More than a statement of the crushingly obvious: A critical guide to HIA

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A critical guide to HIA

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Why yet another HIA guide?

There is no shortage of guides to HIA so why another? This one seeks to be different from its hundred predecessors by focusing on the aims that HIA tries to achieve rather than the processes to be followed. At the same time it is intended to be a very practical guide that can steer people through doing an HIA (or scrutiny of health consequences in the context of some other impact assessment).

It is written in the belief that HIA is not rocket science or even very scientific and that anyone with a reasonable supply of common sense and a minimal understanding of public health is capable of performing a good HIA.

Some preliminaries

What is HIA?

HIA has two essential characteristics
- It is intended to inform a decision
- It seeks to predict the health consequences of implementing different options.

A decision always involves the choice between options – There are always two options - do something or do nothing – and often more than two. An HIA would explore the consequences of each possible option.

A more formal definition of HIA has been given by IAIA based on that given by WHO in the Gothenberg consensus statement.
“Health Impact Assessment is a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population, and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.”

A Decision support tool Not a Decision making tool

The purpose of HIA is to assist decision makers by giving them better information. Its purpose is not to make the decision for them.
**Activities related to HIA**

HIA needs to be distinguished from related but different activities

Health needs assessment – a study of what is influencing the health of a community and how their health might be improved.
Evaluation – examining the consequences of a decision which has already been implemented.
Monitoring - observing what happens as a decision is implemented.
Community development – working with a community to improve their quality of life and in particular their health status.

**Health in other impact assessments**

HIA is no more than a systematic consideration of the likely health consequences of implementing a policy, plan, programme or project.

Consideration of health consequences can also be an element in
- Strategic Environmental Assessment
- Environmental Impact Assessment
- Sustainability assessment
- Integrated Impact Assessment
- Social Impact Assessment
- Many other Assessment processes.

Everything said in this guide about HIA applies equally to consideration of health consequences in other impact assessments.

**Benefits of HIA**

More information for decision makers on the likely health consequences of implementing different options allowing them to make better trade-offs and decisions that are better for health.

*Additional benefits*
- Greater openness and involvement of public in decisions that affect them
- Better co-operation between different agencies (for example PCT and local authority)
- Better understanding of health issues in the community
- Better understanding of health issues among decision makers.

**Why do people ask for an HIA?**

To inform a decision
To demonstrate that a decision which has already been taken is correct
To stop something happening
To support the case for doing something (eg business case for new hospital)
Advocate or Assessor?

Public health people readily adopt the role of advocates. They believe they know the right decision and set about marshalling arguments to support their case. This is a praiseworthy and useful activity but it is not HIA.

HIA involves an impartial assessment of the likely health consequences of all options without preconceptions as to which one is to be preferred.

Do not try to be an advocate on a particular issue and its assessor at the same time.

Are you a decision maker?

Throughout this guide a clear distinction is made between the role of decision maker and the role of assessor. Sometimes the same person or group plays both roles. You may play both roles. When you are involved with an HIA be clear which role or roles you are playing.

Screening - Is it worth starting?

What is the decision about? – If you can’t answer this question don’t start.

Is it plausible to suggest that the decision will affect health?
Is a decision going to be made in the foreseeable future?
Can the decision makers be influenced?

If the answer to any of these question is no don’t start.
If the answer to all these questions is yes then its worth considering the possibility of doing an HIA in a little more depth.

Note that the terms screening and scoping are somewhat inconsistently used in the HIA literature. Some HIA guides describe as screening a much longer process usually involving extensive checklists.

The ideal situation is if the decision makers have requested an HIA or would regard one as helpful. Otherwise you have to have a way of persuading them to consider the findings of the HIA (possibly by communicating it to the press or some other method). There is no point in doing an HIA if it has no chance of informing the decision.
Scoping - Preparation and Planning

This second step involves deciding

The decision
What is the decision about?
Who are the decision makers, who are supposed to be helped or influenced by the HIA?
What are the constraints – what is already decided or fixed?
How is the HIA related to the decision process?
What is the timescale – By when does the HIA have to report in order to be useful?

What will be the scope of the HIA?
Who are the stakeholders?
What issues will it cover?
What will be the geographical limits of the HIA considerations?
What are the temporal limits of the HIA?
What are the main causal paths by which health could be impacted?
What sorts of evidence will be used?
How will the HIA consider inequalities?
Will the HIA involve participation?
How will it communicate with the community?
How will it report and keep in contact with the decision makers?

The process
What resources are available?
What size of HIA will it be – Mini / Standard / Maxi?

At any part of this second stage you may decide that a useful HIA is not possible and go no further.

The scoping group

At this stage you will want to form a small group to shape the HIA, discuss the scoping questions and help in gaining access to the required sources of information. In addition to those who will do the HIA it should involve some of the stakeholders and perhaps some of the decision makers. This group will probably grow during the scoping process as you realise you need additional knowledge and interests in the group.
The decision

What is the decision?
Decisions are about choosing between options. What options are being considered?

Who are the decision makers who are supposed to be helped / influenced by the HIA?
Are they members of a planning committee, a council, a PCT board or some other group. Since the intention is to influence them it is wise to find out what their main concerns are, on what points they would particularly like further information and how they think the HIA could help them. Ideally they will be involved with the HIA from the earliest stage.

What are the constraints?
What has already been fixed? The context for virtually every decision is set by some bigger more strategic decision. Be clear what level decision the HIA is considering. Eg Is an HIA on whether to build a nuclear power station at location X really about whether to build a nuclear power station anywhere?

How is the HIA related to the decision process?
Have the decision makers recognised the HIA as contributing to their decision making process? If not how will the HIA influence their decision? Is there any legal framework for the HIA?

Are other forms of impact assessment or consultation being carried out as part of the decision process – if so ensure that the HIA is co-ordinated with them and does not waste time by repeating activities done under another heading.

What is the timescale?
What is the timescale for the decision. When are the key decision making meetings and by when do papers have to be circulated for these meetings? The HIA must be timed to produce its reports to meet these deadlines. An HIA which reports after the decision has been taken is useless.

Iterative HIA /decision making

The description so far has assumed a linear process

Propose options

↓

Assess options with HIA

↓

Consider HIA and choose options
Sometimes things go like this. It is however much better if there can be an iterative process between the health impact assessment and the formulation of options. In this scenario the final HIA is almost token because all the work has been done in the earlier stages.

Propose Options
↓
Consider health impacts
↓
Revise Options
↑
Finalise options
↓
HIA
↓
Make decision

Scoping the HIA

Who are the stakeholders?
Stakeholders are anyone who will be affected by the decision or who has an interest in the decision. This is probably a very large number of people. How are they to be offered an opportunity to be involved? Almost certainly a few will have to represent the many. How will they be chosen? The aim is to devise an HIA process which considers the interests of all stakeholders.
Do some stakeholders need to be invited to join in the scoping process now?

What issues will the HIA cover?
By this stage you are clear what the decision is but to what extent are the constraints accepted. There may well be differences of opinion on what issues should and should not be considered in the HIA - These differences will need to be resolved by negotiation.

What are the geographical limits?
Is the HIA solely concerned with local impacts and local residents or does it extend to the surrounding region, or the whole country, or overseas countries? This may be a difficult issue because positive and negative impacts often affect different communities. Eg a new road may reduce quality of life for local residents but improve economic and health prospects for the wider region.

What are the temporal limits?
To what extent is the HIA concerned with the current population, or their children, or future generations. Something, which has positive impacts for the current generation, may have negative impacts for future generations. This question raises the issue of sustainability (see page 26).
**What are the main causal pathways?**
This is where you think how and why the proposal might affect health and start to draw the first logic diagram (causal pathway).
See the section on logic diagrams on page 12
This will help you understand what special knowledge you may need and so where you might need to seek help, what types of evidence you will need and where you should be concentrating your investigative efforts.

**What types of evidence will you use?**
How much weight will you give to epidemiological reasoning and how much to lay knowledge?
What routine statistics do you need to look at and will they need any further analysis?
What do you want to find out from the literature and how will you search it?
What do you want to find out from key informants and expert witnesses? Who are the key informants? Who are the experts?
Do you need any particular technical expertise?

**How will the HIA consider inequalities?**
How are you going to look at distribution of impacts? Which different groups will you consider?
See section on distribution of impacts on page 19.

**Will the HIA involve participation?**
What does the HIA want to get out of participation?
Who is to be invited to participate?
How are they to participate?
See section on participation on page 23

**How will it communicate with the community?**
The stakeholders and wider community may want to know how the HIA is progressing. How will you keep them informed? How will you attract and handle press interest?

**How will the HIA report?**
At the end of this process how are the results to be communicated to the decision maker? How are they to be fed back to the participants and other stakeholders?

**The process**

**What resources are available**
Now think about what resources you have.
How many people – how much time - what skills?
Library facilities – computers - meeting places – offices – post - telephones
Communication facilities – photocopying, websites etc etc
Incidentals – travel, refreshments for meetings, payment for participants,

Where are you going to get these resources – what will your employing organisation give? Do you need to look elsewhere for resources?
What size of HIA will it be – Mini / Standard / Maxi
Having looked at the nature of the decision, the scope of the question and the resources available to you, you are now in a position to decide what size HIA you are going to do.

You may realise at this stage that you know enough and don’t need to go any further with the HIA. You may decide that with the resources available, you cannot do a worthwhile job and therefore not proceed with the HIA.

If proceeding you need to decide whether to do a mini/standard or maxi HIA.

Levels of HIA - Mini Standard and Maxi

HIAs may range along a spectrum of intensity from a very short process using minimal resources to a very extended process using huge resources. Mini, Standard and Maxi merely describe three points along this continuous spectrum.

**Mini HIA**
The assessment will be based on what you already know perhaps strengthened by one or two key informants.
Only very easily obtainable routine statistics will be used.
Any literature searching will be quick and superficial.
It will not involve significant participation.
This level of HIA involves perhaps a days work with a few people round a table.

Do not scorn the mini HIA – it can be very cost effective and give a lot of benefit for a minimum investment of resource.

**Standard HIA**
This is a more substantial process.
It will involve seeking the views of several key informants.
Extensive assembly of routine statistics and perhaps some further analysis.
Substantial searching of the literature with perhaps proper systematic searches for one or two areas.
It may involve considerable effort to obtain proper participation.
It is likely to involve several people for several weeks

**Maxi HIA**
This is a very substantial process.
It will involve interviewing a wide range of key informants.
Commissioning work from relevant subject experts.
Extensive assembly of routine statistics with further analysis.
Possibly some collection of new data.
Possibly some mathematical modelling and simulation of impacts.
Very extensive literature searching with systematic searches for several areas.
Widespread participation with focus groups, panels, public consultations and so on.
It is likely to involve several people for several months.
A maxi HIA can only be undertaken when you have large resources at your disposal.
Risk Assessment

In offering to undertake an HIA you are claiming to be able to predict the future – What is the basis for such a claim?

Risk assessment includes a series of processes
- Describing the baseline
- Logic diagrams (Causal paths)
- Predicting change in intermediate factors
- Exposure and dose response curves
- Participative assessment
- Key informants
- Literature searches
- Modelling
- Distribution of impacts

Describing the baseline

The first step in making prediction is to know from where you are starting.
An adequate description of the baseline will describe
- the current state of health of the population including mental health
- the current state of environmental determinants of health
- the current state of other determinants of health
- how these things vary across different sectors of the population
- how these are expected to change (trends)
- are there any susceptible groups in the population
- the inequalities of distribution of these things between different groups

Many indicators of these things can be obtained from routine statistics
- Death rates for different causes
- Infant mortality
- Hospital admission rates for different causes
- Numbers of people with certain conditions on GP registers (QOF)
- Road accident statistics
- Estimates of levels of certain air pollutants
- Benefit claimant counts
- Estimates of certain health behaviours (eg smoking, drinking)
- Crime statistics
- Housing and education statistics

A useful collection of data at local authority level is to be found in health profiles
www.communityhealthprofiles.org.uk
Local statistics however have serious limitations

- Except for very common things numbers are small and confidence intervals will be wide.
- The things on which statistics are collected are unlikely to show large or rapid change in response to the options being considered in the HIA.
- It is often difficult to break them down meaningfully into areas smaller than the local authority.
- Many are estimates (eg much air pollution data and much health behaviour information) based on modelling from surveys of larger areas. They are useful guides but may not represent the true position.
- The data available are often not the data which are most relevant.

When citing a baseline indicator why are you doing so?  Will you be suggesting at the end of the HIA how it is going to change?  Or are you citing it for some other reason? – if so what is that reason?

Logic diagrams (Causal paths)

Logic diagrams are the key to prediction in HIA
You believe that changes in one factor lead to other changes which in turn lead to changes in health.

Examples (→ indicates a causal connection)
Build an incinerator → Release of particulates → Increased asthma
Build new road → Increased road speed & traffic → Increased road accidents
Renovate houses → Warmer drier houses → Less asthma and childhood illness
Build telephone mast → Increased electromagnetic waves → More brain tumours

The last one is almost certainly wrong but many people believe it.

The logic model is made up of many of these paths and probably includes interactions between them. Two examples of logic paths are given on the next pages.

Diagrams such as these are the structure on which the HIA is hung. Think widely when drawing them. Do not rule out any ideas at first but include them and then discuss whether you want to retain them. You should have drawn the first logic diagram in the scoping stage. You will probably revisit it and refine it many times throughout the HIA.
Now you have your logic diagram you need to consider every arrow on the diagram.

\[ A \rightarrow B \]

Nature       - What is the nature of B? Is it deaths, illness needing hospital admissions, headaches, feeling anxious or miserable or some other condition?

Direction  – Does an increase in A cause an increase or decrease in B?

Magnitude - For a given change in A how big is the change in B?
For further discussion of magnitude see quantification page 27.

How certain are you that A causes changes in B?
Is it possible that changes in B cause changes in A?

Having done this you should be able to identify which are the important paths which will cause large or serious health effects and which are small print which do not need further consideration.

**Example of a Logic diagram – A new supermarket**

```
Build Supermarket on edge of town

Increased traffic  →  Traffic accidents  →  Injury
Cheaper alcohol  →  Vehicle emissions
Cheaper food  →  Food choice
 Closure of local shops  →  Employment

Injury  →  Mental health  →  Physical health  →  Income
Better diet  →  Alcohol consumption

Cheaper alcohol  →  Alcohol consumption
```
Example of a Logic diagram – New hospital and medical school

Predicting changes in intermediate factors

The links in the chain between proposal and outcome are referred to as intermediate factors.

Your logic diagram will show that the first step in the causal chains is nearly always something like

- emission of air pollutants,
- increase in traffic,
- increase in employment,
- increase in noise

In order to assess their effect you need to know how likely these changes are to occur and how big they are likely to be.

These are subjects, which lie outside the expertise of most public health people. You therefore need advice from people with the relevant expertise – combustion engineers, atmospheric distribution experts, traffic modellers, economists and so on.

If your prediction for the first step in the chain is wrong, predictions for all subsequent steps in the causal chain will also be wrong.
Exposure and dose response curves

The classical epidemiological and toxicological approach to prediction is through assessment of exposure and dose response. An example of pollution will help to explain this.

Suppose we are concerned that a factory will harm health by emitting a pollutant. In order to predict its health impact we need to know

Exposure - How much pollutant will each person get?
Dose response - How will that dose of pollutant affect their health (dose response)

We can estimate exposure by estimating
How much pollutant will come out of the factory chimney,
How it will be dispersed in the air (plume distribution),
How much will reach the ground where the person is,
How much will the person absorb / breath in / eat.

We can then look at the dose response curve to see how the dose to which the person is exposed will affect different health outcomes.

Example of a dose response diagram

Percent change in risk of death on days with raised PM$_{10}$ concentrations
(compared to risk on days below 15 µg/m$^3$.)

PM$_{10}$ concentration is a measure of particles in the air.

This section has been a very simple summary of a complex subject and there is a whole discipline devoted to exploring questions of exposure and response.
In reality things are much more complex. One also has to take account of

<table>
<thead>
<tr>
<th>Lag Times</th>
<th>May be several years between exposure and appearance of the response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative effects</td>
<td>Is the pollutant excreted /inactivated over time or does it build up in the body?</td>
</tr>
<tr>
<td>Interactions</td>
<td>Is the effect of the pollutant modified (made greater or less) by the presence of other pollutants?</td>
</tr>
<tr>
<td>Susceptibility</td>
<td>Do people differ in the way they are affected by the pollutant? (ie are the dose response curves different for different people).</td>
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Exposure and dose response has been explained by reference to a chemical because this is the easiest to understand. However the same type of reasoning can be applied to any possible intermediate factor such as

- Income
- Employment
- Discrimination
- Social support and interaction (social capital)

These can all be treated as exposures (how big a change will be experienced by a person) and we can then ask what will be the health effect of that change (dose response).

**Participative assessment**

A different way of exploring impacts is through participative methods. Again thinking is based on a logic diagram but it is developed and expanded through people’s thoughts and ideas expressed in their own words.

What is their conception of the logic diagram?

What do they think the impacts will be – they may be concerned about an impact without having ideas about how the impact would be caused - that is no problem - all logic diagrams are incomplete and a causal chain can be considered even if intermediate steps are unclear.

What do they think are the important paths and impacts?

What are their hopes and fear in relation to the proposal – Hopes and fears need to be included in the logic diagram both as intermediate variables and outcomes.

People will express their knowledge and insights in a wide range of ways often using stories. Much of the knowledge will be lost if one attempts to impose a different frame on the way that knowledge is expressed. This section has sought to translate the insights from lay knowledge into the more formal language of risk assessment. The process is akin to mind-mapping.

Participation is discussed at more length on page 23.
Key informants

Key informants are people, who could be expected to have knowledge about how the proposal will affect things. They could be the proposer, residents in the areas most affected by the proposal, people with special knowledge about activity (furnace engineers, architects, road constructors etc) or people with special knowledge about the possible effects.

The HIA will attempt to draw out their knowledge in the most appropriate manner. For some this will be by submitting detailed papers, for others by interviews and technically focussed questions, for others by informal discussion. In every case the intention is to create a process and setting which allows the informant to communicate as much as possible of their knowledge and understanding. Sometimes workshops involving different types of key informants can be helpful in reaching shared views.

Literature and internet searches

The purpose of literature searches in HIA is to find out what is already known about the causal paths and the impact of similar proposals in other places. In order to do this effectively the first essential is to be clear what you are looking for and what questions you want to answer.

Searching is a specialised skill, which requires appropriate strategies and good choice of key words. Computerised data bases have made it possible to do much better literature searches with less effort. Google and similar search engines will also retrieve thousands of sources from the internet.

The aim is to find all relevant sources without too many irrelevant ones.

Reports of previous HIAs on similar subjects may be particularly relevant.

It has been said that all searches should be systematic searches. This is totally impractical as a proper systematic search on any subject may well take several months. In some cases results of good systematic searches are already available (but such summaries may rapidly become out of date) in which case it is sensible to use them rather than start afresh. In scoping your HIA you should have identified how much time and resource you can allow for searching.

Once you have found the sources you will need to appraise them, working out which are helpful and which are rubbish.

In order to find out more about literature searching and appraisal look at the extensive guidance on this subject available elsewhere.
When doing an HIA it is usually a good idea to seek the advice of a librarian or someone else with experience of searching.
Conflicts of evidence

It is very likely that different lines of evidence may point to different conclusions. Frequently residents and “technical experts” will have very different views. There will probably be conflicts in the literature. Findings from literature searches, participative assessments and key informants may all point in different directions. Often these differences cannot be reconciled and the HIA will have to decide how much weight to give to these different types of evidence.

Formal Modelling

For some purposes it is helpful to undertake formal mathematical modelling of impacts. This can be used to clarify
The effect of the proposal operating as expected
The effect of the proposal in the event of a catastrophe

It will answer questions such as
What concentrations of particles will people be exposed to?
How many extra cancer cases might this proposal cause?
What would happen if the plant exploded?

A model incorporates a set of assumptions about causal relations (e.g. doubling this will result in quadrupling of that) and about normal conditions (e.g. the furnace will burn X tons, the wind will be from the South West Y days per year, people eat Z gms of fish per week).

Based on these assumptions one can then predict the consequences. By varying the assumptions it is possible to see which conditions are critical and which do not make much difference to the outcome (sensitivity analysis). Such models have been widely used in prediction of effects of pollutants. In many cases when used models suggest that any impact will be small (e.g. one extra cancer death per 100 years).

A model used to explore catastrophic events will look at extreme conditions (e.g. if a plane weighing N tons with a full fuel load crashes on the reactor). The results of this model are then used to attempt to ensure that the consequences of such an event can be limited.

Models are beguiling because they seem very scientific, they give very precise (detailed but not necessarily accurate) results and no one except possibly the modeller can understand them. However it is important to remember that they are only models not reality and that they are only as accurate as the assumptions built into them.

“All models are wrong – some are useful.”
**Distribution of impacts**

A proposal will not affect everyone the same. Some may experience more or less positive impacts, others more or less negative impacts. If it is to make a contribution to decisions about equity the assessment must describe not only the overall impact of the proposals but also the impact on different groups within that population.

Groups in the population concerned may be defined on
- Geographical grounds
- Socio-economic grounds
- Grounds of susceptibility
- Other groups

**Geographical grounds**
Groups who live in different places are likely to be differently affected. For example those who live close to a factory or a road will probably be more affected by it than those who live further away. The assessment of risk needs to clarify these differences.

**Socio-economic grounds**
People in different socio-economic circumstances are likely to be differently affected. For example employees of a large enterprise may benefit while those who live close to the enterprise may suffer some negative impacts (of course the same individual may fall into both categories). People with cars may be very differently affected than people reliant on public transport. People with high incomes may experience different impacts to those on low incomes. Other socio-economic factors such as being a single parent or a member of a particular ethnic group will also affect the impacts experienced. Note that these different groups are often clustered in particular geographic locations.

The HIA needs to consider how these different groups will be differently affected. It is unlikely to be possible to make a full separate assessment for each of these groups. It is often a good idea after consideration of each impact to add a section considering how various different socio-economic groups will be affected.

**Susceptible groups**
Some groups are people who for physiological or other reasons may be particularly susceptible to harm. For example young children may be especially susceptible. Older people, people with respiratory illnesses, people with visual handicap and so on are other groups who for one reason or another may be particularly susceptible. In assessing the likely impacts the HIA should think where these susceptible people are and how they will be affected. In particular the HIA should think about places such as schools and communal residential homes where there will be a number of susceptible people.
Recommendations

Having assessed the different options and clarified the likely positive and negative impacts for each, where possible the report should suggest ways in which positive impacts of each option could be increased and negative impacts avoided or minimised.

Note that these recommendations should flow from the previous risk assessment and be easily related to the logic diagram. As with all other stages of the HIA the recommendation should be evidence based and the reasoning for them should be laid out.

The recommendations are not the place for you to include all your pet causes. You may passionately believe that bananas should be included on the hospital menu or that everyone should ride bikes, but if it is not relevant to the causal paths examined in the HIA do not include it in the recommendations.

Beware of making recommendations outside your competence and in particular beware of technical judgements. For example you may properly recommend that noise reduction or dust suppression measures should be provided but unless you are unusually knowledgeable on the subject do not recommend one technical solution rather than another.

For areas where the impacts are uncertain or where there is concern over adverse impacts you may recommend appropriate monitoring so that early remedial action can be taken if needed.

The bottom line

This guide has urged that HIA is a decision support tool not a decision making tool. It therefore urges that the report should not explicitly say which of the options examined is best. If the assessment reveals that option A will kill 5 people a year or is in some other way dramatically worse for health than option B then there is no need to state that B is best. If the two are closely balanced then it is up to the decision makers assisted by the information provided by the HIA to decide which option is to be preferred.

This guide therefore advises that the report should not explicitly state a preferred option – there should be no bottom line. Other guides on HIA take a different view.
Communication

The audience

When the assessment has been completed and the recommendations identified it will be time to communicate the findings to the relevant people.
1. The decision makers
2. Those who have given evidence to or helped with the HIA
3. Those who will be affected by the decision (stakeholders)
4. The wider HIA community

It will probably be necessary to use different methods of communication for these different audiences.

Decision makers
For decision makers – the reporting needs to fit with the decision making process. At the scoping stage you will have clarified the timetable and the form of reporting required. It will probably involve a formal report and maybe presentations to a committee.

Helpers and Stakeholders
Helpers and stakeholders should be offered the formal report but many will also want a shorter easy to read presentation. It might be necessary to think about producing something in other languages. Verbal presentation to groups or meetings may also be needed. The internet can also help with feeding back.

The HIA community
We all learn from each other’s efforts and therefore the report of your HIA should be available to others wishing to do HIA in the future. The research you have done should be a resource for others and they should be able to copy the features that were successful and avoid those that were not. The best way to make your report accessible is to submit it to one of the internet HIA sites.

The formal report

An HIA is not completed until it has produced a formal written report.

The report should contain the following
- Executive summary
- The options examined
- The policy context for the decision
- The scope of the HIA – limits to the enquiry
- The types of evidence and the methods used to assess risk
- Groups given special consideration
- The local situation and the baseline conditions
- The logic diagram and the causal paths
- The intermediate variables
- Health impacts resulting from changes in each important intermediate variable
• How each special group is affected
• Implication of impacts for equity
• Summary of impacts through different paths
• Recommendations including monitoring
• Reflections on process of HIA
• Resources used in performing the HIA
• Names of people who contributed to the HIA

Reflection and Evaluation

Reflection

When the HIA is complete it is good practice to reflect on how things went. What aspects were successful? What aspects did not go so well? What things would you do differently next time round? These reflections will be particularly useful to others planning to do a similar HIA.

Resources used

One of the big gaps in knowledge of HIA is what it costs. It is therefore helpful to know and report. Who worked on it? How much time did each of them devote to the HIA? What resources besides time were used? How much did they cost?

Evaluation

At the end of the day we want to know how useful the HIA was. Once the decision has been made it is a good idea to talk to the decision makers. How helpful did they find the report and did they take it into account when reaching their decision?

It is very difficult to know if your predictions will prove accurate. Unfortunately there is no way you can know if predictions made about options, which were not implemented, would have been correct. However if the decision taken and implemented was fairly close to one of the options examined in your HIA it may be possible one or two years later to see if the predictions made in relation to that option have turned out to be correct.
Participation

This guide has suggested that in some cases participation may not be part of an HIA. Many would see this as heresy and regard participation as an essential part of HIA.

The reasons for participation

The reasons for involving the community in HIA are:-

- People are a source of information
- People have a right to know how and why decisions that affect them are being taken
- People have a right to take part in making decisions that affect them (“little democracy”)
- People will feel better about and be more ready to accept decisions they do not like if they understand the reasons for them (“Conflict resolution”)
- People and communities learn about health by participating (“Social learning”)

All of these are excellent reasons for using participatory methods

Others would add that there should be participation simply because participation is a good thing.

Practicalities of participation

The number of stakeholders in any decision will be large or very large. It will probably be impossible for all to participate and therefore some people will have to represent others.

There is a range of ways in which you can seek to involve the community and “hear its voices”

- Public meetings – difficult to manage and tend to be dominated by the loudest voices
- Focus groups – need skilled facilitation and how do you decide who to include in the groups
- One to one and small group conversations – very useful but who gets invited?
- Open “Surgeries” and drop in sessions – useful but only hear self selected voices.
- Postal questionnaires – tend to get low response and difficult to understand what people really think from tick box or written responses
- Street corner interviewing of passers by - difficult to know who respondents are
- Formal quota sampling and interviewing – better than unstructured sampling
- Open drafting - making all working papers and drafts widely available for all to comment on – community groups often find it difficult to respond to this approach
- Community members on the scoping and steering groups – Very good idea but how are the members chosen?
- Involvement of community leaders – Good idea but whose views do the community leaders represent
- Democratically elected people (councillors) – Very good idea

All of these suggestions have their strengths and their drawbacks.
With controversial decisions lobby groups often become involved. It is clearly important to hear their voice. Often they are extremely well informed on the issues. On the other hand it is not the job of an HIA to be the advocate or the opponent of a lobby group. It is important also to “hear the voices” of those who hold different views to the lobby group.

Real participation will require changes to usual working arrangements. It may be necessary to hold meetings outside working hours. Perhaps community members should be paid for their participation – why not? All the professionals are paid. Community members may need travel expenses and perhaps facilities such as creches. They may need support to contribute effectively to committee working styles, with which they are unfamiliar, or maybe you should adopt different working styles to make it easier for them to contribute.

One simple test of the quality of participation is the number of community members involved. Is it likely that an HIA, which involved less than 10 community members was really participatory? A very large number of so called participatory HIAs would fail that test.

There is a large literature on how to “hear people’s voices” and how to work with communities. Doing this is a skill and it is not easy. If you are going to use participative methods you will have to think carefully about how you are going to do it.

**Theoretical objections to participation**

There can be no objection to true participation but many objection to the imperfect or tokenistic participation, which is all too common.

The aim of participation is to “hear the voices” (note the plural) of the community. The problem is that inevitably some voices have to represent other voices. We then have to ask

- Who represents whom?
- How are those representatives chosen and who by?
- Which are the voices which are not heard?

Some of the solutions tried include

- A claim that professionals (GPs, community nurses, social workers) know the views of “their clients” and can speak for them. Has anyone asked the clients?
- Self appointed community spokespeople – With well connected leaders this works well but it may effectively exclude other voices. For example in some communities older males are the traditional leaders – do they speak for the females in the community?
- Individuals selected by the HIA group to be the “voice of the voiceless”. – by what right does the HIA group select voices for the community?
- Training local residents to identify and communicate community views.
Often HIA practitioners attempt to achieve participatory democracy. It might be better to work through the existing elected democracy. True, perhaps only 25% or less of the electorate voted for their councillor, but he or she has probably a much better claim than any one else to represent the views of the constituency.

It is very easy to damn attempts at participation because they do not achieve reasonable representation, but they may well be better than the alternative of no participation.

Inadequate or half-hearted attempts to obtain participation in an HIA all too often looks like very paternalistic practice.

**Ethics and Values**

HIA is not a value neutral activity. Almost every step – deciding whether to do an HIA – defining the question to be examined – choice of method – choice of evidence – interpretation of evidence – whom to involve – and so on – is informed by values. You need to be aware what those values are.

The Gothenburg consensus statement listed four values of HIA

- Equity
- Sustainability
- Participation
- Ethical use of evidence

To these might be added

- Effective use of resources (Value for money)
- A broad view of health
- Impartiality

**Equity**

In any proposal there will be winners and losers (or people who gain less). The value of equity requires that impacts should be fairly distributed. Fair distribution probably implies that any negative impacts should fall on those who have most and are therefore best able to bear them while the greatest positive impacts should be experienced by those who have least.

In considering how a value of equity would influence the conduct of an HIA. We need to distinguish two stages - assessment of options, which is the business of the HIA, and the decision about options, which is the business of the decision makers.
The assessment stage asks how will the options affect distribution of health – who will experience positive impacts (become healthier) and who will experience negative impacts (become less healthy). The recommendation part of the HIA might include suggestions as to how the resulting distributions might be made fairer (for example by compensation).

The decision stage asks which of these distributions is fairest, does most to increase equity and should therefore be chosen.

**Sustainability**

Sustainability means meeting the needs of the present without compromising the ability of future generations to meet their own needs. In working out what the value of sustainability means for the practice of HIA, as for equity, we have to distinguish between the assessment stage and the decision or choice of options stage.

The assessment stage asks what will be the consequences of each option immediately and at different times in the future possibly looking centuries into the future.

The decision stage asks for each option how the future consequences should be weighed against the immediate consequences and on those grounds which option should be preferred.

Sometimes future impacts are “discounted” which may have the effect of making the decision look like a technical one, but discounting is merely a way of presenting a value judgement in numerical form.

**Impartiality**

One of the dominant values of this guide is that value and political judgements ought to be taken by people or systems that are democratically accountable rather than by HIA experts. For that reason the distinction between assessment (a technical activity) and decision (a value judgement) is emphasised.

Earlier in this guide it has been stated that all activities are informed by values and so it might be argued that impartiality is an unattainable goal. However in the context of HIA impartiality means that one attempts to predict the consequences of each option without deciding whether they are good or bad and that one applies the same methods of enquiry and same standards of evidence to the assessment of all options.
Quantification

Magnitude

In order to make trade-offs between different impacts one needs to know not only the nature of the impacts but also how big they are (their magnitude). One extra death in a hundred years might be considered less important than one extra death every year. The HIAs description of impacts should therefore attempt to describe both the nature and the magnitude of each impact.

One can either describe magnitude

- In numbers (ratio scale)
  
  Eg 100 deaths, 27 new cases of asthma

- Or in words (ordinal scale)
  
  Eg big, small, negligible impact, - serious, slight, trivial impact

Note that if you are describing magnitude in words you do not avoid the problem of quantification – what do big, small and negligible mean? How did you decide that the magnitude was small rather than big or negligible?

Numeric descriptions require epidemiological approaches to assessment. They carry the danger of implying a degree of certainty and accuracy which rarely exists in HIA.

Uncertainty and likelihood

In describing an impact you may well be unsure as to whether it exists. This is more likely to be the case for small impacts but it could be the case for a large impact. You should therefore describe certainty and magnitude separately. For example it is certain that taking the contraceptive pill increases risk of thrombosis but the risk is very small. On the other hand it is unsure how unemployment in many circumstances will affect risk of mortality but the risk could be quite large. It is also frequently the case that one is certain that an impact exists but uncertain about its size. Uncertainty should always be admitted in an HIA report, it does not help anyone to pretend you are sure when you are not.

Likelihood is a related idea to uncertainty. You may well be sure that if a plane crashes it will have a very big negative impact but be unsure how likely a plane is to crash. When describing impacts through catastrophic events it is helpful to give some estimate of the likelihood – once in ten years, once in a hundred years, once in a thousand years.

Conclusion

This guide has emphasised that HIA is intended to help decision makers. There is no “best way” of doing an HIA. Each one has to be designed to fit the question it is intended to answer. This guide has introduced a range of approaches and tools for HIA. You have to think clearly and decide which of these are best suited to the decisions that you are trying to inform.