

Evaluating Health Impact Assessments in New Zealand

A report prepared in 2010 by:

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1 Introduction

Purpose

Health impact assessment (HIA) is a systematic way of identifying and predicting the potential health impacts of a proposed or draft policy, strategy, plan, project or programme (a 'proposal'). It offers a mix of methods and tools by which to judge a proposal's anticipated effects on the health of a population and the distribution of those effects within a population. HIA has been widely used overseas, especially in the United Kingdom (UK), Europe and Canada, and is increasingly being used in New Zealand, with initial application mostly in urban planning. There are commonly four stages to HIA:

- screening
- scoping
- appraisal and reporting
- evaluation.

Are HIAs worthwhile? Answering this question involves evaluating HIAs, and the purpose of this paper is to provide guidance on the evaluation of HIAs in New Zealand. It brings together a diverse range of national and international views to provide a starting point for those undertaking HIA evaluation. In particular, the paper builds on the two New Zealand guides to conducting HIAs (Public Health Advisory Committee 2005; Ministry of Health 2007), which emphasise evaluation as the fourth stage of HIA.

The focus here is on policy-level HIA, in keeping with the current focus in New Zealand. However, evaluations of project-level HIA are also referred to because this is the focus of much of the international literature.

The evaluation of health impact assessment

The Ministry of Health's Health Impact Assessment Support Unit (the HIA Support Unit) was established in 2007 to embed HIA into public policy development processes so that the potential impacts of policies, plans and projects on health outcomes and inequalities could be identified and addressed from early in the process. Between 2007 and 2010, the HIA Support Unit has funded or co-funded a number of HIA activities at a national, regional and local level to increase the evidence base and build capacity for HIA methods and approaches in New Zealand.

Evaluation is the formal process of determining and documenting the quality or value of something, and it is an important part of any public health intervention. Evaluation can be used to demonstrate that good practice is being followed, to demonstrate that an intervention did what it set out to do, and/or to demonstrate the worth of that type of intervention. This information is important for building the evidence base of what works, and for demonstrating the contribution of effective interventions to wider health goals. Evaluation of HIA is important for building local evidence of the effectiveness of this kind of assessment. In the face of scepticism about the wisdom of expending scarce resources conducting HIAs, it is important to be able to point to high-quality evidence for the effectiveness of HIAs.

Evaluation of HIA is generally regarded as an underdeveloped field. A review completed by the UK's Health Development Agency in 2002 found very limited review-level evidence for HIA (Taylor and Quigley 2002). More recent commentators have also noted that HIA lacks a substantial evidence base to demonstrate that it is an effective approach (Kreiger et al 2003; O'Reilly et al 2006). In 2004, Parry and Kemm identified evaluation as 'HIA's weakest point', although there has been increasing emphasis on it in the intervening years.

Evaluation has been a focus for the HIA Support Unit. When funding HIAs, the HIA Support Unit sets an expectation that the evaluation stage will be undertaken. Many of the HIAs have a case study evaluation and some have been independently evaluated. There is an evaluation section on the HIA Support Unit web page that presents the available evaluations (see <http://www.moh.govt.nz/moh.nsf/indexmh/hiasupportunit-evaluation>).

Even though evaluation is listed as the last stage of HIA, the evaluation stage is actually planned and budgeted for during the scoping stage of the HIA. This is to say, time, money and expertise are allocated to evaluation right from the beginning. The evaluation plan or framework covers the aims and objectives, type of evaluation, evaluation questions, information gathering methods and timeline, and is an adjunct to the overall project plan.

In order to formulate the evaluation framework, it is important to be very clear about what the HIA is setting out to achieve (ie, the HIA's aims and objectives). The process of reaching consensus on the purpose of an HIA, including the values that will underpin it, is an important step. Approaches such as intervention logic, programme logic and causal pathways can be used to clarify and express the aims and objectives and are very useful for informing the

evaluation questions. Engagement of communities is often regarded as a key part of HIAs, and so evaluation of this aspect may also be important.

Adequate evaluation planning will help to meet some of the challenges of HIA evaluation, such as ensuring sufficient ongoing commitment from those involved in the HIA being evaluated, ensuring adequate resources for evaluation, developing evaluation design to reflect the interests of the wide range of stakeholders involved, and defining the limits of an HIA in order to evaluate it (Taylor et al 2003).

2 Types of Evaluation

Overview

Evaluation is an important area of work across a wide range of disciplines. Confusingly, there is no common language for evaluation. There is also no universal agreement on what information should be included in the different types of evaluation. Although it is not particularly important which names are used, it is important to be clear about what is meant when each term is used.

Most evaluation of HIA uses the terms 'process', 'impact' and 'outcome' evaluation. The WHO HIA evidence website¹ defines these terms as follows:

- process evaluation: measuring the activities that occur while a programme is running, identifying who is involved and whether the separate components of a programme are working
- impact evaluation: measuring the immediate effect of a programme (particularly its objectives)
- outcome evaluation: measuring the long-term effects of a programme (particularly its goals).

The WHO definitions are the basis for this document.

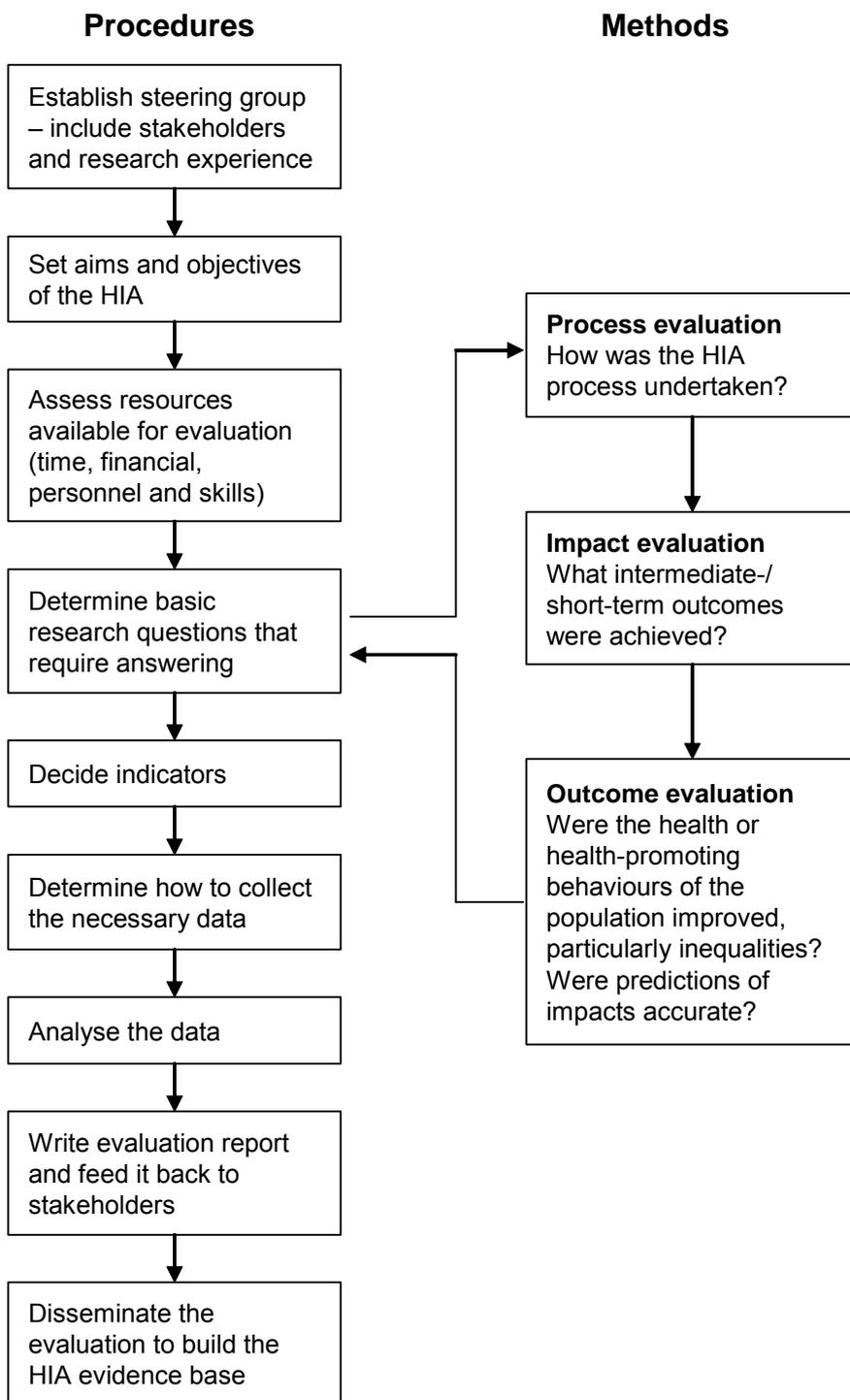
Formative evaluation is less frequently referred to in the HIA literature, but it is also an important part of evaluation activity:

- formative evaluation: gathering information in order to plan, refine and improve the intervention, and setting clear goals, objectives and strategies.

Figure 1 provides an overview of where process, impact and outcome evaluation methods fit within the overall HIA process.

¹ *Health Impact Assessment – Use of evidence webpage.*
<http://www.who.int/hia/evidence/eva/en/index.html>

Figure 1: Evaluation in the HIA process



Source: Quigley and Taylor 2004

Evaluation of HIA typically draws on the health promotion evaluation literature. A useful New Zealand guide to health promotion evaluation is *Programme Evaluation: An introductory guide for health promotion* by Anaru Waa and colleagues (Waa et al 1998).

Both qualitative and quantitative data are used in the evaluation of HIAs. Qualitative data collection methods are typically used for process and impact evaluations and include key informant interviews, document analysis, stakeholder workshops, participant observation, in-depth interviews and self-completion questionnaires. Many textbooks on qualitative health research provide detailed guidance for these methods of data collection (Patton 2002; Liamputtong 2009; Bryman 2008).

Formative evaluation

Formative evaluation aims to improve the process of HIA as it is being undertaken. It is generally done internally by the project team and not published, so there are no examples of formative HIA evaluation to draw on. The Public Health Advisory Committee HIA and Whānau Ora HIA tools produced by the Ministry of Health provide a starting point for those conducting HIAs (Public Health Advisory Committee 2005; Ministry of Health 2007). Health promotion evaluation guidance is also helpful (Waa et al 1998).

Process evaluation

Process evaluation includes collecting information on the procedures for undertaking the HIA, who was involved and what resources were used (Public Health Advisory Committee 2005; Quigley and Taylor 2004). The process evaluation question is generally, 'what was the process followed in undertaking the HIA?'

Process evaluation may also try to answer the question 'What was the quality of the HIA process?' Quality can be measured in terms of how useful those involved found the process (Quigley and Taylor 2004; Harris-Roxas and Harris 2007), particularly the decision makers (Taylor and Quigley 2002) and whether they found the process added value (Metcalf et al 2006). It can also be measured by seeing whether a recognised process was followed (Harris-Roxas 2008) or whether particular important steps were taken; for example, the Public Health Advisory Committee (2005) tool asks specific questions about particular steps, including consideration of equity and involvement of stakeholders.

The HIA process can also be evaluated against the terms of reference agreed for the HIA (Scott-Samuel et al 2001), or against the aims and objectives of the HIA (Public Health Advisory Committee 2005).

Some published process evaluations have used a formal review or audit tool, while others do not specify the method. More formal tools have the advantage of identifying which aspects of the process are important to document, ensuring that key information is not missing from the evaluation and that the HIA is critically reviewed for gaps in the process, as well as documenting what was done.

Impact evaluation

Impact evaluation considers the things that change as a result of the HIA process and how effective the HIA was in the short term. The European Observatory on Health Systems and Policies' Effectiveness of Health Impact Assessment project framework distinguishes four types of effectiveness:

1. direct effectiveness (where the HIA has contributed to modifying the decision)
2. general effectiveness (where the results of the HIA were adequately taken into account but did not result in a modification to the decision)
3. opportunistic effectiveness (where the HIA seems to have only been initiated because it was expected to support the proposed decision, and so any apparent impacts on the decision were probably illusory)
4. no effectiveness.

The framework explores these dimensions of effectiveness in terms of health, community and equity, based on the values underpinning the HIA (Wismar et al 2007). Table 1 explains this in more detail.

Table 1: Four types of HIA effectiveness

Health, equity and community adequately acknowledged	Modification of pending decisions according to health, equity and community aspects and inputs		
		Yes	No
Yes	<p><i>Direct effectiveness</i></p> <ul style="list-style-type: none"> • Changes in the decision were made due to the HIA • The project was dropped • The decision was postponed 	<p><i>General effectiveness</i></p> <ul style="list-style-type: none"> • Reasons were provided for not following the HIA recommendations • The health consequences were negligible or positive • The HIA raised awareness among policy makers 	
No	<p><i>Opportunistic effectiveness</i></p> <ul style="list-style-type: none"> • The decision would have been made anyway 	<p><i>No effectiveness</i></p> <ul style="list-style-type: none"> • The HIA was ignored • The HIA opportunity was missed 	

Source: Wismar et al 2007

The impact of an HIA is evaluated against its aims and objectives. If the HIA aims to contribute to better decision-making by informing and making recommendations to decision makers, the impact evaluation questions might be: ‘How effective was the HIA in informing policy makers?’ and ‘Did it make the policy making more open and involve stakeholders?’ (Kemmm 2006). The effectiveness in informing decision makers can be measured by exploring the perceptions of decision makers, including asking about them about the utility of the HIA and whether it influenced their decision-making.

Impact evaluation can also include the degree to which the recommendations of the HIA were considered, and the extent to which they were accepted and successfully implemented (Public Health Advisory Committee 2005; Quigley and Taylor 2004; Harris-Roxas 2008; Mindell et al 2003; Harris et al 2007). Monitoring of whether recommendations were adopted should be undertaken so that this information is available alongside the HIA report for those who wish to learn from the success or otherwise of past HIAs.

Impact evaluation also needs to recognise the indirect or unanticipated impacts of the HIA, both positive and negative. Impact evaluation work has already been conducted in New Zealand, including the evaluation of the Greater Christchurch Urban Development Strategy HIA (Mathias 2008) and the report on HIA experience at policy level by Martin Ward (Ward 2006). These evaluations have

emphasised the importance of the *indirect* impacts of HIA, particularly developing relationships between stakeholders and policy makers and an increased recognition of the importance of health. HIA impact evaluation should include consideration of these indirect impacts in order to build on people's understanding of HIA.

Outcome evaluation

Outcome evaluation seeks to measure the longer-term effects of an HIA. As mentioned above, outcome evaluation is not generally regarded as a current priority for HIA evaluation because it is resource intensive and causal associations are difficult to demonstrate. As a result, ongoing monitoring of health impacts is often outside the time and resource means of those conducting HIAs. It may be more appropriate to encourage the ongoing monitoring of health impacts by those whose policies or programmes are the subject of the HIA, as suggested by Harris et al (2007).

Collecting information on a range of indicators of health and wellbeing and their determinants, including their distribution in the population, both before and after a policy is implemented, is very important. Such data can be used to inform HIAs as well as to assess the accuracy of HIA predictions, and to monitor and review the effectiveness of the HIA and the policy it assessed.

Some of this kind of data is collected routinely by a variety of health and social agencies as well as by local government, and HIA practitioners should work with those commissioning HIAs to establish appropriate data sources and indicators. It would also be useful to develop a set of indicators to use in HIAs, including information on where regional and local-level data can be sourced on these indicators, to help HIA practitioners establish a baseline and for ongoing monitoring following HIA. There are some international models on which this work could be based, such as work by the Association of Public Health Observatories in the UK (see <http://www.apho.org.uk/>).

HIA aims, ultimately, to improve the health of affected populations and reduce health inequalities, so outcome evaluation could seek to answer questions about whether the health or health-promoting behaviours of the population improved and whether inequalities were reduced, as suggested by Quigley and Taylor (2004). Similarly Mindell et al (2003) describe outcome evaluation as the monitoring of health outcomes and indicators after the proposal has been implemented (Scott-Samuel et al 2001). However, any monitoring of the health impacts of the policy blurs the line between evaluating the HIA and evaluating

the policy on which the HIA was performed. There are also well-recognised difficulties in drawing causal associations between policies and health effects because so many other factors affect health. This difficulty is compounded when considering the effectiveness of an HIA, because it is just one of many inputs into the final policy.

Information on the health status of the population following implementation of a policy can be used to assess whether the predictions made in the HIA about the health impacts of policy options were accurate, and this activity is included as part of outcome evaluation by some practitioners (Quigley and Taylor 2004; Parry and Kemm 2005). In practice, however, it can be difficult to assess the accuracy of predictions made because of the time lag for any health effects, the difficulty in establishing causation, and changes to the final policy (Parry and Kemm 2005). On the other hand, this activity cannot be entirely neglected, because if there is no evidence that predictions made by the HIA process have any validity, then it can be difficult to persuade decision makers that changes should be made to policy based on these predictions.

Harris et al (2007) do not include discussion of outcome evaluation in their guide to HIA. Instead they talk about follow-up to the implementation of the policy or programme, whereby the health impacts are monitored and managed in an ongoing way by those implementing it. This follow-up collects the same data as outcome evaluation, but does not attempt to draw causal associations between either the HIA or the proposal it assessed and the health impacts found. Whatever name and purpose are given to this ongoing monitoring of health impacts, it can be an important part of HIA evaluation activity.

3 Evaluation Tools

Reflections

The simplest form of HIA evaluation is the inclusion of 'reflections' in the published HIA report. These might include noting the resources used for the HIA, along with other elements of the process such as the methods used and the degree of participation. Reflections on what was or was not felt to be successful and what would have been needed to improve the process can provide useful information for others undertaking HIA, even when the actual impacts of the HIA are not yet known.

This is not evaluation in a formal sense, but such reflections do tend to make some attempt to identify factors influencing the quality of the HIA as well as often briefly identifying some initial impacts. Examples of reflections are found in two early HIAs completed by the Welsh Health Impact Assessment Support Unit (Kemmer 2000; Elliot and Williams 2002). This approach has the benefit of not requiring special resource or expertise and ensuring that lessons from the HIA process are not lost. However, the applicability of any conclusions to other situations is limited.

Case studies

Case studies are the most common form of process evaluation. They summarise the HIA process used and include critical reflections with the aim of improving HIA practice. They can also include an indication of whether decision makers perceived the HIA as adding value, and whether health impacts were considered by decision makers, as well as some monitoring of whether recommendations were adopted as a minimum level of impact evaluation. Case studies are considered an important method to use for process and impact evaluation of HIAs (Harris-Roxas and Harris 2007). The case study guide on the HIA Support Unit web page provides further information (see <http://www.moh.govt.nz/moh.nsf/indexmh/hiasupportunit-evaluation-casestudies>).

Case studies of completed HIAs are commonly used to disseminate the findings of HIAs. They are usually much shorter than the HIA report provided to the client, and can be published in academic journals or made available on relevant websites for wide dissemination. New Zealand examples of case studies resulting in journal publications include the Greater Christchurch Urban Development Strategy HIA (Stevenson et al 2006) and the Avondale Future

Framework HIA (Quigley and Burt 2006). Four case studies of transport-related HIA conducted in New Zealand are presented in the NZ Transport Agency report *Applying Health Impact Assessment to Land Transport Planning* (Ball et al 2009). Other completed case studies can be viewed on the HIA Support Unit web page (see <http://www.moh.govt.nz/moh.nsf/indexmh/hiasupportunit-evaluation-casestudies>).

Considering groups of HIA case studies together can help to draw more generalisable conclusions. A recent review of the use of HIA in the United States summarised the characteristics of 27 HIAs, including the type of policy or project examined, the investigators involved, the steps involved, the methods used for making predictions, the nature of the recommendations, and any information available on the impacts of the HIA on decisions or the affected population (Dannenberg et al 2008). A more formal approach to using case studies for evaluation is taken by the European Observatory on Health Systems and Policies, which examined a series of 17 HIAs and related assessments using a common framework for exploring the effectiveness of the HIA approach (Wismar et al 2007). Reviews of multiple HIA case studies can also be undertaken periodically to investigate which process factors are most important to successful HIAs.

Lists of evaluation questions

A list of evaluation questions can be developed that an HIA evaluation might seek to answer. The Health Development Agency in the UK developed such a list out of a learning-by-doing practitioners' workshop (Taylor et al 2003). Questions focus on process and impact evaluation and include questions about how the HIA was undertaken; the resources used; the way that inequalities were assessed; how and when the recommendations were accepted by decision-makers; and what other impacts were noted. This guidance also goes on to provide advice about the basic steps involved in evaluation. The guidance is further developed in a later paper by the same authors, which identifies key stages in HIA evaluation (Quigley and Taylor 2004). Indicators are also suggested that set out the type of information that might be needed for answering process, impact and outcome evaluation questions.

A similar list of evaluation questions is included in the fourth stage of the New Zealand Public Health Advisory Committee tool (2005), again focusing on the questions to be answered by process and impact evaluation. The Whānau Ora HIA tool also includes a list of evaluation questions, with a specific focus on the involvement of Māori and impacts for Māori (Ministry of Health 2007). Both of these guides are available on the HIA Support Unit website at: www.moh.govt.nz/moh.nsf/indexmh/hiasupportunit-resources.

Such lists of evaluation questions provide guidance for those wishing to develop their own evaluation questions, and involve making suggestions about the types of questions that might be asked rather than taking a prescriptive approach to the focus of the evaluation or the methods used for answering these questions. However, there is a danger in focusing on detailed lists of questions without clear high-level objectives for each step of the evaluation. It is also important to identify the overall evaluation questions that these more detailed questions seek to provide information for. It is important not to confuse evaluation of the HIA with evaluation of the decision it sought to inform, particularly in terms of impact and outcome evaluation (Parry and Kemm 2004). For example, if HIA aims to inform decision-making, rather than aiming to change policy *per se*, evaluation in terms of the recommendations accepted may not be appropriate.

Review checklists

One method for evaluating the process of undertaking an HIA is to use a checklist that identifies the key elements of an HIA and the standards that should be met for each of those elements. Such checklists seek to be more comprehensive than lists of evaluation questions by covering all aspects of the HIA. Checklists can be developed specifically for an HIA question, or a generic checklist can be used. This process is often quite formal and aims to judge the quality of the HIA.

The Alconbury Airfield Development HIA evaluation used just such an 'audit protocol', which set out standards for the structure, evidence, information, assessment and recommendations of the HIA, as well as a list of seven key features of the HIA against which the HIA could be assessed (Close 2001). Those using the tool were in close contact with those undertaking the HIA and so had access to a variety of different types of information beyond the HIA report.

A similar approach is to use a set of criteria to review the HIA report itself. Ben Cave Associates Ltd have developed a review package for assessing the

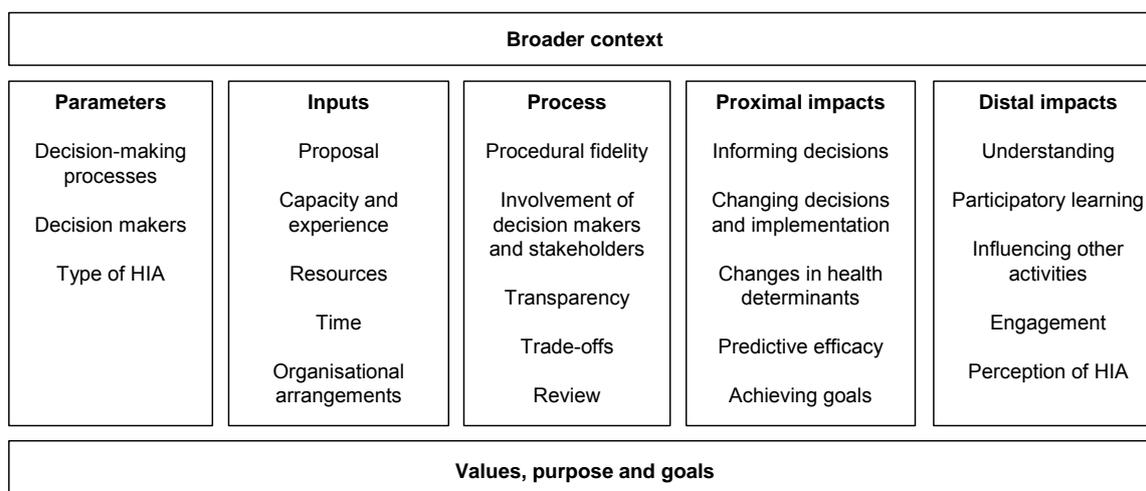
quality of completed HIA reports, designed specifically for use on project-level HIA (Fredsgaard et al 2009). This approach draws on quality assurance processes in environmental impact assessment and aims to provide policy makers with a process by which it is possible to decide on the quality of completed reports. A list of key features of HIAs is provided, which includes: a description of the development, local population and baseline health conditions, the identification and evaluation of key health impacts, the alternatives and mitigation strategies given and the communication of results. The review package also asks questions about the process of the HIA, and it is completed by two reviewers, who must reach a consensus about the final grade for the HIA report. The discussion between the reviewers and the reasoning for awarding the grade are also important outputs of this review process. The review package was used in the review of health impact assessments conducted by the Ministry of Health Learning by Doing Fund. This review is available at www.moh.govt.nz/hiasupportunit

It may be useful to consider adapting review tools such as those described above for use in New Zealand, to enable a more formal quality check of the HIA process used.

Evaluation frameworks

Harris-Roxas and colleagues in Sydney have developed a framework that evaluators can draw on when considering the process and impacts of a particular HIA (Harris-Roxas 2008). The framework (see Figure 2) includes five categories into which evaluation information can be classified (parameters, inputs, processes, proximal impacts and distal impacts). It identifies many possible types of information to be collected in each category, and these are similar to the indicators proposed by Quigley and Taylor (2004). This framework has the advantage over previously published sets of questions of providing a more exhaustive list of factors to consider in evaluation, from which the evaluator can select an appropriate focus.

Figure 2: Conceptual framework for the impact and effectiveness of HIA



Source: Harris-Roxas 2008

Parry and Kemm (2005) produced a much simpler framework developed from a workshop on the evaluation of HIA. This framework identifies three important goals of HIA: predicting health impacts, involving stakeholders in the assessment process, and informing the decision-making process. These goals are then used as the domains for HIA evaluation: prediction, participation and informing the decision-making process. Process and outcome criteria are then identified for each of these domains.

For example, process criteria in the prediction domain focus on the robustness of methods used to predict health outcomes, while outcome criteria for this domain are very difficult to define because of the inherent difficulties involved in evaluating predictions in HIA. Participation process criteria focus on the methods used to engage stakeholders, while participation outcome data can be sought directly from stakeholders about the degree to which they feel ownership of the HIA's results. Process criteria for informing the decision makers concentrate on how they were engaged, while outcome criteria consider how the HIA shaped the decision-making process.

A list of elements to be included in the HIA report was also developed to facilitate future evaluation, because it was noted that much of the necessary information for evaluation was not included in many HIA reports.

Success–fault analysis

Another method for process evaluation focuses on identifying the features that are responsible for the success or failure of the HIA approach in order to inform HIA practitioners and improve their processes. Birley (2007) used fault analysis (inspired by the fault analysis of failed engineering projects) to consider five international HIA projects and why they failed. He considers issues of procurement, competence and jurisdiction (all process issues), and the ways in which failings in these areas have hindered the overall HIA process. Similarly, a review of New Zealand policy-level HIAs by Ward in 2006 identified factors contributing to the success of three HIAs, using face-to-face interviews with individuals involved in the HIAs (Ward 2006).

Davenport et al (2006) reviewed HIA case studies, commentaries and discussion papers, as well as surveying academics, practitioners and policy makers, in order to identify factors associated with the success of an HIA. The UK Department of Health identified strengths and weaknesses in existing practice in their 2010 review of how HIAs were carried out by government departments (Department of Health 2010). Such reviews provide valuable information on what is working in HIA processes.

This approach provides critical reflection on the HIA process, and as such is valuable in providing information for HIA practitioners, as well as those commissioning HIAs and those making policy around the use of HIAs. In this way, it can contribute to improving the quality and success of future HIAs. Moreover, when several HIAs are examined together, as they were in the above cases, more generalisable conclusions can be drawn. On the down side, an external evaluator is generally required, and it can be a time-consuming process that is likely to lead to similar results for each HIA. This is probably not an approach that should be taken with every HIA, but rather undertaken periodically by external evaluators at critical points in the development of HIAs in a particular sector or region in order to inform next steps.

Cost–benefit analysis

Economic analysis seeks to quantify the costs and benefits of HIAs in order to ensure the resources involved in an HIA were effectively deployed to achieve maximum health benefits. Such analyses can allow HIAs to be compared with other interventions aimed at improving health to ensure the best use of available resources. Cost–benefit analysis involves both process and impact evaluation, because it involves collecting data on the HIA process to identify the costs and benefits of the HIA and how they are valued by decision makers.

There are challenges in quantifying the benefits of an HIA because many of the impacts identified may be intangible, such as improved relationships. In the cost–benefit analysis of HIA undertaken by the York Consortium (O’Reilly et al 2006), willingness to pay was used to put a monetary value on the benefits of HIA to decision makers and other stakeholders. Parry and Kemm (2005) concluded that it would be premature to seek formal cost–benefit analysis of HIA because of the issues involved with developing a common metric for costs and benefits.

Another alternative is to perform cost–utility analysis, whereby the benefits can be identified without having to be translated into monetary terms (Kemm 2006). There can also be challenges in accurately quantifying the costs of HIA because the resources for HIA are often drawn from existing staff and budgets rather than being specifically engaged.

Although specialist expertise is required to carry out a full economic evaluation, the inclusion in all process evaluations (and preferably in all case studies or other informal evaluation activities) of an estimation of the costs involved in carrying out an HIA will facilitate later attempts to perform economic analysis and contribute to an understanding of the costs of undertaking HIAs. A 2006 review of 158 European HIAs found cost information for only 15 (Wismar et al 2007). Similarly, the 2010 review of UK government department impact assessments found that the majority did not quantify health impacts or subsequently assess the costs and benefits of those health impacts (Department of Health 2010).

The identification of benefits, even where they are not quantifiable, can feed into cost–utility analyses and strengthen the case for investment in HIA. Atkinson and Cooke (2005) have published a preliminary framework for assessing the costs and benefits of HIAs, which may provide a basis for further work in this area. The HIA Support Unit HIA case study guide (Ministry of Health 2009) suggests that all costs of an HIA should be recorded as accurately as possible in order to contribute to our understanding of the costs of undertaking an HIA.

In New Zealand there is legislation such as the Resource Management Act 1991 (New Zealand’s principal environmental health legislation), which has a specific requirement for cost–benefit analysis before any policy, method or rule is notified. This is one example where information from an HIA evaluation could be included in local government policy documents as justification for their decisions on issues as they relate to the environment but which also interface with human health.

4 Conclusion

Evaluation of HIA is recognised internationally as an area requiring more attention. This paper provides guidance on HIA evaluation in New Zealand by explaining HIA evaluation and outlining the available evaluation tools. Despite limited New Zealand literature, it draws where possible on findings and examples from this country.

HIA evaluation is typically based on health promotion evaluation literature and uses process, impact and outcome evaluation. Following are the key messages about the overall process of evaluating HIAs.

- The evaluation stage is planned and budgeted for during the scoping stage of the HIA (ie, time, money and expertise are allocated to evaluation right from the beginning).
- The evaluation plan or framework covers the aims and objectives, type of evaluation, evaluation questions, information gathering methods and timeline, and is an adjunct to the overall project plan.
- In order to formulate the evaluation framework, it is important to be clear about what the HIA is setting out to achieve (ie, the HIA's aims and objectives).
- The process of reaching consensus on the purpose of an HIA, including the values that will underpin it, is an important step.

The current priorities for HIA evaluation in New Zealand are process and impact evaluation, because these enable the nature of an HIA to be recorded and its short-term impacts to be measured. It is hoped that this paper will assist in strengthening the quantity and quality of HIA evaluation in this country.

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