Part I

SECTION 2

The process of health impact assessment

Overview

In this section, you explore the process of health impact assessment.

Working through this section will help you to identify the various steps involved, and some of the issues to think about and plan for before you embark on HIA in your organisation/partnership.

Although there are different models and various tools to support the practitioner in conducting HIA, it is possible to define a common framework and identify five core steps in the process:

1. *Screening (Section 2.1)*
2. *Scoping (Section 2.2)*
3. *Appraisal of the potential health effects/impacts (Section 2.3)*
4. *Decision-making (Section 2.4)*
5. *Monitoring and evaluation (Section 2.5).*

2.1 Screening

Screening is the first core step in HIA.

The **primary function** of screening is to act as a **selection** process during which policies, programmes, and projects are quickly assessed for their potential to affect the health of the population.

Screening is essential in order to filter out those policies, programmes and projects that do not require assessment because:

- they have a negligible impact on health;
- the impacts on health are well known and documented, as are the mechanisms to remedy them.

Screening offers a systematic way in which to decide whether it is appropriate to undertake HIA. It enables decision-makers to ***target*** effort and resources on those policies, programmes and projects:

- the potential impacts of the implementation of which require further investigation;
- that may need modification to maximise any beneficial effects and minimise any harmful effects on the health of the population.

Once a decision has been made to investigate further the health impacts of a particular proposal, the **supplementary function** of screening is to determine what **type of appraisal** needs to be conducted. The various types of appraisal are outlined *in Section 1.3*, and the appraisal step is discussed later *in Section 2.3*

In some models of HIA that have been derived from environmental impact assessment (EIA), a form of rapid appraisal may be undertaken at the screening stage. However, as a general rule, we recommend that appraisal is conducted as Step 3 in the process.

Screening is usually conducted by officers working either within an organisation or on behalf of a partnership. During this selection process, officers will be guided by:

- evidence of health impacts already available;
- their knowledge of the significance of proposals;
- their judgement of the capacity in an organisation or partnership to conduct HIA.

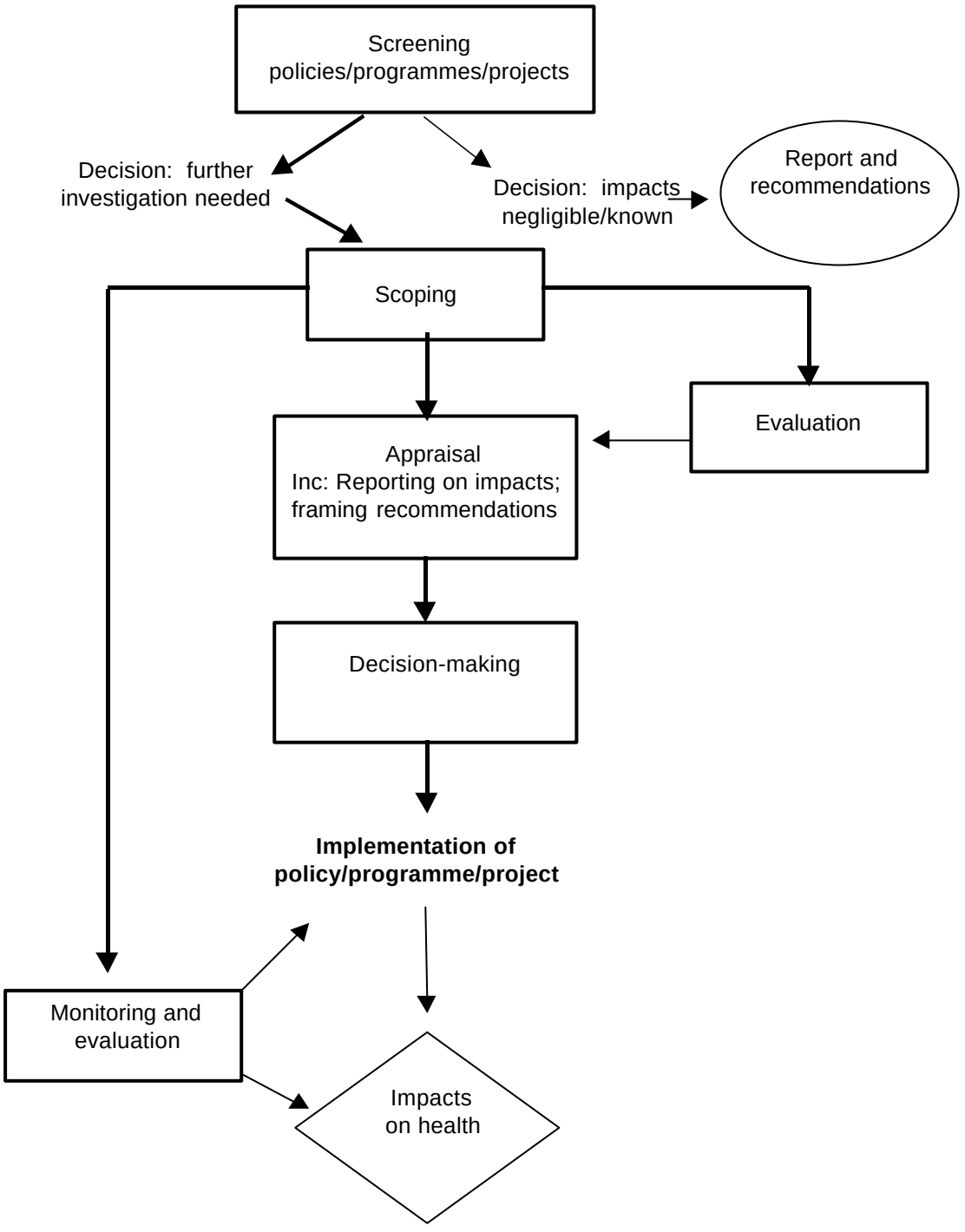
To screen a set of proposals, it is necessary to develop a screening tool. Screening tools are usually based on a set of criteria against which all proposals are judged. It is possible for any organisation/partnership to devise appropriate criteria against which to screen proposals. For any screening tool, it is advisable to use two main groups of criteria:

- those relating to the nature of the proposals – the parameters;
- those relating to the potential impacts on health of the proposals when implemented.

A framework screening tool has been provided *in Inset 2.B*, which could be used as a starting point for an organisation- or partnership-specific screening tool. Parts 1 & 2 are designed to fulfil the primary function of screening, and reflect the two general groups of criteria outlined above. In Part 3, the criteria reflect the supplementary function of screening, that is, to determine which type of appraisal is most appropriate for the proposal and the prevailing circumstances. In Part 4, the criteria reflect the capacity of the organisation/partnership to undertake HIA on a particular proposal.

Inset 2.A:

Core steps in the process of health impact assessment



As discussed *in Section 1.1.1*, the impacts of proposal implementation on health can be direct and indirect, that is, acting through changes in the determinants of health. Thus, the officer(s) undertaking screening and identifying the potential health impacts need to be aware of this and consider changes in the factors affecting health and well-being, such as:

- employment status;
- access to transport, and mobility;
- social cohesion;
- access to healthy food choices;
- fear of crime;
- community empowerment;
- uptake of benefits.

Inset 2.B:

Screening tool

The screening tool is made up of four parts:
Parts 1 and 2 focus on the proposal and its potential impacts;
Parts 3 and 4 focus on the circumstances surrounding the conduct of the HIA.

Part 1 of the screening tool, in which the parameters of the proposal are examined, should be used to reach a **provisional decision** about whether the proposal has sufficient organisational/partnership significance (within the parameters outlined) to merit the use of resources to conduct an appraisal.

Part 2 of the screening tool, in which the potential health impacts are considered, should be used as an important and necessary means of **qualifying** the provisional decision to ensure that those proposals which may not seem to have sufficient organisational/partnership importance but have potential negative impacts of some import are passed through screening to appraisal.

Parts 3 and 4 of the screening tool switch focus to the circumstances surrounding the conduct of the HIA.

Part 3 should be used to qualify or confirm the provisional decision made about which type of appraisal to conduct when applying the first part of the tool.

Part 4 focuses on the capacity within the organisation/partnership to conduct the HIA.

Inset 2.B/1:

Screening tool: Part 1

Investigating the parameters of the proposals

The parameters of any proposal it is important to consider are listed below. For each parameter, it is recommended that officers identify a set of levels or thresholds for the following situations:
(1) do not conduct HIA;
(2) conduct rapid appraisal;
(3) conduct intermediate appraisal;
(4) conduct comprehensive appraisal.

As HIA becomes a regular feature of decision-making within an organisation, and process and outcomes are monitored and evaluated, it will be possible to develop screening guidelines relevant to and appropriate for the type of proposals an organisation/partnership regularly implements.

Parameters for all types of proposal (policies, programmes or projects)

- The relative importance of the proposal within the organisation's/partnership's priorities
- The extent of the population affected by the proposal
- The existence of vulnerable, marginalised or disadvantaged groups within the population affected
- Stage of development of proposal (i.e. the potential to make changes)

Parameters for proposals about programmes and projects

- The size of the proposal
- The cost of the proposal
- The nature and extent of the disruption to the population affected

Inset 2.B/2:

Screening tool: Part 2

A checklist of questions about the nature of potential health impacts

Bias towards HIA	**To your knowledge:**	**Bias against HIA**
Yes/don't know	Are the potential negative health impacts likely to be serious?	*No*
Yes/don't know	Are the potential negative health impacts likely to be disproportionately greater for vulnerable, marginalised or disadvantaged groups in the population?	*No*
Yes	Are there community concerns about potential health impacts?	*No*
	Is there a robust evidence/experience base readily available to support:	
No/don't know	- appraisal of the impacts?	*Yes*
No/don't know	- the recommendations that could be made to ameliorate those impacts?	*Yes*
Yes/don't know	Could any of the actions to ameliorate the potential negative health impacts of the proposal actually have a negative effect on health?	*No*
No/don't know	If allowed to occur, could the potential negative health impacts be easily reversed through current service provision?	*Yes*
Yes	Is there a need to increase social capital in the community or population affected?	*No*

Inset 2.B/3:

Screening tool: Part 3 A checklist of questions about the circumstances in which the HIA must be conducted		
Bias towards rapid appraisal	**To your knowledge:**	**Bias towards intermediate or comprehensive appraisal**
Yes	Is there only limited time in which to conduct HIA?	*No*
Yes	Is there only limited opportunity to influence the decision?	*No*
Yes	Is the timeframe for the decision-making process set by external factors beyond your control?	*No*
Yes	Are there only very limited resources available to conduct HIA?	*No*

Inset 2.B/4:

Screening tool: Part 4 A short checklist of questions about the capacity within an organisation or partnership to conduct the HIA		
Bias towards commissioning the assessor(s)	**To your knowledge:**	**Bias towards appointing internal assessor(s)**
No	Do personnel in the organisation or partnership have the necessary skills and expertise to conduct the HIA?	*Yes*
No	Do personnel in the organisation or partnership have the time to conduct the HIA?	*Yes*

There are three possible decisions arising from the ***primary function*** of screening - that is, the functions fulfilled through Parts 1 and 2 of the screening tool.

The three possible decisions are outlined below and are illustrated in *Inset 2.C*:

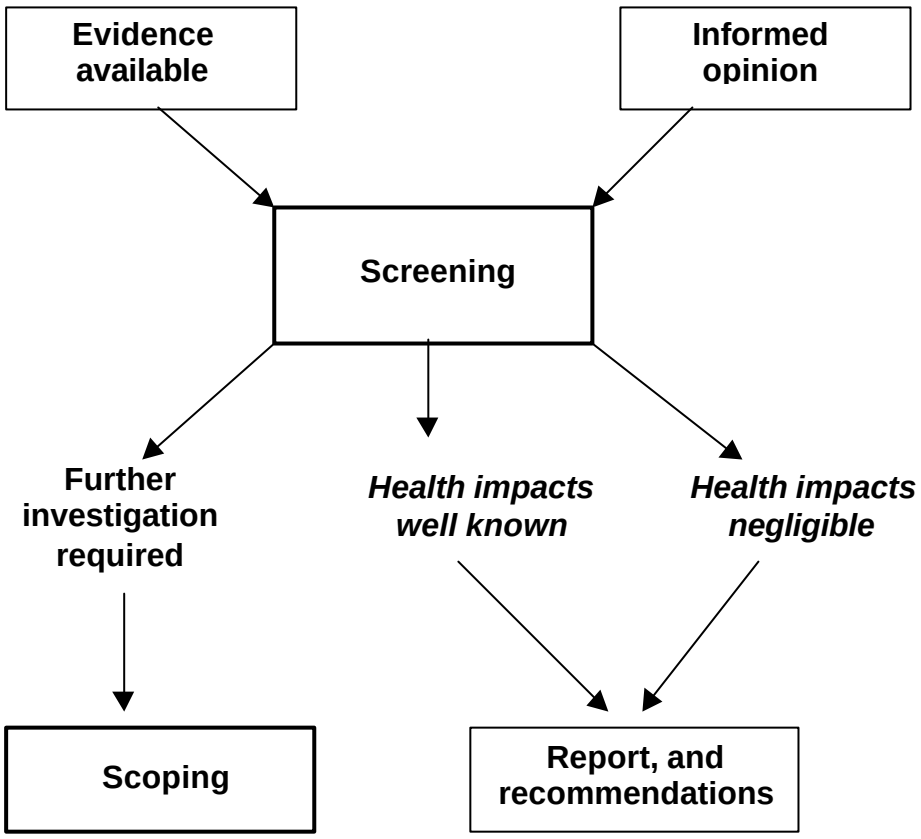
1. further investigation is necessary because more information is required on the potential health impacts identified;

2. further investigation is not necessary because the potential health impacts are well known and it is possible to suggest effective ways in which beneficial effects are maximised and harmful effects are minimised;

3. further investigation is not necessary because the potential health impacts are judged to be negligible.

Inset 2.C:

Three possible decisions from screening



The range of possible decisions from the ***supplementary function*** of screening (as fulfilled through Parts 3 and 4 of the screening tool) are shown *in Inset 2.D.*

Inset 2.D*:*

Which type of appraisal is appropriate?			
	Rapid HIA	**Intermediate HIA**	**Comprehensive HIA**
Prospective			
Retrospective			
Concurrent	Not possible		

In all cases, it is important to document the reasons for the decision, as well as the decision itself.

The circumstances in which it is likely that various types of HIA will be undertaken are shown *in Inset 2.E*.

Inset 2.E:

Matching organisational circumstances with types of health impact assessment		
	Prospective	**Retrospective**
Rapid	Time and resources restricted Need to identify impacts quickly, either to have a chance to alter the proposal or to ascertain whether an intermediate or comprehensive HIA is needed	Time and resources restricted Need to identify impacts quickly, either to inform the development of similar proposal(s), or because of concerns about impacts perceived to have arisen following implementation
Intermediate/ Comprehensive	Time and resources available Impacts potentially serious and/or complex Large investment in proposal	Time and resources available Perception of impacts that have arisen following implementation very negative Need to identify impacts to inform the development of future proposals Large investment in proposal, therefore need to ascertain VFM and/or added value Need to enlarge the evidence base concerning health impacts
Policy review	Policy not implemented through programme(s) or projects Need to identify impacts quickly to have a chance to alter the policy or to ascertain whether more time is needed to investigate impacts	Policy not implemented through programme(s) or projects Need to identify impacts to inform future policy development Need to enlarge the evidence base concerning health impacts

Areas of uncertainty

For some subject areas, the body of evidence available about the potential health impacts of proposal implementation is not substantial. Therefore, the evidence on which to base decisions not to proceed with further investigation may be slight. The evidence base should grow as:

- the number of HIAs that are performed, documented and evaluated increases;
- further primary research on health impacts is conducted.

Signposts

- For the screening tool used in the ***Merseyside Model*** of health impact assessment, *see Section 6.2, Inset 6.M.1*.
- For a set of criteria that can be used when ***screening regeneration projects***, *see Case-study 8.4.3*.
- For a short discussion on the importance of screening, *see Case-study 8.4.4 (Overall conclusions and Recommendations)*.

2.2 Scoping

Alternative terminology:

- ***setting the terms of reference*** - *Merseyside Guidelines for health impact assessment* (1)

If a decision is made during screening that further investigation of health impacts is necessary, the second core step of HIA, generally known as scoping, is undertaken.

The process of scoping establishes the foundation for undertaking the three remaining steps in HIA – appraisal *(Section 2.3)*, decision-making *(Section 2.4)*, and monitoring and evaluation *(Section 2.5)*. The key tasks to be undertaken during scoping are:

- setting the boundaries for the appraisal of health impacts;
- determining the way in which the appraisal will be managed;
- allocating responsibility for decision-making;
- determining the nature of, and responsibility for, monitoring and evaluation of HIA process, implementation of the modified proposal, and health outcomes.

Thus, scoping acts as a blueprint on which the design and organisation of the subsequent steps in HIA are laid out. Scoping can be used to ensure that:

- the appraisal is well designed, systematic, and consistent with the distinguishing characteristics of HIA *(see Section 1.5)*, and the values held by the organisation/partnership about health, and the conduct of HIA in general;
- there is clarity among all stakeholders about relevant roles and responsibilities during the HIA.

Individual aspects of the health impact assessment that need to be addressed during scoping are shown *in Inset 2.F*.

Signpost

- For the scope of an HIA conducted on a local transport plan, *see Case-study 8.3.2*.

Inset 2.F:

Aspects of health impact assessment to be addressed during scoping

- The scope of the HIA, including:
  - timescale;
  - geographical boundaries;
  - population covered;
  - vulnerable, disadvantaged or marginalised groups requiring particular attention;
  - potential health effects/impacts of concern;
  - criteria for prioritisation of health impacts
- The methods of appraisal
- The various stakeholders *(see Inset 2.G)*
- The nature of participation of various stakeholders
- Management arrangements for the appraisal, including:
  - appointment of assessors, whether internal or external;
  - mechanism of management of assessors, including feedback process
- Work programme, including:
  - timetable;
  - deadlines;
  - outputs (including conditions about ownership, confidentiality and copyright)
- Resources, including:
  - budget and sources of funding;
  - personnel;
  - facilities
- Responsibility for decision-making
- The nature of, and responsibility for, monitoring and evaluation of proposal implementation, process and health outcomes

2.2.1 Setting up a steering or management group

It is advisable for *scoping* to be undertaken by a steering or management group, which will also be responsible for overseeing the HIA. This form of management arrangement is particularly suited to partnership working where several agencies and interested parties are involved. It can help to ensure that a range of interests and different expertise is brought to the assessment.

For those organisations in which HIA is being introduced or tested for the first time on intra-organisational policies, the management arrangements may mirror:

- line management structures already in place;
- in local government, standard reporting arrangements to council committees;
- in the voluntary sector, standard reporting arrangements to the Board of Directors/Trustees.

In those cases in which the steering or management group is ***not*** responsible for the ultimate decision about modifications to the proposal, it is helpful if one or more members of the decision-making team are on the steering or management group. This will ensure that the results of the HIA are given due consideration. It will also mean that at least some of the decision-makers will have engaged in a process in which shared values about the promotion of health are developed, and the need to undertake HIA has been recognised.

The ability to appoint a steering or management group (or add to a core group, for instance), and ensure the membership is relevant to the proposal under investigation, will improve as experience in HIA increases within an organisation or partnership.

Signposts

- For the composition of the Steering Group for an in-depth HIA of a programme of social housing refurbishment and reallocation in West London, *see Case-study 8.5.1*.
- For the roles and responsibilities of the members of the Steering Group for an HIA of regeneration projects, *see Case-study 8.4.6*.

2.2.2 Setting up a working group

An interesting and useful feature of the design of an intermediate HIA of a housing project in an SRB programme is the establishment of a Working Group, *see Case-study 8.4.2*. Criteria for membership were capacity to commit time to the day-to-day work of the HIA and capacity to contribute to the success of the HIA. Working Group tasks include:

- shaping the nature of community involvement;
- facilitating community involvement;
- designing parts of the research;
- carrying out some of the research.

Signpost

- For the composition of the Working Group, *see Case-study 8.4.2*.

Stakeholder involvement:

An important aspect of scoping is to identify the full range of stakeholders, and agree how best to involve them in the appraisal. For a list of potential stakeholders in HIA, *see Inset 2.G*. If possible, the steering or management group should include representative stakeholders from the various constituencies to ensure that they are able to make a contribution to scoping the HIA.

Inset 2.G:

Potential stakeholders for local health impact assessment

- Representatives from the constituent communities in the affected population
- Representatives from neighbouring communities
- Proponents of the policy, programme or project
- Specialists whose field of knowledge is relevant to the policy, programme, or project under investigation
- Professionals from relevant public sector agencies, including front-line staff, e.g. health visitors, GPs, social workers, community development workers, police, probation officers, teachers, etc.
- Representatives of relevant voluntary organisations
- Representatives from the business or commercial sector as appropriate (e.g. Chamber of commerce)
- Decision-makers involved in the implementation of the policy, programme, or project
- Locally elected politicians (if not involved as decision-makers)

If the HIA is of service provision and/or development:

- Service users or clients - past/present/future (this may be a broad constituency and mirror the population, but it could also be a specific or well-defined group in the population depending on the service in question)
- Carers as appropriate
- Service providers
- Representatives from any agencies that may be involved in service monitoring and/or regulation

2.3 Appraisal of potential health effects/impacts

Alternative terminology

- ***risk assessment*** *– Developing health impact assessment in Wales* (2) (*see also Case-study 8.4.3)*

Appraisal is the third core step in the process of health impact assessment.

It is central to health impact assessment as a methodology. The aim is to appraise a proposal's potential to affect the health of a population when implemented.

Appraisal comprises four main tasks:

- policy [programme/project] analysis;
- profiling the affected population;
- identification and characterisation of the potential health impacts;
- reporting on the impacts, and making recommendations for the management of those impacts.

As described *in Section 1.3*, there are three main types of appraisal – rapid, comprehensive and intermediate. The amount of time available for each of these activities will depend on the type of appraisal being conducted. During rapid appraisal, there is only very limited time available; during intermediate appraisal, more time is available but may be subject to certain constraints (depending on the amount of resources allocated); during comprehensive appraisal, there is considerable time available.

2.3.1 Policy [programme/project] analysis

The aim during the analysis of a policy, programme, or project is to identify and examine key aspects of the proposal. This task is important for two main reasons:

- to inform the identification and characterisation of the potential effects on health, and the determinants through which they act;
- to inform the reporting of impacts on health, and the recommendations for modification of the proposal.

Analysis of the proposal is usually undertaken by the assessor(s), and the results presented to other stakeholders.

The aspects of a proposal (policy, programme or project) it is useful to analyse are shown *in Inset 2.H*.

Signpost

- For the results of policy analysis conducted on a planned residential development, *see Case-study 8.4.4.*

Inset 2.H:

Key aspects of a policy/programme/project for analysis

- Content
- Values – explicit or implicit
- Aims and objectives
- Priorities/goals
- Target populations/communities/groups
- Outputs
- Intended outcomes
- Political context – nationally/locally
- Relationship to other policies, etc.
- Non-negotiable aspects
- Potential limiting factors to effective implementation
- Potential areas of tension between the policy, etc, and the values underpinning HIA

2.3.2 Profiling

Profiling is the process through which the current status of the population affected by the policy, programme, or project is established.

Profiling is important for two main reasons:

- to inform the identification and characterisation of the potential health effects;
- to provide a **baseline** against which future trends in the determinants of health and health outcomes can be monitored.

Profiling is usually conducted by the assessors with support from other stakeholders, especially professionals working with relevant data sources and/or the local community, and the local community themselves.

The information it is useful to collate and/or obtain during profiling is shown *in Inset 2.I*.

Signpost

- For the results of profiling the community affected by a planned residential development, *see Case-study 8.4.4*.

Inset 2.I:

Information relevant to profiling

- Characteristics of the population covered:
  - size;
  - age and sex structure;
  - ethnicity;
  - socio-economic status;
  - identification of vulnerable, disadvantaged or marginalised groups.
- Health status of the population, and of vulnerable groups, e.g. mortality, disability, morbidity, and natality data.
- Health behaviour indicators, e.g. survey data about smoking, exercise, etc.
- Existing land uses (where appropriate).
- Environmental conditions of the population covered, e.g.:
  - air/water/soil quality;
  - housing stock;
  - work places;
  - local features of importance.
- Access to public sector and other services.
- Locations where vulnerable groups may be concentrated, e.g. particular streets/areas, and/or schools, residential homes, etc.

Stakeholder involvement:

All stakeholders are potential sources of information during profiling, but key informants and community groups are particularly important.

2.3.3 Identification and characterisation of health impacts

The identification and characterisation of potential sources of **harm** (often termed hazards) and **good** to the health of the population arising from the implementation of a policy, programme or project is the pivotal task in appraisal.

It involves an estimation of:

- the likelihood that a **hazard** will have a **negative effect** on the health of a particular population, which can be referred to as a health **risk;**
- the likelihood that a **good** will have a **positive effect** on the health of a particular population.

The health **impact** of a policy, programme or project is the **change in health risk** - mediated through both negative and positive effects - that can be attributed to the intervention. This is why the appraisal of health effects/impacts is referred to as ***risk assessment*** by many practitioners.

It is crucial to identify the positive effects of proposal implementation, and not just the negative effects, for several reasons:

- to assess whether the positive effects of a particular proposal outweigh the negative, or are experienced disproportionately across the population;
- to explore the potential for any positive effects to be enhanced by modification to the proposal;
- to enlarge the evidence and experience base of the impacts of particular types of policies, programmes and projects.

The assessor(s) are responsible for leading the identification and characterisation of potential health impacts. There are several sources of information available to them:

- the views and perceptions of stakeholders and key informants involved in the particular HIA;
- the knowledge base (information and experience) of stakeholders and key informants;
- the evidence base in the literature/grey literature (material that is unpublished but available, e.g. reports written for an organisation or partnership);
- the experience base in the literature/grey literature.

During identification and characterisation, it is helpful for stakeholders to identify health impacts (i.e. changes in health risk) through potential changes in the underlying **determinants of health**, that is, factors known or thought to be causally related to health status *(see Inset1.A)*.

Most models of HIA are designed to incorporate a set of health determinants which can be used to guide or prompt the identification of health impacts *(see Section 6 for examples)*. However, the specification of health determinants varies among the different models of HIA; in addition, in most models, the determinants are classified into fields or areas of influence, and the classifications used can also differ.

It is also possible to devise a specific set of determinants for a particular HIA. A set devised to prompt identification of the potential impacts of the implementation of a Local Transport Plan is listed *in Case-study 8.3.4*.

As each impact is identified, it is necessary to characterise the various aspects of that impact. A checklist of the aspects of a health impact it is useful to characterise are shown *in Inset 2.J*.

If there is more than one phase to the implementation of the policy, programme or project, the health impacts that arise during each phase should be identified and characterised.

At all times during the identification and characterisation of potential health impacts, it is important to consider whether vulnerable, disadvantaged or marginalised groups in the population will suffer either solely or disproportionately from any harmful effects of proposal implementation.

Inset 2.J:

Aspects of impacts on health it is important to characterise during appraisal

- Nature of the impact
- Activity giving rise to the impact
- Determinant through which the impact acts
- Size or magnitude
- Severity
- Frequency (incidence/prevalence rates)
- Time of occurrence (short, medium or long term)
- Point of occurrence (distance from the source of harm/benefit)
- Likelihood of occurrence (risk)
- Distribution in the population/constituent communities, especially across vulnerable, disadvantaged or marginalised groups and the locations where they may be concentrated

Any impacts identified and characterised must be clearly recorded at the time to ensure that no information is lost. This information will form the backbone of the report, and the foundation for making recommendations about modifications to the proposal. For some of the models of HIA featured *in Section 6*, there is a systematic way of recording the impacts identified, usually by means of a matrix.

When working with stakeholders on this task, the assessor(s) should also elicit stakeholders' views about which impacts they consider to be a priority for management. This will aid the assessor(s) during the framing of recommendations. It is most likely that stakeholders will prioritise those impacts that are:

- thought to be significant, particularly for any vulnerable groups in the population;
- of concern to the community affected by the implementation of the proposal.

It is not uncommon for stakeholders to suggest ways of managing some of the negative impacts that have been identified, and of enhancing those that are positive. These suggestions should be recorded at the time, and considered by the assessor(s) when compiling the report and framing recommendations about modifications to the proposal.

The assessor(s) can use the evidence/experience base to strengthen, supplement and refine the identification and characterisation of the potential health impacts by stakeholders and key informants. However, when using the evidence/experience base, it is important for the assessor(s) to judge its applicability and relevance to the particular HIA being conducted *(see Inset 2.K for a checklist of questions)*.

Signposts

- For the evidence base used in an HIA of a Local Transport Plan, *see Case-study 8.3.2*.
- For the evidence base used in an HIA on targeting Home Improvement Grants, *see Case-study 8.5.2*.

Inset 2.K:

Checklist to determine the applicability and relevance of the evidence/experience base to the particular health impact assessment being conducted

Evidence about health impacts/determinants of health

- Is the study population similar to the local population in terms of:
  - health status?
  - socio-economic status?

Experience and practice during other HIAs

- Is the proposal investigated similar to that being put forward for implementation locally?
- Are there local circumstances governing the current proposal that would change the nature of, or modify, the potential health impacts identified in other similar HIAs?

The information collected during scoping, proposal analysis and profiling will be useful in such comparisons.

The sources of information available to the assessor(s) can be defined according to whether the impact is expressed in **quantitative** or **qualitative** (non-quantitative) terms. Information from some stakeholders about their perceptions of potential health impacts may be expressed in qualitative terms. Some stakeholders may know of, or have access to, quantitative evidence. Some of the impacts on health described in the literature will be expressed in quantitative terms; others will be expressed qualitatively.

Quantitative characterisation

For certain physical or chemical hazards to which people are exposed, such as air pollutants, it is possible to define a dose-response curve. The use of a dose-response curve will indicate the likelihood that an individual will experience harm when exposed to different amounts or doses of the hazard. It is then possible to make a quantitative estimate of the impact (change

in health risk) that might arise from the implementation of a policy, programme or project which leads to an increase in the dose to which a population is exposed.

For some impacts, it will be possible to use the existing evidence in the literature to make a quantitative estimate.

Signposts

- For a model of the health impact of transport using four health status outcomes – accidents, coronary heart disease, respiratory illness, and mental health – *see Case-study 8.3.3*.
- For work on modelling the effects on health of levels of air pollution, *see Case-study 8.3.5*.
- For work in progress to develop a framework for health impact assessment relating to transport, *see Case-study 8.3.6*.

Qualitative or non-quantitative characterisation

For certain determinants of health, particularly social factors, it is not possible to make a quantitative estimate of the potential impact. In such cases, changes in the determinants can be characterised using scales or ranks defined in qualitative (non-quantitative) terms. For instance, the simplest ranking possible has three levels:

- harmful or negative impact, that is, an increase in risk;
- no change;
- beneficial or positive impact, that is, a decrease in risk.

Using such a scale, the nature of an impact can be recorded against the health determinants being investigated. The same approach can be taken to characterise other aspects of an impact it may not be possible to quantify. For instance, this approach is taken in the *Merseyside Guidelines for health impact assessment* (1); to characterise the risk of an impact occurring, a qualitative scale of *definite-probable-speculative* is used.

For a useful but succinct discussion on the use of scales in health measurement, see Streiner and Norman (3).

Areas of uncertainty

- The extent to which determinants of health will be affected by a particular policy change or option
- At present, the causal relationships between some health determinants and health status are not well defined
- Some health states are affected by the interaction of several health determinants, the mechanisms of which are also difficult to define at present
- There may be gaps in the evidence about certain health impacts
- There may not be suitable measures for some determinants of health, e.g. community severance

Stakeholder involvement

All stakeholders should be involved in the identification and characterisation of the impacts.

Depending on the type of appraisal being conducted and the circumstances surrounding a particular proposal, a variety of validated methods can be used to obtain the views, perceptions and experiences of stakeholders, for example:

- stakeholder workshop *(see Case-study 5.3.1)*;
- Delphi exercises;
- with- and without-proposal scenarios;

- surveys *(see Case-studies 8.4.6 and 8.5.1)*;
- key informant interviews *(see Case-studies 8.4.6 and 8.4.7)*;
- focus groups *(see Case-studies 8.3.1 and 8.4.7)*;
- brainstorming;
- citizens' juries.

The most appropriate ways to elicit the insights of stakeholders will initially be defined by the steering or management group during scoping, but be augmented by the assessors, and possibly by suggestions from stakeholders who have a good knowledge of the local community. The assessor(s) should ascertain what methods of community consultation may already be in place in a locality, in case it is possible to integrate some aspects of the health impact assessment into them, and thereby make effective use of already established networks.

2.3.4 Reporting on the impacts, and making recommendations for the management of priority impacts

The last task during appraisal is to compile the report, and make recommendations for the management of any priority impacts identified.

It is the responsibility of the assessor(s):

- to collate, analyse, and present the information relating to the potential health impacts of the proposal under investigation;
- to frame recommendations for the modification of the proposal.

It is the responsibility of the steering or management group to ensure that the contents of the report and the substance of the recommendations accord with:

- the scope of the HIA, and the underlying values;
- the views expressed by stakeholders;
- the evidence available from various sources.

Signpost

- For two examples of the presentation of the results of appraisal of regeneration projects, *see Case-studies 8.4.1 and 8.4.4*.

2.3.4.1 Prioritisation of impacts

It is unlikely that the assessor(s) will be able to give detailed consideration to all the potential health impacts identified by stakeholders and key informants, and during the interrogation of the evidence base. It is necessary, therefore, for the assessor(s) to prioritise the impacts identified in relation to their capacity to harm the health of the population affected by the proposal. It will be these impacts that are the focus for recommendations about modifications to the proposal.

To ensure that prioritisation is a fair and open process, it is advisable for the assessor(s) to use a set of criteria that may have been agreed by the steering or management group before appraisal, and has been shown to other stakeholders.

Irrespective of whether such criteria are available, the assessor(s) may have access to two main sources of information to guide them during prioritisation:

- concerns about specific impacts and/or vulnerable groups in the population that were identified during screening, or by the steering or management group during scoping;
- the results of any prioritisation exercise undertaken by stakeholders during the identification and characterisation of impacts.

In addition, the assessor(s) need to gauge the relative priority accorded to the impacts identified against the evidence base in the literature, and grey literature.

There are two potential sources of conflict during the prioritisation of impacts:

- different stakeholders may have different perceptions about relative priorities;
- the perceptions of stakeholders may not accord with the evidence base in the literature.

The assessor(s) should record any discrepancies, and the reasons for prioritising one impact over another. It may be possible for the assessors to resolve some of the conflict about priorities by referring to the value set established at the beginning of the process.

Signposts

- For a set of general criteria that can be used to "weight" impacts, *see the Kirklees Metropolitan Council Model, Section 6.4, Inset 6.K.5*.
- For a set of criteria used to prioritise the potential impacts from the implementation of a regeneration proposal, *see Case-study 8.4.7*

2.3.4.2 Framing recommendations for the management of priority impacts

Once the assessors have defined those impacts on health that are a priority for management, they need to frame the recommendations for the modification of the proposal. Depending on the nature of the proposal itself, and the priority impacts identified, there are two strategies available to the assessors:

- to make a series of suggestions about amending specific parts of the proposal;
- to develop a range of different options, including the possibility of not implementing the original proposal.

Any recommendations should be made with the aim of optimising health gain within the particular context and constraints operating locally. The results of the policy, programme, or project analysis undertaken at the beginning of the appraisal should help to inform and guide the assessor(s) in this process.

It may be that during the identification and characterisation of the potential health impacts it is found that the impacts on the population as a whole and those on various vulnerable groups within it are not the same, either in nature or in magnitude. In this situation, the assessor(s) must frame the recommendations to modify the proposal in such a way as to achieve health gain according to the criteria set by the steering or management group *(see Inset 2.L for a description of the strategy that could be used in various scenarios)*.

Signpost

- For an example of the ways in which the needs of vulnerable groups can be addressed, *see Case-study 8.4.1*.

Inset 2.L:

Strategy for framing recommendations in different situations				
		V U L N E R A B L E G R O U P S		
		Positive impact	**No change**	**Negative impact**
P O P U L A T I O N	**Positive impact**	*Health gain for all.* Find ways to enhance proposal to increase the level of health gain	*Health gain for population.* Find ways to modify proposal to obtain health gain for the vulnerable	*Health gain for population but harm to vulnerable.* Find ways to ameliorate source(s) of harm to the vulnerable and, if possible, to obtain health gain
	No change	*Health gain for vulnerable.* Find ways to enhance proposal to achieve health gain for population without compromising that of the vulnerable	*No health gain.* Find ways to enhance proposal to achieve health gain for population, but in particular the vulnerable	*No health gain for population and harm to vulnerable.* Find ways to ameliorate source(s) of harm to the vulnerable; if possible enhance proposal to bring health gain to population and to vulnerable
	Negative impact	*Health gain for vulnerable but harm to population.* Find ways to ameliorate source(s) of harm to population without compromising health gain for vulnerable	*Harm to health of population.* Reject proposal or ameliorate source(s) of harm to population; if possible enhance proposal to achieve health gain for the vulnerable	*Harm to health of all.* Reject proposal, or present different options to achieve same ends but with health gain for all, or at least ameliorate source(s) of harm to all

A framework for structuring any recommendations made is shown below *in Inset 2.M*.

Inset 2.M:

Framework for structuring recommendations in the health impact assessment report *[Source: Ref.4]*	
Factors	**Remarks**
Recommendation	
Project stage	
Timing	
Health determinants affected	
Likely effectiveness	
Implementing agency	
Budgeting agency	
Technical adequacy	
Social acceptability	
Capital/recurrent cost	
Fixed/variable cost	
Financial/economic cost	
Direct/indirect cost	

Stakeholder involvement

The input of the views, perceptions and experiences of all stakeholders including the community are pivotal in the identification and characterisation of impacts, and should be reflected in the prioritisation of impacts for amelioration/enhancement.

All stakeholders should be sent a copy of the report as presented to the decision-makers who are responsible for judging the viability of modifying the proposal under investigation.

2.4 Decision-making

Decision-making is the fourth core step in health impact assessment.

It is centred on the changes that could be made to a proposal to minimise the harmful effects and maximise the beneficial effects on health.

However, some people may be under the impression that health impact assessment comprises only three steps – screening, scoping, and appraisal. This impression may have arisen because in some cases the decisions taken about implementing a proposal are made by a group of people who have not been involved in the first three steps of the assessment. If HIA is to be an effective tool in mainstreaming health, and a means of providing an opportunity for health gain, decision-making about the proposal must be treated as an integral part of the HIA process.

As discussed *in Section 2.2*, if the steering or management group is not responsible for decision-making, then it is recommended that the decision-makers are represented on the steering group.

Those making the decisions about the outputs of the impact appraisal need to appraise:

- the quality of the assessment against the specifications for the HIA set during scoping;
- the content of the report and the recommendations, which should be guided by the value set established at the beginning of the process.

The recommendations that the decision-makers accept, reject, or modify will be influenced by the current context for proposal implementation and the constraints operating locally, such as the resources available and the relative priority given to health and health gain. An outline of the various scenarios decision-makers could face, and the action they could take in each one, is presented *in Inset 2.N*. Negotiation among the decision-makers may be necessary if their views differ about the appropriate actions to take.

Stakeholder involvement

All stakeholders involved in the identification and characterisation of the health impacts should be informed of the decisions taken in relation to the recommendations made about the proposal.

Inset 2.N:

Options available to decision-makers				
		COSTS TO MODIFY PROPOSAL		
		Higher	**Equal**	**Lower**
LEVEL OF HEALTH	**Improved**	*Accept* if higher costs within budget *Trade-off* if costs not within budget, according to relative priority of health gain for resource use	*Accept*	*Accept*
	No change Current status maintained	*Reject*	*Accept* if other priority issues enhanced	*Accept* if other priority issues enhanced
	Deterioration or worsening	*Reject* *(unless other statutory or legal obligations or responsibilities exist)*	*Reject* if level of deterioration is unacceptable *Trade-off* if other priority issues that prevail over health are enhanced by proposal	*Reject* if level of deterioration is unacceptable *Trade-off* if other priority issues that prevail over health are enhanced by proposal

2.5 Monitoring and evaluation

Monitoring and evaluation is the fifth core step of health impact assessment.

There are two main types of monitoring and evaluation that can be conducted following the assessment and implementation of the proposal:

- process evaluation;
- outcome evaluation.

Although some people may not consider monitoring and evaluation to be an integral part of health impact assessment, it provides valuable insight into the ways in which it is possible:

- to improve the process of HIA;
- to modify various proposals to achieve health gain;
- to assess the accuracy of predictions made during appraisal.

2.5.1 Process evaluation

There are two facets to process evaluation:

- evaluating the process of the specific HIA undertaken;
- monitoring and assessing the extent to which the modifications to the proposal agreed by the decision-makers have actually been implemented.

It is important to evaluate the process of HIA in order to identify what went well and where it is possible to make improvements. These learning points should then be incorporated into the design and conduct of future HIAs.

In a systematic review of 20 HIAs (both prospective and retrospective), McIntyre and Petticrew (5) underline the importance of evaluating individual HIAs, and emphasise the need to develop a validated tool, especially as more HIAs become available. They suggest using the set of general criteria identified by Fleeman (6), as follows.

1. Conditions in the Terms of Reference (TOR), or scope, of the HIA (including a consideration of whether the TOR were suitable for the purpose, and whether the HIA has met the TOR).
2. Biases and traps (including a consideration of the timing of the HIA, the budget, and the impartiality of the assessor(s)).
3. Technical adequacy and quality of format (including who was consulted, the range of health impacts evaluated, and whether local conditions were taken into account).
4. Recommendations (including a consideration of whether they are practical and can be translated into action).

For a checklist of questions that could be used to evaluate the quality of an individual HIA, *see Inset 2.O.*

The evaluation of individual HIAs will support the development of HIA methodology in general.

It is essential to monitor whether the modifications to the proposal agreed by the decision-makers are implemented, although in practice this may not always be done. There are two reasons for this. The first is to ensure proper implementation of the proposal. The second is to provide intelligence for the monitoring and evaluation of health trends and outcomes *(see Section 2.5.2)*. If this facet of process evaluation is not undertaken, it could have serious consequences. Consider what would happen if those monitoring and evaluating health trends and outcomes work on the assumption that the modifications as agreed were implemented when in fact they were not. The evaluation of health trends and health outcomes will be erroneous, because the interpretation of and conclusions drawn from the findings will be distorted by a misguided assumption. The use of such evaluations could have serious

implications not only for the development of policy, programmes or projects and conduct of future HIAs in the local area, but also for the work of other practitioners who might use the results.

Inset 2.O:

Checklist to assess the quality of an health impact assessment

[Source: adapted from Ref.2]

- Were stakeholders involved in an appropriate and timely way?
- Was the evidence in the literature on the consequences of similar proposals properly searched?
- Were the issues identified during scoping addressed?
- Were the potential health impacts on vulnerable groups adequately explored?
- Were alternative options adequately explored?
- Were efforts to mitigate any negative effects concentrated on the largest impacts?
- Was the decision-making process transparent?

Signpost

- For an evaluation of the process of an HIA on a regeneration project, *see Case-study 8.4.4*.

2.5.2 Outcome evaluation

During outcome monitoring and evaluation, trends in the indicators and health outcomes, chosen to signal changes in health status, are tracked and analysed (*see Section 5.2.6*).

The monitoring and evaluation of health outcomes is an important part of the process of HIA for several reasons:

- to test the prediction(s) – that is, to determine whether the impacts, or lack of impacts, expected after changes to the proposal actually occurred;
- to enable early detection of harmful impacts that require remediation or action to safeguard the health of the population or that of vulnerable groups – this is important in situations where negative impacts were identified at appraisal but could not be well characterised or it was not possible to ameliorate them through modifications to the proposal;
- to determine the actual effects of proposal implementation in order to inform the development and implementation of similar proposals in the future;
- to ascertain whether value for money or added value has been achieved for the investment of resources;
- to build the evidence base.

The monitoring of health trends and outcomes will probably be conducted by the officers in an organisation or partnership, and incorporated into the existing systems for data collection and monitoring. However, as there are many determinants of health through which the impacts could act, it is likely that the indicators and outcomes chosen for monitoring are collected by more than one agency. This will require co-ordination and collaboration. In these circumstances, it is advisable to develop a protocol for information-sharing among agencies in order to manage appropriately issues of confidentiality and sensitivity about data. If the data relevant to certain indicators/health outcomes are not collected routinely, it will be necessary to institute appropriate arrangements for data collection and analysis.

Dr Anna Hansell has investigated the use of routine data in health impact assessment and health inequalities impact assessment (for details of how to access this report, *see Section 2.2*)

Signposts

- For indicators of short-term transitional outcomes and of long-term changes in health status, and long-term health outcomes being monitored in an HIA of a regeneration project, *see Case-study 8.4.2*.
- For indicators of health outcome used in an HIA of a Local Transport Plan, *see Case-study 8.3.2*.

References – Section 2

1. Scott-Samuel, A., Birley, M. and Ardern, K. (1998) *The Merseyside Guidelines for health impact assessment*. Merseyside Health Impact Assessment Steering Group, Liverpool Public Health Observatory, Liverpool.

2. Health Promotion Division (1999) *Developing health impact assessment in Wales*. National Assembly for Wales, Cardiff.

3. Streiner, D. L. and Norman, G. R. (1995) *Health Measurement Scales: A Practical Guide to their Development and Use*. 2nd edition. Oxford University Press, Oxford.

4. Birley, M. (1999) *Procedures and methods for health impact assessment*. In: *Health impact assessment. Report of a Methodological Seminar.* Department of Health, London.

5. McIntyre, L. and Petticrew, M. (1999) *Methods of Health Impact Assessment: a literature review*. Occasional Paper. MRC Social and Public Health Sciences Unit, Glasgow.

6. Fleeman, N. (1999) *A prospective health impact assessment of the Merseyside Integrated Transport Strategy (MERITS)*. Observatory Report Series No.45. Liverpool Public Health Observatory, Liverpool.

Review questions – Section 2

- How might you develop the ability of your organisation/partnership to involve all of the relevant stakeholders in the HIA process?

- Are suitable screening tools available to help you to screen policies, programmes and projects for their potential health impacts? If not, how might you go about adapting the framework tool described in this section?

- Within your organisation/partnership, is there a suitable group around which to develop a steering or management group for HIA? If not, how might you set one up? What would be the advantages of doing this?

- Think about some of the policies, programmes and projects that your organisation/partnership would consider selecting for health impact assessment. Which aspects of health impact would it be most valuable to identify and characterise? Why? What types of health impact would you be most likely to prioritise, and why?

- Which vulnerable, disadvantaged or marginalised groups in the community is your organisation/partnership most concerned to protect? What might be some of the implications for you in terms of selecting proposals for health impact assessment?

- Within your organisation/partnership, who are likely to be key decision-makers in relation to the policies, programmes and projects that might be selected for health impact assessment? In what circumstances will the composition of the decision-making group be liable to change? What would be the main implications of a change of this kind?

- Does your organisation/partnership currently carry out process or outcome evaluations in relation to HIA? If so, how do you make use of the findings? If not, what might be the value of carrying out such evaluations?