

Scottish Health Impact Assessment Network

How to do Health Impact Assessment: a guide for practitioners

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About this guide

This document is a practical guide for people wishing to do health impact assessment.

The guide covers the steps to take in doing a detailed HIA. It assumes an understanding of the basic principles informing HIA.

The guide assumes that practitioners already have some basic public health skills. It does not include detailed guidance on particular methods that may be used within HIA (such as critical appraisal or qualitative research methods) as other sources of guidance on these are available.

The guide describes the steps to take in conducting a detailed HIA. Detailed guidance on a rapid screening HIA is available in 'Using the Rapid Impact Assessment Checklist'.

This document is not a detailed guide to incorporating health in other impact assessments but does offer some suggestions about how this may be achieved. A good understanding of the principles of HIA will be helpful in ensuring health is incorporated in integrated impact assessments.

The range of health impact assessments

There is a wide spectrum of complexity in approaches to HIA. The Scottish HIA Network promotes two complementary approaches to HIA:

1. 'Health Impact Screening' (sometimes called Rapid Impact Assessment) of proposals led by the planners or policy makers developing them.
2. More detailed HIA of selected proposals.

This guide focuses on detailed HIA.

Detailed Health Impact Assessment

Detailed HIA may range from a Rapid HIA to Comprehensive HIA. Both of these involve community profiling, reference to research literature and consultation with stakeholders. The difference between them is the level of detail undertaken in each of these steps. Comprehensive HIA may include primary data gathering and/or quantification of impacts.

The steps taken in the Rapid and Comprehensive HIAs are the same, and either will use a range of sources of evidence depending on the kinds of impacts that are being considered. The evidence and methods used, and the scale of the assessment, should be appropriate to the nature and scope of the proposal being assessed.

The Steps to take in a Health Impact Assessment

The steps to carry out in a detailed HIA are now well established, and are based on those established for Environmental Impact Assessment. They are generally described as follows:

Step 1	Screening	Decide whether doing an HIA is appropriate
Step 2	Scoping	Set the geographical, population and time boundaries and identify affected population groups
Step 3	Set up the HIA team	Ensure appropriate expertise is included
Step 4	Local profile	Collate relevant data on the local population and features of the local area(s).
Step 5	Involve stakeholders	Engage with local people and other stakeholders to identify their views on possible impacts.
Step 6	Identify, assess and present impacts:	Collate evidence from range of sources to identify likely health impacts from the proposal.
Step 7	Make recommendations	Use findings to recommend changes to the proposal or other changes that would improve health impact.
Step 8	Monitor impacts	Monitor actual impacts that arise after implementation of the proposal.

Though the steps above are presented as linear, HIA is usually an iterative process where findings and issues that emerge in later steps may mean that earlier steps need to be revisited and the scope and analysis amended accordingly.

Step 1: Screening

Those authorising, or developing, proposals hold primary responsibility for deciding whether a HIA should be done. Sometimes the initial interest comes from elsewhere but it is fundamental that findings and recommendations are fed into the decision-making process. So it is useful to involve policy makers in screening. Often screening may identify potential impacts that were not previously considered and this may in itself inform changes without the need for a more detailed assessment.

Screening should include consideration of:

- Who may be affected by a proposal? Even if a proposal has a stated target group it may affect other people who are not part of this intended target. In particular, consider who might be disadvantaged by the proposal? Will there be differential impacts?
- What determinants of health and wellbeing could be affected?
- What further evidence is needed to inform recommendations? Some judgment is required to decide if further assessment would be useful in informing or changing the proposal or other actions.

The Rapid Impact Assessment Checklist or similar screening tools can be used in a group exercise to address these questions.

Further issues to consider when screening to decide whether to do a HIA include the following:

- What is the geographical and population scale of the proposal?
- Will any of the results of the proposal be irreversible?
- Is there conflict or disagreement about the proposal? If so, would a HIA help to resolve it?
- Are there time, money and expertise to do a HIA?
- Is it possible to change the proposal in light of the HIA findings?

The possible outcomes of screening are:

There are no likely significant health impacts	⇒	No further action required
There are likely health impacts but recommendations to gain maximum benefit from the proposal are already obvious and no further assessment is required	⇒	Decide who should make and implement the recommendations
There are possible significant health impacts and uncertainty about which impacts are most significant and how, or if, the proposal should be adjusted	⇒	Go to step 2 (see table opposite)

Step 2: Scoping

Scoping defines the nature and extent of the HIA that will be carried out. Decisions about scope should be debated and agreed by the HIA team or steering group. This will inform the terms of reference for the HIA, which should define:

- The aim of the HIA
- The proposal to be assessed, including alternative options to be considered and phases of implementation
- Whether HIA is part of an integrated assessment or standalone
- The geographical area over which to consider impacts
- The timescale over which to try to predict impacts.
- The different population groups to be considered
- Stakeholders and informants to consult
- The impacts to be assessed
- The methods and evidence to be used
- The decision making framework for the HIA including deadlines for reporting
- Reporting and dissemination of the HIA

Often during an assessment it becomes clear that impacts will be spread more widely than originally thought, and the scope has to be reconsidered.

Step 3: The health impact assessment team

A team should be set up to carry out the HIA. The HIA team should report to a steering group with the authority to agree terms of reference for the HIA and to implement the recommendations. If the HIA is externally commissioned, the steering group will hold the responsibility for scoping the work and reviewing the output.

The team's role may include:

- Scoping the work (if not already specified by the steering group)
- Brainstorming to identify likely impacts
- Reviewing the relevant evidence in published and grey literature and local sources and then assessing its local relevance
- Consulting stakeholders
- Doing any further assessment that might be required, for example prioritising the impacts and estimating how many people will be affected by the different impacts
- Debating and agreeing the recommendations.

The team should include people with knowledge of:

- the specific proposal
- policy and practice in the topic area
- the local area and population, and
- health.

Some of the relevant skills required may include:

- Policy appraisal
- Critical appraisal
- Framing an assessment in terms of health impact
- Epidemiology and statistics
- Collation, analysis and interpretation of all types of evidence to predict impacts
- Engaging with different stakeholders
- Communicating results to various audiences
- Formulating recommendations

Health specialists can help with framing the assessment, and appraising the final report as well as collating, analysing and interpreting health evidence. Specialists in other sectors may be needed to collate, analyse and interpret complementary evidence related to their field.

It is also helpful to involve the proponent and/or the decision maker in the assessment. They have insight into the rationale and background to the proposal, often have an understanding of potential unintended impacts as well as the intended objectives and know what changes to the proposal are possible and practical.

Step 4: Local profile

The purpose of the local profile is to inform identification of impacts, characterise the relevant population groups who may bear these impacts, and to provide the background information needed to help apply literature evidence to the specific context. This involves collating available data on:

- Demographic make-up of the local population: especially, any particularly vulnerable or socially excluded groups, as identified in the scope
- Health status of the local population including common health conditions: again, consider vulnerable and socially excluded groups
- Social, cultural, economic features of the local area covered by the proposal
- Features of the local area: eg facilities and amenities, environmental challenges
- Current provision relevant to the specific proposal

The data used in the local profile will include routine demographic and health data and also other routine data relevant to the policy area. Potential sources of data on greenspace, transport and housing are suggested in the Scottish HIA Network guides to HIA of these topics. The HIA team should include someone with knowledge of the policy area, and part of their role is to suggest and interpret suitable data sources for the profile.

Step 5: Involving stakeholders

Stakeholders are people with an interest in the proposal being assessed, and include potentially affected people. Informants are people with relevant information, such as knowledge of the local area or of the topic area. Many people will be in both these groups. Both stakeholders and informants should be involved in the HIA. Groups to involve include:

- Affected communities
- The proponent
- The decision maker
- People with relevant expert knowledge
- Interest groups

The assessment should seek to involve the different population groups included in the scope.

There are several reasons to include these groups. Firstly, they hold some of the evidence that is needed for the assessment. They may give insights into, for example, different ways the proposal could affect health; whether mitigating measures are likely to work in the local context; and what values are placed on different impacts. Secondly, involving stakeholders helps ensure their views and values are taken into account. Explicitly setting out the potential health impacts of a proposal can also increase transparency of decision making. Involving people in the assessment is to promote wider acceptance of the findings and recommendations. Finally, being involved in HIA may give a voice to groups that are not otherwise heard and may build community capacity. Conversely, if done badly a HIA may further disempower and disenfranchise vulnerable people.

A variety of methods may be used to gain views. The assessors need to clarify why each of the relevant stakeholders is being involved and to use appropriate methods that will gather the appropriate information. Focus groups, questionnaire surveys, open meetings, workshops and other methods can all be used. The RIA checklist can be used to structure discussions that are seeking to identify potential impacts. Specific topic guides or questionnaires will need to be developed for discussions that are seeking to explore identified impacts in more detail. A range of participatory prioritisation methods may be used to help groups prioritise impacts or recommendations.

Involving stakeholders is often difficult, and demands time and resources. Communities are not homogenous and include people with different and changing views. It is important to consider how representative the stakeholders involved in the HIA are, and make particular attempts to seek views of hard to reach groups.

Decision making is often subject to considerations other than health. It is therefore important that participants understand the role of the HIA and do not have unrealistic expectations.

Step 6: Identify and assess health impacts

This step forms the bulk of the assessment as it is where the team collects, interprets and presents a range of different sources of evidence to identify potential health impacts and assess their significance. Most HIAs use evidence from:

- The local profile
- Involvement of stakeholders and affected populations
- Literature review of relevant research findings
- Other primary data or quantification

HIA does not require new methodologies. The methods and evidence used will depend on exactly what information is needed to inform decision making, the kinds of impacts identified and the scope of the proposal. Both quantitative and qualitative methods may be appropriate. Sometimes it may be necessary to commission work externally.

Literature review

The literature review provides information on findings of research on the health impacts of similar proposals. The literature review may also explore the evidence for each link in the hypothesised pathway by which the proposal is expected to impact on health. This will mean exploring the link between proposed action and determinants as well as the link between the determinants and health.

The team should formulate the questions to be addressed in the literature review, based on the evidence that is required to predict impacts and make recommendations.

The review will consider health literature and also literature relating to the policy area of the proposal. This means searching a range of databases. The member of the HIA team who is the specialist in the policy area should help identify relevant literature. Several reviews have been produced that summarise the evidence on the health impacts of key policy areas. These include the Scottish HIA Network guides to HIA of greenspace, transport and housing. Reviews contained within other HIA reports of similar proposals can also be helpful.

Impacts in another setting or location may differ from those that arise in the context of the HIA. When carrying out a HIA the research evidence should be integrated with other kinds of evidence about the local context to inform a judgement about whether the research findings are transferable. This would include the local profile and qualitative evidence from key informants who have knowledge of the local context and how previous proposals have affected the local area.

Often there is a lack of research evidence about the links between a proposal and health, although there may be plausible theoretical grounds to expect an

impact. In other cases, there is good evidence for parts of a causal chain but not for other links in the chain. For example an HIA of a park redevelopment may note that there is strong evidence of an association between walking and health, and less strong but suggestive evidence of a link between park design and walking. In these cases, poor or insufficient evidence should not be confused with evidence of no effect. But the HIA should make clear the strength of the evidence for the impacts.

The London Health Observatory has produced a very useful [Guide to Reviewing Published Evidence for Use in Health Impact Assessment](#)

Further analysis

Some HIAs may include further research or analysis, for example to quantify impacts or collate more detailed information on the affected populations.

Quantification of the number of people likely to bear impacts is most commonly done by applying estimates from the literature to the affected population. When doing this it is important to note in the report that vulnerable populations are likely to bear adverse impacts disproportionately.

In some cases more detailed methods such as comparative risk assessment, scenario building, or mathematical modelling may be used. These would usually require specialist expertise. Some models have been developed specifically for HIA. For example public health specialists at University College London developed the ARMADA (Age Related Morbidity And Death Analysis) model which aimed to quantify the number of cases of respiratory disease that a change in transport would bring.

In Scotland it is usually possible to obtain sufficient information on the population's baseline health from routine data sources such as the Scottish Morbidity Records (SMR) or census data collected by the General Register Office for Scotland (GRoS). However there may be occasions when further information is needed and a survey is required.

More often HIAs may include more detailed qualitative research to identify the views of affected populations and increase understanding of why and how the predicted impacts may arise.

Finally, further analysis may include the use of formal prioritisation of impacts using methods such as questionnaires and Delphi surveys.

In all cases, the methods used must be appropriate to the questions that need to be addressed in order to understand how impacts may arise and inform recommendations.

Putting the evidence together

Identifying impacts

The aim is to identify all the potential health impacts, to define them and then decide which might require further assessment. Screening should already have identified some likely impacts, but for a more detailed assessment a systematic analysis should be done. As HIA means looking for unintended impacts, the HIA team should be systematic, open and transparent about how they are identified. It is important to think broadly, as impacts often arise in an indirect way, and can occur at different stages of a causal pathway.

Impacts may be identified:

- During the screening stage, for example using a tool such as the Rapid Impact Checklist of health determinants
- Reviewing the evidence on health effects of similar proposals
- Findings from consulting with stakeholders
- The HIA team brainstorming other possible effects of the proposal

Identifying pathways of health impact

The assessment should state clearly how the actions within the proposal will impact on health determinants and thereby on health. It is often helpful to do this with a diagram mapping the causal pathway. Alternatively, the links between a proposal and its impacts can be outlined in words. Mapping the causal pathway can help the assessors to think critically about the likelihood of the impacts and evidence base for each step in the pathway. It can also be a useful way to demonstrate to others the links between the proposal and health. It may also help inform the recommendations by identifying points in the pathway where changes could be made to improve the health impacts.

Further evidence

Sometimes simply identifying impacts is enough to inform recommendations. For larger and more complicated projects there will be a need to investigate impacts in more detail in order to develop recommendations. This will include cross-referencing the assessment of impacts with the local profile and investigating the mechanisms and causal pathways through which actions may lead to impacts. This information will help, for example, to help decide which impacts are 'significant' as defined below, to weigh up benefits and harms or to suggest ways to mitigate adverse impacts.

Before carrying out a further assessment of the identified impacts, the team should decide the aims of that assessment and the questions that need to be answered in order to inform recommendations. These may include, for example:

- How many people, from which population groups, will be affected by each impact?
- Will any vulnerable population groups be affected?
- What is the research evidence that the proposal is likely to have the intended and unintended health impacts? (positive or negative)?
- What are the pathways by which impacts will occur?
- Is there research evidence to support the predicted steps in the pathway?
- What value do people place on each impact?
- How do residents/local people perceive the risks and benefits?
- What priority do affected people give to each impact, compared with the other impacts or other factors?

Assessing significance

Often there are many identified impacts and a need to focus on and prioritise those that are most significant. 'Significant' impacts may be:

- potentially severe or irreversible negative impacts
- impacts affecting a large number of people
- impacts affecting people who already suffer poor health or are socially excluded
- positive impacts with potential for greater health gain

Presenting findings

One way to present the findings is to prepare a matrix like the one below, showing impacts and population groups. This should help make explicit who will bear what impacts and indicate the overall balance of positive and negative impacts on each population group.

Issues	Health Impact	Positive or Negative	Affected populations	Likelihood: definite probable possible	Severity: major moderate minor	Number of people affected
Parking/ Transport						
Potential increase in parking spaces	Easy parking access at venue Less stress	Positive	Staff Venue users	probable	minor	1000s
	Increased car use Adverse impact on environment Reduced physical activity levels	Negative	Staff Venue users	possible	moderate	1000s
Improved public transport access Targeted green transport plan Walking groups	Increased use of sustainable travel modes Reduced adverse impact on environment Increased physical activity levels	Positive	Staff Venue users Specific user groups: cyclists; walking groups	probable	moderate	1000s

As already noted, it is important to outline the causal pathway by which each impact is expected to arise. This can be presented as a diagram or in words.

Step 7: Make recommendations

As the aim of the HIA is to inform changes to improve health, it should include recommendations and/or suggestions. These aim to mitigate any adverse impacts arising from the proposal and maximise the benefits. They should focus particularly on vulnerable groups who may bear impacts. The team should consider recommendations for all the reasonable options considered within the proposal. The recommendations may be broader than the proposal being assessed. For example, the assessment of a transport proposal may make recommendations about land use policy.

Recommendations should be evidence based. This means that they flow from the assessment of health impacts and relate directly to the identified impacts. The team may also need to review the evidence that the recommendations are likely to work, and consult with stakeholders to ensure that they are practical in the relevant context. However, there are usually different degrees of evidence available to inform different recommendations. So it is important to provide an indication of the type of evidence informing a recommendation. For example, the recommendations could be graded as follows:

- *Research evidence*: there is research evidence that implementing the recommendation will improve health
- *Observational evidence*: there is research evidence to support an impact but no evidence the recommendation will improve the impact
- *Best practice*: recommendation is in line with best practice statements
- *Stakeholder consensus*: there is stakeholder consensus to support a recommendation

The HIA team is responsible for developing and agreeing the recommendations based on the available information. Recommendations should be reported to a group with the appropriate authority to implement them.

Step 8: Monitor impacts

HIAs often include a recommendation that future health impacts, and implementation of the recommendations, should be monitored. This may allow changes to be made to address unanticipated impacts, and adds to the evidence base for future HIAs.

Monitoring should be meaningful. This means defining the population(s) to monitor, deciding in advance the aims of monitoring and defining the outcomes that should be monitored. It also means designing the monitoring so that there are reasonable chances of identifying changes in behaviour and health, and attributing them to the proposal, once it is implemented. This may not be easy, e.g. if the expected changes are small, or the outcomes are affected by other factors, especially if these are also changing over the period when the proposal is being implemented.

Monitoring should feed into the future implementation and review of the proposal and, ideally, be part of standard/routine monitoring processes. The aims of monitoring may be to:

- monitor implementation of the recommendations of the HIA team
- identify impacts that were not foreseen in the HIA
- inform the evidence base for future assessments particularly when there has been uncertainty over the likely impacts

Monitoring may involve routine data or require prospective collection of new data.

Reporting of a Health Impact Assessment

A HIA report should include sufficient information for it to be appraised by others and to justify the recommendations made. Suggested content of the report includes:

- The proposal and options assessed
- Methods used in the assessment
- Background data on context , populations and health
- Matrix of impacts and affected populations
- Description of each impact including affected populations, size, certainty, causal pathway
- Recommendations, which should be related to the impacts
- Conclusions, which may include reflection on the HIA process

In addition, it is often good practice to produce a short version for those who may not want to read the technical report. The HIA team may want to disseminate findings through other routes such as presentations, meetings and articles in local newsletters.

Health in other Impact Assessments

There are a growing number of impact assessments now required as part of policy making and planning. These include economic assessment, environmental impact assessment, sustainability appraisal, equality impact assessment, assessment of effect on families, assessment of effect on law and order and many more. Most of these are determinants of health and many of these assessments will consider some aspects of health.

Strategic Environmental Assessment (SEA)

Strategic Environmental Assessment (SEA) is environmental impact assessment as applied to strategies, plans and programmes rather than projects. SEA aims to ensure that significant environmental effects are identified, assessed, mitigated, communicated to decision-makers, monitored and that opportunities for public involvement are provided. The EU directive on SEA [EU directive on SEA](#) was introduced in July 2004 and includes a list of project proposals that must be subject to an SEA. In Scotland the scope of SEA was expanded to cover all public sector strategies, policies, plans and proposals in the [Environmental Assessment \(Scotland\) Act 2005](#), which came into force in February 2006. Development of SEA in Scotland is led by the [SEA Gateway](#).

Under the European legislation, SEA requires explicit consideration of significant impacts on 'human health'. The SEA process and format of the reports are laid down in the legislation and associated guidance. This does not currently mandate consideration of differential impacts.

Integrating assessments

Combining the various assessment processes can reduce the burden on policy makers, prevent duplication and make any trade-offs between different development areas explicit. There is now growing interest in integrated assessments, which include environment, health, equality, economic and other impacts as appropriate. Including health within broader assessments can ensure it is considered as part of a wider framework and reduce duplication of assessment. It is important when doing this to ensure that health is properly considered and that the range of relevant health impacts is identified and assessed.

The emphasis on differential impacts in HIA can add value to other impact assessments, which may not always do this explicitly.

To ensure health impacts are considered, it is helpful to include health specialists with an understanding of HIA in the assessment team.

A useful approach can be to conduct an integrated screening process that considers a range of potential impacts of a proposal. The kind of assessment that follows will depend on the impacts identified. If appropriate, an HIA can be done in parallel with other assessments and the findings incorporated into the report. The evidence of expected impacts of the proposal on a particular determinant may be generated by, for example, an economic or environmental assessment. This can be added to evidence of the impact of that determinant on health to give a fuller picture of the impacts of the proposal.