1998. *The Social, Cultural and Economic Determinants of Health in New Zealand: action to improve health.* National Health Committee: Wellington.

Source: Ministry of Health 2007.[25]

Appendix D: Template for HEAT task one, questions one to three

Understanding health inequalities

Health issue _____

Type of inequality	1. What inequalities exist?	2. Who is most advantaged and how?	3. Why did the inequality occur?
Consider the range of inequalities.	**What do you know about inequalities in relation to this health issue?**	**Who is advantaged in relation to the health issue being considered and how?**	**What causal chain(s) leads to this inequality?**

Appendix E: Template for HEAT task two, question four

Where/how will you intervene to tackle this issue?

Health issue _____

Level	Determinants	Intervention
Consider each levels of the Intervention Framework	**Distribute the causes of inequalities (answers to Question 3) across the levels as appropriate**	**Brainstorm possible interventions at each level. These may or may not be the responsibility of the health system.**
1.Structural		
2. Intermediate pathways		
3. Health and disability services		
4. Impact		

Appendix F: Template for HEAT task three, question five

How will you improve Māori health outcomes and reduce health inequalities experienced by Māori?

Health issue _____

Pathway	Questions	Responses
Tuatahi – Developing whānau, hapū, iwi and Māori communities	How have Māori been involved in the use of HEAT? Have Māori health inequalities been fully considered?	
Tuarua – Māori participation in the health and disability sector	How will you involve Māori in the health and disability service interventions? How will you build Māori workforce capability?	
Tuatoru – Effective health and disability services	How will you ensure that the health and disability service intervention(s) proposed are timely, high-quality, effective and culturally appropriate for Māori?	
Tuawhā – Working across sectors	How will you work collaboratively with other sectors to reduce Māori health inequalities?	

Appendix G: Template for HEAT task four, questions six to nine

Reviewing and refining your intervention

Health issue _____

Question		Responses
6. Health inequalities outcomes	What are the predicted outcomes of this intervention for health inequalities?	
7. Groups benefiting	Who stands to benefit the most from this intervention?	
8. Unintended consequences	Are there unintended consequences that can be foreseen?	
9. Risk mitigation	What needs to be done to ensure that the benefits accrue to the intended populations?	

Appendix H: Template for HEAT task five, question ten

How will you know if inequalities have been reduced?

Health issue _____

Outcomes hierarchy	Outcomes	Measuring outcomes
What is the outcomes hierarchy proposed for your intervention?	**What are the outcomes that you want your intervention to achieve?**	**How will you measure whether these outcomes have been achieved? What evidence do you need to collect?**
Short-term impacts		
Long-term outcomes		
Outcome for health inequalities		

Appendix I: Further equity resources

NZDep

The NZDep Index of Deprivation is an index of small area socioeconomic deprivation. NZDep combines nine variables from the census which reflect eight dimensions of deprivation including access to a telephone and car, employment and home ownership. NZDep provides a deprivation score for each meshblock in New Zealand. Meshblocks are geographical units defined by Statistics New Zealand, usually containing between 90 and 100 people. It is updated following each census. The NZDep User's Manual can be accessed on the Ministry of Health's website:

http://www.moh.govt.nz/phi/publications#DeprivationIndex (Accessed 14 April 2008)

NZiDep

The NZiDep index measures the socioeconomic position of individuals using eight simple questions which take from two to three minutes to administer. The index is applicable to all adults (not just the economically active) and all ethnic groups, and is relevant to the current New Zealand context. The index is indicative of deprivation in general, and is designed for use in research for understanding the relationships between socioeconomic position and health and social outcomes. The index can be accessed on the University of Otago, Wellington website:

http://www.wnmeds.ac.nz/academic/dph/staff/pcrampton.html (Accessed 14 April 2008)

TUHA – NZ

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http://www.hpforum.org.nz/Tuha-nz.pdf (Accessed 4 October 2007)

Health Inequalities Impact Assessment: Equity Checklist

A part of this tool was used as the basis of HEAT. It was developed by the Bro Taf Authority and is available on the Authority's website:

http:// www.phel.gov.uk/hiadocs/bro_taf_toolkit_for_HInequalityIA.pdf (Accessed 15 August 2007)

Four Steps Towards Equity

Four Steps Towards Equity is a health promotion equity tool developed in New South Wales, Australia.[35] Like HEAT, it focuses on building equity considerations throughout the planning cycle. It also considers equity principles, organisational capacity, and further supports such as equity websites and key readings. This tool is available at:

http://www.health.nsw.gov.au/pubs/f/pdf/4-steps-towards-equity.pdf (Accessed 15 August 2007)

Measuring inequalities

This presentation by Camara Jones, available at the website below, includes details of what and how to measure inequalities in health outcomes and the factors which may explain such inequalities. Regularly incorporating such measures enables the measurement of intermediate indicators.

http://www.minority.unc.edu/institute/2000/materials/slides/CamaraJones1-2000-06-12.ppt (Accessed 5 February 2008)

Websites

The following website provides valuable information and resources to raise awareness about racial and ethnic disparities in medical care.

http://www.kff.org/whythedifference/ (Accessed 5 February 2008)

Feedback form

The Health Equity Assessment Tool: a user's guide

1. How would you rate the value of this Guide? (Please circle a number) **Not at all valuable 1 2 3 4 5 Extremely valuable**
2. In what contexts have you used this Guide? (eg, DHB service planning)
3. On what health policies, programmes or services have you used the Guide?
4. What were the strengths of the Guide?

5. How could the Guide be improved?
6. Do you have any other comments?

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