



*Health Development Agency*

Health impact assessment

*A review of reviews*

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Every effort has been made to be as accurate and up to date as possible in the preparation of this document. However, we would be very pleased to hear from readers who would like to comment on the content or on any matters relating to the accuracy of the briefings. We will make every effort to correct any matters of fact in subsequent editions of the briefings.

Comments can be made by using our website:  
[www.hda-online.org.uk/evidence](http://www.hda-online.org.uk/evidence)

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# Introduction

## Developing the HDA Evidence Base

In 1999 the white paper *Saving Lives: Our Healthier Nation* (Department of Health, 1999a) was published. It signalled that the HDA would be established and that it would have, as one of its roles, building the evidence base in public health with a special focus on reducing inequalities in health.

In April 2001 the Department of Health (DH) published *A Research and Development Strategy for Public Health* (DH, 2001). One of the tasks identified by this strategy was for the HDA to maintain 'an up-to-date map of the evidence base for public health and health improvement'. The Research and Information Directorate of the HDA has been commissioned by the DH to develop the evidence base across a number of topic areas and this work is to be presented in a series of briefings\*.

These briefings outline the state of the evidence and propose suggestions for the future direction of research to fill any identified gaps or inconsistencies in the evidence base. The briefings will also be routinely updated when new evidence is available.

It was agreed with the DH that the starting point for developing the HDA Evidence Base was to undertake a series of 'review of reviews'. One of the topics chosen was health impact assessment (HIA), and hence this briefing and suitable references will join many other topic and methodology based papers on the Evidence Base website ([www.hda-online.org.uk/evidence](http://www.hda-online.org.uk/evidence)) in 2002. For further details and discussion about the HDA's

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\* Topic areas include: teenage pregnancy, HIV/AIDs, sexually transmitted infections, smoking, alcohol, drugs, obesity, low birth weight, breastfeeding, social support in pregnancy, physical activity, mental health, accidental injury, depression in later life, and health impact assessment.

Evidence Base programme of work, please see Kelly et al., 2002.

This briefing presents a 'review of reviews' of the evidence of the effectiveness of the HIA approach. For the purposes of this briefing, effectiveness is defined as:

*'If and how the HIA approach informs the decision making process and, in particular, if it improves health and reduces health inequalities.'*

Through review and appraisal of the available systematic review level evidence this briefing:

- Identifies and assesses all relevant systematic reviews, syntheses, literature reviews and meta-analyses (it is not a systematic review of individual HIA case studies)
- Highlights the evidence for effectiveness of the HIA approach
- Identifies gaps in the evidence and provides recommendations for the development of the HIA approach, including further research.

The recommendations presented in this briefing are not only targeted at policy makers, but may also be useful to people new to HIA and a useful reminder for existing HIA practitioners and commissioners.

## Health impact assessment

### *What is HIA?*

HIA is a developing approach that can help to identify and consider the potential – or actual – health impacts of a proposal on a population. Its primary output is a set of evidence-based recommendations geared to informing

the decision making process. These recommendations aim to highlight practical ways to enhance the positive aspects of a proposal, and to remove or minimise any negative impacts on health, wellbeing and health inequalities that may arise or exist.

Although there is no single agreed way of doing HIA, there is a developing consensus about the core elements or stages of the process (HDA, 2002):

- Deciding whether to undertake an HIA – often referred to as **‘screening’**
- Planning how to undertake an HIA in a given context – often referred to as **‘scoping’**
- Identifying and considering a range of evidence for potential impacts on health and equity – sometimes referred to as **‘appraisal or assessment’**
- Deciding on, and prioritising specific recommendations for the decision-makers – sometimes referred to as **‘developing recommendations’**
- **Further engagement with decision-makers** to encourage adoption of recommendations or adaptation in the proposal
- **Ongoing monitoring and evaluation** to assess if the HIA recommendations were implemented, if they contributed to positive effects on health and equity; and if not, why not.

### *International and national policy context*

Policy impact appraisal is not new. It has occurred for economic, environmental, political and social reasons, with health being a recent addition. The Ottawa Charter for Health Promotion (First International Conference on Health Promotion, 1986) identified that health considerations should be relevant to all policy makers and they should be aware of the health consequences for their decisions. Joffe and Sutcliffe (1997) noted that the need to assess the health impact of public policy was endorsed in the Health for All strategy. The Department of Health, in its publication *Policy Appraisal and Health* (1995), has also acknowledged the importance of public policy as a determinant of public health and recommended that policy makers should assess health impacts.

In addition, it is now widely recognised that a variety of factors can affect health and health inequalities outside of the formal health services and structure (Dahlgren, 1995; Milner and Marples, 1997; Frankish et al., 1996; Mahoney and Durham, 2002). It has also been suggested that HIA offers a practical way to consider health and

inequalities within the decision making process at policy and other levels (European Centre for Health Policy, 1999; Mahoney and Durham, 2002).

HIA has been endorsed and signalled in a range of European and national policies and strategies. For example, at the European level, Article 152 of the Amsterdam Treaty calls for the European Union to examine the possible impact of major policies on health (European Commission, 1999). At a national level, despite there being no statutory requirement to undertake HIA there is recognition within England of the value of HIA as a resource to support efforts to improve health and particularly to address health inequalities. The government has clearly signalled its acknowledgement of the importance of the wider determinants of health and its commitment to promoting HIA at a policy level (Department of Health, 1999a). The recommendations of the *Acheson Report* on inequalities in health also reflect the importance of assessing the impact of policy on health inequalities (Department of Health, 1998). The value and importance of HIA has also been strongly endorsed or signalled by a range of other policies, programmes and guidance. For example:

- New Deal for Transport (DETR, 1998)
- New Deal for Communities (Cabinet Office, 1998)
- National Service Framework (CHD) (Department of Health, 2000)
- Modernising Governments (Cabinet Office, 1999)
- Promotion of Economic, Social or Environmental Wellbeing (DETR, 2001)

### *Regional and local development within England*

Even though HIA is still a relatively new and developing approach within England there is evidence of variable but steadily increasing activity at both the regional and local level. In a recent mapping exercise undertaken for a retrospective process evaluation 103 local level HIA case studies were identified (Jackson et al., in press). This is probably an underestimation. These case studies covered a wide range of projects, programmes and strategies that included topics such as housing, transport, regeneration and health.

To support the growing interest in HIA within England a number of specialist centres are emerging. These centres are actively involved in undertaking HIAs and promoting and supporting the approach within their locality, region and across other areas of the country.

In addition to these specialist academic centres there are a growing number of HIA specialist practitioner posts at both regional and local level. Such post holders are often responsible for commissioning and managing HIA and/or promoting and supporting the development of HIA within their organisation and across their locality and region. There are also a number of independent HIA practitioners, some of whom are attached to academic institutions and other organisations who are supporting/carrying out HIA.

As a consequence of national, regional and local level work a number of dedicated HIA resources, toolkits and websites disseminating this information are being developed. In addition a small number of dedicated training courses, whether short introductory overviews or the more intensive courses, are also being delivered.

For further information about the HIA approach – including drivers and benefits, when to undertake HIA, a more detailed description of the basic stages and some ideas on how to get started – see *Introducing Health Impact Assessment (HIA): informing the decision making process* (HDA, 2002). In addition, for further information on case studies, resources, toolkits and contact details of HIA practitioners visit [www.hiagateway.org.uk](http://www.hiagateway.org.uk)

# Methodology

A standard methodology has been developed by the HDA for the production of the Evidence Base briefing papers (HDA, in press). The methodology used to produce this briefing paper is outlined below.

## Identification of the relevant literature

An extensive and systematic search of the literature was conducted. The search strategy was devised in collaboration with the London Library and Information Development Unit; the search terms are shown in Appendix 1. Searches were conducted on the following:

### Electronic databases

- The Cochrane Library
- The DARE database
- National Research Register
- The Health Technology Assessment Database
- National Guidelines Clearinghouse
- National Coordinating Centre for Health Technology Assessment
- Health Services/Technology Assessment Text (HSTAT)
- Department of Health Research Findings Electronic register
- TRIP
- ScHARR
- Clinical Evidence
- Health Evidence Bulletins Wales
- MEDLINE
- EMBASE
- Psyc-INFO
- Socio-File
- CINAHL
- Pre-Medline
- Sociological Abstracts

- British Libraries Electronic Table of Contents Database (ZETOC)
- SIGN Guidelines
- Web of science

### Websites

- Medical Research Council (MRC)
- National Institute for Clinical Effectiveness (NICE)

### Internet gateways and search engines

- BUBL
- Social Science Information Gateway (SOSIG)
- Google

### Grey literature including dissertations and theses

- British Library Public Catalogue (SIGLE)
- North West Region Health Care Libraries Grey Literature Circulars
- ASLIB Index to Theses
- Dissertation Abstracts (DataStar web)
- Networked Digital Library of Theses and Dissertations
- Academic Dissertation Publishers
- Australian Digital Theses Program
- Virginia Tech Electronic Theses and Dissertation
- Lund University Dissertation Abstracts
- Wageningen Dissertation Abstracts

All databases were searched from January 1996 to January 2002\*. The searches of the above generated 242 references. All citations were downloaded into Reference Manager software. In addition, reference lists were checked for additional documents. Key experts (via

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\* 1996 was chosen as a starting point for the search strategies within all HDA Evidence Briefing Papers to ensure the task was manageable.

the European Centre for Health Policy HIA email list) were asked for relevant documents/abstracts. The above identified a number of websites and email addresses, all of which were also searched and/or contacted for appropriate publications/abstracts.

## Data handling process

Titles and abstracts of identified references were independently assessed for relevance by the authors of this briefing. The following inclusion criteria were used:

- English language only
- 1996 to January 2002
- Systematic reviews, syntheses, meta-analyses and literature reviews
- The effectiveness of the HIA methodology/approach/process (if and how the HIA approach informs the decision making process and, in particular, if it improves health and reduces health inequalities).

Abstracts were rejected if the document provided an overview and/or critical appraisal of HIA developments within a country/region/locality, or an individual HIA case study, or descriptive account of a tools/resources development. In addition papers that focused on other forms of impact assessment, for example environmental, were excluded. Where no clear decision could be made on the basis of the title or abstract, studies were considered relevant.

A total of 14 abstracts were considered to be relevant and the full documents were requested for retrieval. One document was not received before the cut-off date of 30 March 2002 and therefore was not included in this briefing.

A total of 13 documents were assessed independently by two reviewers (the authors). Each document was critically appraised in terms of transparency, systematicity, relevance and quality using the HDA critical appraisal form (Appendix 2)\*. The authors met to discuss whether the document met the HDA Evidence Base criteria and any disagreements were planned to be resolved through discussion and, if required, a third reviewer. However, this

was not necessary. There was no blinding of authorship of the documents. See Appendix 3 for a summary table of the 14 documents that were considered relevant, including a summary of the selection/rejection criteria for the 13 critically appraised documents.

In addition a number of further papers were identified (either when reviewing the abstracts or when reviewing references of retrieved documents) and considered useful to the 'Introduction' and 'Discussion and recommendations' sections of this briefing\*.

Key themes and gaps identified in the documents and other papers were mapped, collated and summarised. The briefing was written by Lorraine Taylor and Robert Quigley, and externally peer-reviewed by three reviewers.

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\* The critical appraisal form was adapted from the systematic review assessment forms used by the York Centre for Reviews and Dissemination and Health Evidence Bulletins Wales.

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\* It is important to note that these papers were rejected from the critical appraisal process after reviewing their abstracts.

# Findings

One of the 13 identified documents met the HDA's critical appraisal criteria (see Appendix 2) and was therefore used to inform the findings below, and included on the HDA Evidence Base website\*:

McIntyre, L. and Petticrew M. (1999). *Methods of Health Impact Assessment: a literature review*. MRC Social and Public Health Sciences Unit, Occasional paper No 2. [www.msoc-mrc.gla.ac.uk](http://www.msoc-mrc.gla.ac.uk)

McIntyre and Petticrew (1999) aimed to identify:

- What HIAs had been carried out
- What were the methods and results
- If the results of the prospective HIAs were validated by long-term follow-up.

McIntyre and Petticrew (1999) identified 20 HIA studies for inclusion (nine prospective and 11 retrospective). Thirteen of the HIA studies were undertaken on projects with the balance carried out on policy level initiatives. A range of topics was covered, for example transport, Common Agricultural Policy, urban regeneration, industrial development, irrigation, community safety and government sanctions.

All of the nine prospective studies used an existing HIA model; however, none of the retrospective HIAs used a recognised model to structure the process. For further details of the models used see the full review.

The authors were unable to determine the most appropriate methodological approach for HIA. This was because HIA was identified as a relatively new and

developing approach, with limited case studies and associated evaluations to draw on. Similarly, the authors were unable to determine which factors need to be considered when assessing the validity of the conclusions of the HIA. As a consequence of these points, the authors were unable to assess the long-term follow-up of prospective HIAs.

There is currently no review-level evidence available to demonstrate if and how the HIA approach informs the decision making process and, in particular, if it improves health and reduces health inequalities.

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\* Although the remaining 12 documents were not used to inform the findings, they provided useful information for the Introduction and Recommendations sections. These documents are outlined in Appendix 3 and full references are provided in the Reference section.

# Limitations

As with any review there are a number of limitations that need to be considered. In relation to this briefing paper the following limitations have been identified.

Although the HDA values the full range of evidence to inform thinking about the effectiveness of an intervention or approach, for practical reasons a decision was made to limit the evidence considered during 2001-2 to reviews alone. Systematic reviews, meta-analyses and other reviews of effectiveness have the advantage of aggregating large amounts of primary data which can be evaluated and summarised (Elliott et al., 2001).

This approach is not without its drawbacks. It is acknowledged that there are considerable limitations in drawing conclusions on this type of evidence alone. Not least, this is because the traditional processes to identify, select and appraise reviews tend to favour a relatively narrow spectrum of potential evidence – mostly drawn from randomised controlled trials and/or which sit easily within traditional evidence hierarchies.

Other types of methodological approaches, for example, qualitative work, tend to be under-represented in reviews of effectiveness\*. Also, systematic reviews, meta-analyses and other reviews of effectiveness tend to rely on published evidence and yet publication policies may exclude articles with inconclusive or negative findings.

As previously mentioned, the inclusion criteria for the search strategy was 1996 to January 2002 and English language papers only. The search terms used focused only on health impact assessment and did not include other areas of impact assessment, for example environmental or social impact assessment. These decisions were made to

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\* For a detailed discussion of the rationale for this approach, together with its implications for the conclusions that can be drawn about effectiveness please see Kelly et al., 2002.

ensure the project remained manageable given the limited number of staff and timeframe. Coincidentally, it is arguable that HIA was a relatively new concept within the UK until 1996. Linked to this, a number of documents that the authors were aware of were not referenced in the 242 references identified by the search strategy. This is because many HIA documents are in the grey literature and have not been entered into searchable databases. Therefore, there may well have been relevant reviews, particularly from other countries, both before 1996 and in the grey literature that have not been included in this briefing. In addition, a broader range of evidence about the effectiveness of other impact assessment methodologies has not been reviewed.

The 'Discussion and recommendations – other papers' section in this briefing was drawn from the remaining 12 critically appraised documents and other background papers that were identified as a result of the search strategy (searching for systematic reviews, meta-analyses, literature reviews and syntheses). Therefore it is important to note that the information discussed in this section of the briefing (pp9-12) was not drawn from a systematic search of all of the available HIA literature. Furthermore, some of the papers used to inform these recommendations were not critically appraised (as were the 12 documents) and so are not based on an objective and systematic assessment of the papers' content\*.

The subjectivity of the critical appraisal process also needs highlighting. While it is designed to be as objective as possible, the authors acknowledge that decisions do contain a subjective element, and so consideration of this must be given when reading the 'Findings' and 'Discussion and recommendations' sections.

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\* These caveats only apply to the 'Discussion and recommendations – other papers' section of this briefing paper, not to 'Recommendations – McIntyre and Petticrew (1999)'.

# Discussion and recommendations

This section highlights the main recommendations from the McIntyre and Petticrew (1999) review. In addition, building on McIntyre and Petticrew's recommendations, discussion and recommendations from the following are also presented:

- The 12 critically appraised documents that did not meet the HDA Evidence Base methodology
- Papers identified either when reviewing the abstracts, and when reviewing references of retrieved documents and/or documents suggested by key experts in the field.

## Recommendations – McIntyre and Petticrew (1999)

As previously stated, at the review level there are wide gaps in the evidence base for this topic. This is primarily because HIA is a new and developing approach and consequently there are limited published primary studies for a review to draw on.

The McIntyre and Petticrew (1999) review highlighted the need to:

- Undertake a range of different types of HIA, both retrospective and prospective
- Publish and disseminate the results and conclusions of existing studies in order to facilitate learning, appraise the models used and appraise the impacts identified during the process
- Consider the nature of the evidence used as inputs to the HIA process, including the role of confounders, appropriate length of follow-up and ascertainment of exposure
- Consider how to appraise what and how the HIA achieved and explore the potential development of an appraisal checklist

- Utilise and develop a wide range of study designs and methods to facilitate data collection and presentation.

## Discussion and recommendations – other papers

Suggested areas for further research and development for the HIA approach have been broken down into the following areas (in no particular order):

- Monitoring and evaluation
- Inequalities
- Evidence
- Methodology.

### *Monitoring and evaluation*

Relatively few HIA case studies have been evaluated to date (Jackson et al., in press; Parry and Stevens, 2001; Lock, 2000). One example is the audit evaluation of the Alconbury HIA (Jewell, 2000). In addition, a number of reports have cited that the Manchester Airport HIA contributed to changes being made to the proposal (Winters, 1997; Milner and Marples, 1997) – however, it is important to note that a formal evaluation was not undertaken.

Two evaluations are also in progress (HDA retrospective process evaluation, and the retrospective and concurrent evaluation of four rapid HIAs undertaken on London Mayoral strategies).

To determine the effectiveness of the HIA approach, and to ensure quality, it is necessary to monitor and evaluate how the HIA process is undertaken (process), whether its recommendations were implemented (impact) and the effect on the health of the local population, for example, did it make a difference? (health outcome).

In addition there is a need to determine if the HIA approach adds value to the decision making process, and to weigh up its costs and benefits over and above current/other approaches. For example, decision analysis that may be used to assess the health impacts of a proposal (Milner and Marples, 1997; Frankish et al., 1996). Responsibility for the various monitoring and evaluation activities also needs to be specified (Douglas et al., 2001).

### Recommendations – monitoring and evaluation

It is therefore essential for:

HIA practitioners to engage with monitoring and evaluation activities, and disseminate their completed case studies, their evaluation findings and key lessons learned.

Without this, the effectiveness of HIA and how it contributes to improving health and reducing health inequalities cannot be demonstrated. It is also imperative that the aims and objectives of the HIA are clearly agreed and documented in order to inform the basis for monitoring and evaluation activities undertaken.

Monitoring and evaluation activities could include assessing:

#### Process evaluation

- How the HIA was undertaken, in particular, how any inequalities were addressed?
- What resources (financial, human, time) were used and the associated opportunity cost?
- What evidence was used, and how was it used to inform development of recommendations?
- How were health inequalities assessed?
- How were recommendations formulated and prioritised (what factors influenced this decision making process)?
- How were the decision makers involved and engaged in the process, what were their expectations and were they fulfilled with the limited resources available?
- How and when were the recommendations delivered to the relevant decision makers?

#### Impact evaluation

- How and when were the recommendations accepted and implemented by the decision makers – and if not, why not?

- What if any unintended impacts were associated with the HIA approach, for example: partnership working, raising the profile of local health needs and putting health on the agenda?

### Outcome evaluation

The difficulty in establishing the connection between HIA and broader improvements in public health is acknowledged in a number of papers (Department of Health, 1999b; Mahoney and Durham, 2002; Lock, 2000). Ratner et al. (1997) also acknowledged the difficulty of demonstrating the health outcomes of the HIA approach due to confounding factors. For example, a health outcome can have multiple causes and each cause can have a large number of health (and non-health) determinants. Attribution of health outcomes to any one intervention/approach is therefore problematic. Paradoxically, if the HIA is successful and the recommendations are implemented, it may be impossible to test whether the predictions were accurate.

As a consequence of these difficulties it is necessary to explore whether it is feasible and appropriate to:

- Assess the associated health outcomes (both intended and unintended, positive and negative) of the HIA approach. This includes exploring:
  - Whether the identified predictions did indeed materialise
  - Were the predictions made during the appraisal accurate
  - The effectiveness of the HIA approach to achieve change in the health of the population or health determinants; for example, whether the anticipated positive effects on health, wellbeing and equity were in fact enhanced, and any negative ones minimised
- Undertake an economic analysis of the HIA approach.

As a consequence of carrying out the above, it will then be feasible to undertake a systematic review of individual HIA case studies to determine if and how the HIA approach informs the decision making process and, in particular, if it improves health and reduces health inequalities.

### *Inequalities*

Proponents of HIA advocate its use to help raise awareness and address health inequalities (Douglas and Scott-Samuel, 2001; Mahoney and Durham, 2002). It is

suggested that this can be achieved by not only assessing how the proposal affects a population – but more specifically, how these effects are distributed between the different subgroups of the population concerned (Douglas et al., 2001). It is also recognised there is a tension when trade-offs are required between improving average health and improving the health of the most disadvantaged to reduce inequalities in health (Douglas and Scott-Samuel, 2001).

However, in reality, Hansell and Aylin (2000) identified that little has been published relating specifically to the assessment of equity issues in HIA. While Parry and Scully (in press), on behalf of the World Health Organization Regional European Office's HIA Methods and Strategy Programme, have undertaken a review of how inequalities have been theoretically and practically handled in HIA, there is still currently limited published work or guidance specially dedicated to this issue ([www.euro.who.int/healthimpact](http://www.euro.who.int/healthimpact), checked 25/7/2002).

### Recommendations – inequalities

- Encourage HIA practitioners to specifically consider inequalities in all aspects of the HIA process. (As a minimum, the impact of the proposal on these population subgroups – gender, age, socioeconomic status and ethnicity – should be collected, collated and analysed.)
- Produce good practice guidance to help HIA practitioners assess the impacts of a proposal not only on disadvantaged groups but across the population.
- Explore the feasibility of using health equity audits within HIA.

In turn this will enable practitioners/researchers to assess if the HIA approach contributes to improving health and reducing health inequalities.

### Evidence

As previously highlighted, not only is it important to develop the evidence base for HIA (ie the effectiveness of the approach), but there is also a need to appraise evidence on both the determinants of health and the health impacts of interventions within the HIA process. However, appraising evidence can be complex because of the interrelationship between different health determinants and their causal pathways (Lock, 2000). Also, it is not always easy to isolate the influences of particular interventions on complex and dynamic social

systems. Mindell et al. (2001) recognised the need to identify and document the causal pathways of health impacts where known. It is, though, acknowledged that the existing evidence base for various health determinants and interventions to improve health can be patchy, and therefore the prediction of health impacts tends to be incomplete, and in turn open to an element of subjectivity and political drivers (Fehr, 1999; Parry and Stevens, 2001). It has also been suggested that when predicting health impacts these need to be understood as the 'prediction of tendencies and types of impacts', rather than absolute measures (Banken, 1999).

Even though HIA case studies undertaken to date have focused on common topics, for example, housing, transport and regeneration, the evidence base to inform these HIAs has not always been easily accessible or complete due to the lack of systematic search strategies and quality assessment criteria (Parry and Stevens, 2001).

### Recommendations – evidence

- Collate and synthesise the best available evidence for a range of common determinants of health, their inter-relationships and mapping of causal pathways.
- Collate and synthesise the best available evidence for a range of common health interventions and health impacts, and in turn their causal pathways.
- Explore how best to disseminate the available evidence base on a range of common determinants of health and health interventions.
- Determine how to critically appraise and weight evidence from a wide range of sources, including balancing quantifiable evidence with qualitative evidence.

### Methodology

Although there is no fixed, formally agreed model/way of doing HIA, there is a developing consensus about the core elements or stages of the process\*. HIA also draws on other impact assessment areas, for example environmental impact assessment, and uses a wide variety of tools and methods; for example, literature reviews, epidemiological modelling of risk, key informant interviews and focus groups to elicit community views and perceptions. The flexibility of using a variety of methods appropriate to what is being studied and its

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\* In 1997, Milner and Marples concluded that no 'simple, cheap yet reliable off the shelf toolkit' is available for HIA.

potential for inter-disciplinary cooperation are cited as strengths (Scott-Samuel, 1998; Fehr, 1999). However, it has been noted that there is a need for further methodological developments which are both 'universally accessible' and appropriate for 'any user or group' of practitioners (Mittlemark, 2001; Banken, 1999).

While HIA has the potential to foster community empowerment, there is a requirement to explore how best to involve and work with local communities to ensure expectations are not unreasonably raised, are ethical and are methodologically robust (Parry and Stevens, 2001; Morrison et al., 2001).

Furthermore, it is noted that HIA should focus on areas where change is possible and partners/decision/policy makers are willing to implement any recommendations developed (Douglas, 1998). This also requires an understanding of the policy making process (Kemmer, 2001).

### **Recommendations – methodology**

- Disseminate information on the HIA models available, highlighting any potential flexibility and capacity to be tailored to specific situations and the appropriate time to use different models.
- Provide an overview of the differing tools and methods that can be used in the HIA process, identifying their strengths and weaknesses, and outlining the resources and skill/expertise required.
- Appraise the value and contribution of different types and levels of HIA, for example, prospective versus retrospective versus concurrent; and rapid versus comprehensive.
- Provide an overview of good practice in relation to the key stages within the HIA approach, for example, screening, scoping, appraisal, developing recommendations, and monitoring and evaluation.
- Explore good practice within other impact assessment areas and in turn explore the feasibility of integrated HIA with other impact assessment areas.
- Explore how best to influence the decision making process (for example, involving decision makers in the process, and ensuring HIA recommendations arrive ahead of key decision points).
- Explore the feasibility and appropriateness of prioritising health impacts, in particular how to address conflicting impacts, short- versus long-term impacts, and impacts on different population groups.

- Determine when and how it is best to involve and work with local communities to ensure expectations are not unreasonably raised.

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## APPENDIX 1

### Health impact assessment: search terms used by the London Library and Information Development Unit

#### Main search terms

Health impact assessment (as health near impact\* near assess\*)

#### *Policy (health and non-health sectors) terms index terms:*

Health policy (MeSH, Soc Abs)  
Health promotion (MeSH) or health education (Soc Abs)  
Public health (MeSH, Soc Abs)  
Health planning (MeSH, Soc Abs) Planning (Soc Abs)  
Local planning (Soc Abs)  
Social planning (Soc Abs)  
State planning (Soc Abs)  
Policy making (MeSH, Soc Abs)  
Public policy (MeSH, Soc Abs)  
Government policy (Soc Abs)  
Social policy (Soc Abs)  
Social control policies (MeSH) – use with caution

#### *Text word terms:*

Policy/policies (as polic\*)  
Strategy/strategies (as strateg\*)  
Initiative/initiatives (as initiative\*)  
Projects (as project\*) – use with caution  
Programmes (as program\*) – use with caution

#### *Impact terms – text word terms:*

Impact (as impact\*)  
Consequences (as consequence\*)  
Implications (as implication\*)  
Prediction (as predict\*)  
Effect or effects (as 'health near (effect or effects)') – use with caution  
Affect (as '(affect or affects) near health') – use with caution

#### **Health Impact Assessment: terms used to guide selection of retrieved articles**

Policies/strategies  
Non-health sector (transport, housing, environment, education, employment etc)  
Health sector (broadly defined)  
Regeneration/renewal

#### **National/local/community policies**

National/local/community strategies

Single regeneration budgets  
New deal for communities/transport  
Health action zones  
Health improvement programmes  
Education action zones  
Sure Start  
Healthy living centres  
Neighbourhood renewal  
Local strategic partnerships  
Community plans  
Health improvement plans  
Best value reviews  
Local authority  
Health authority  
Pollution prevention control regulations  
Environmental impact assessment  
Strategic impact assessment  
Strategic environmental assessment

#### **Generic terms**

Social exclusion/inclusion  
Deprivation  
Health inequalities (reducing)  
Poverty  
Variation  
Marginalised

#### **Population groups**

Gender  
Ethnic groups  
Socio-economic groups/social class/social patterning  
Vulnerable groups  
Community groups

#### **Assessment terms**

Risk assessment (MeSH, Soc Abs)  
Decision making (MeSH)  
Policy analysis (Soc Abs)  
Program evaluation (MeSH)  
Evaluation studies (MeSH)  
Prospective studies (MeSH)  
Retrospective studies (MeSH)  
Program development (MeSH)  
Process assessment (health care) (MeSH)

### **Text word terms**

Appraisal/appraising (as apprais\*)  
Assessment/assessing (as assess\*)  
Evaluation/evaluating (as evaluat)  
Analysis/analyses/analysing (as analys\*)

### **Review filters**

York CRD search strategy 1 (high sensitivity, low precision) [www.york.ac.uk/instlcrd/search.htm#1](http://www.york.ac.uk/instlcrd/search.htm#1)

### **Index terms**

Literature reviews (Sac Abs)

### **Text word terms**

Review\*  
Overview\*  
Literature near search\*  
Critical\* near apprais\*  
Meta-analys\*  
Meta analys\*  
Metaanalys\*  
Evidence-bas\*  
Evidence near bas\*  
Synthes\* and (literature or research\* or studies or data)  
Pooled near analys\*  
Data near pool\*

Note: some terms are common words and should be used with caution in high yield databases such as Medline, and/or long time periods, as they may produce an unacceptably high number of spurious results.

## APPENDIX 2

### HDA Evidence Base – critical appraisal tool

Authors: \_\_\_\_\_

Title: \_\_\_\_\_

Source: \_\_\_\_\_

Relevance to topic			
Does this paper address your topic area?	Yes	No	Unsure
Circle the type of paper:			
• Systematic review			
• Meta-analysis			
• Synthesis			
• Literature review			
• Other review (please specify)			
Does it address (circle as appropriate)?			
• Effectiveness (interventions and treatments)			
• Causation			
• Monitoring and surveillance trends			
• Cost			
• Other (please specify)			
Transparency			
Does the paper have a clearly focused aim or research question?	Yes	No	Unsure
Consider whether the following are discussed:			
• The population studied	Yes	No	Unsure
• The interventions given	Yes	No	Unsure
• The outcomes considered	Yes	No	Unsure
• Inequalities	Yes	No	Unsure
Systematicity			
Do the reviewers try to identify all relevant English language studies?	Yes	No	Unsure
Consider whether details are given for:			
• Databases searched	Yes	No	Unsure
• Years searched	Yes	No	Unsure
• References followed up	Yes	No	Unsure
• Experts consulted	Yes	No	Unsure
• Grey literature searched	Yes	No	Unsure
• Search terms specified	Yes	No	Unsure
• Inclusion criteria described	Yes	No	Unsure
Is it worth continuing?	Yes	No	
Why/why not?			

<b>Quality</b>			
Do the authors address the quality (rigour) of the included studies? Consider whether the following are used:	Yes	No	Unsure
• A rating system	Yes	No	Unsure
• More than one assessor	Yes	No	Unsure
If study results have been combined, was it reasonable to do so? Consider whether the following are true:	Yes	No	Unsure
• Are the results of included studies clearly displayed?	Yes	No	Unsure
• Are the studies addressing similar research questions?	Yes	No	Unsure
• Are the studies sufficiently similar in design?	Yes	No	Unsure
• Are the results similar from study to study (test of heterogeneity)?	Yes	No	Unsure
• Are the reasons for any variation in the results discussed?	Yes	No	Unsure
What is the overall finding of the review? Consider: • How the results are expressed (numeric – relative risks, etc) • Whether the results could be due to chance (p-values and confidence intervals)			
Are sufficient data from individual studies included to mediate between data and interpretation/conclusions?	Yes	No	Unsure
Does this paper cover all appropriate interventions and approaches for this field (within the aims of the study)? If no, what?	Yes	No	Unsure
<b>Relevance to UK</b>			
Can the results be applied/are generalisable to a UK population/population group?	Yes	No	Unsure
• Are there cultural differences from the UK?	Yes	No	Unsure
• Are there differences in healthcare provision with the UK?	Yes	No	Unsure
• Is the paper focused on a particular target group (age, sex, population sub-group etc)?	Yes	No	Unsure
<b>Accept for inclusion onto Evidence Base?</b>	Yes	No	Refer to third party
<b>Additional comments</b>			

## APPENDIX 3

### Summary table of critically appraised documents

Author and year	Name of review	Clear aim or research question	Transparency and systematicity			Relevant to Health Development Agency brief	Included or excluded
			Details of databases and years searched	Details of search strategy	Details of inclusion/exclusion criteria		
McIntyre and Petticrew (1999)	Methods of Health Impact Assessment: a literature review	Yes; to determine if a range of HIAs had been carried out; what methods had been employed; and whether long-term results had been followed up	✓	✓	✓	Yes	Included: systematic, transparent and relevant
Buroni et al. (2002)	An integrated approach to strategic health impact assessment. Chapter 4. Model review	Yes: to identify the advantages and shortcomings of the methods, guidelines and tools currently used in the assessment of health	✗	✗	✗	Not a review about the effectiveness of the HIA approach	Excluded: not transparent, systematic or relevant
Department of Health (1999)	Health impact assessment: report of a methodological seminar	Yes: to reproduce papers presented at a Department of Health HIA seminar	✗	✗	✗	Not a review about the effectiveness of the HIA approach	Excluded: not transparent, systematic or relevant
Frankish et al. (1996)	Health impact assessment as a tool for health promotion and population health	No	✗	✗	✗	Not a review about the effectiveness of the HIA approach	Excluded: not transparent, systematic or relevant
Hansell and Aylin (2000)	Routine data and health impact assessment – a review of epidemiological studies of socio-economic influence on health and evaluation of outcome indicators derived from routine health data for health impact assessment	Yes: to review health inequalities literature to examine the possibility of quantifying health effects; to explore the routine use of health data in HIA; to identify needs for additional sources of routine data	Databases ✓ Years ✗	✓	✗	Not a review about the effectiveness of the HIA approach, rather a review of the routine data sources that may be of use to those undertaking a HIA	Excluded: not relevant to research question
Ison (2000)	Resource for health impact assessment (Volume 1)	Yes: to develop a resource for HIA to support the development and implementation of the London Health Strategy	✗	✗	✗	Not a review about the effectiveness of the HIA approach	Excluded: not transparent, systematic or relevant
Lehto and Ritsatakis (1999)	Health impact assessment as a tool for intersectoral health policy: a discussion paper for the conference 'HIA: from theory to practice', Gothenburg, 28-31, October 1999	Yes: to review the recent development of models and strategies for HIA	✗	✗	✗	Not a review about the effectiveness of the HIA approach	Excluded: not transparent, systematic or relevant

Author and year	Name of review	Clear aim or research question	Transparency and systematicity			Relevant to Health Development Agency brief	Included or excluded
			Details of databases and years searched	Details of search strategy	Details of inclusion/exclusion criteria		
Lewis (1998)	Health impact assessment guidelines document: review of recommendations					Excluded: document requested, but did not arrive	
Mahoney and Durham (2002)	Health impact assessment: a tool for policy development in Australia (Interim literature review and briefing paper)	Yes: provides an overview of HIA, describes the critical concerns emerging in the literature and includes an overview of its application in a range of countries	X	X	X	Excluded: not transparent, systematic or relevant	
Milner and Marples (1997)	Policy appraisal and health project. Phase 1: a literature review	Yes: reviews the published and grey literature on HIA of 'non-health' public policy, including: how health impact is conceptualised and measured; the range of possible impacts on health; direct and indirect impacts; approaches used; barriers and facilitating factors at a practical level	X	X	✓	Excluded: not transparent or relevant	
Nordic School of Public Health (2000)	Health impact assessment: from theory to practice. Report on the Leo Kaprio workshop, Gothenburg, 28-30 October, 1999	Yes: to present the work of the meeting and indicate some of the actions already stimulated by the workshop	X	X	X	Excluded: not transparent, systematic or relevant	
Parry and Scully (in press)	Health impact assessment and the consideration of impact equalities: where are we and where do we want to go? Do we need a map?	Yes: to review models and guidance proposed for the conduct of HIA; to review published HIA case studies; and to consider whether a 'checklist' might highlight inequalities and to propose items for such a list	X	X	X	Excluded: not transparent, systematic or relevant	
Ratner et al. (1997)	Setting the stage for health impact assessment	No	X	X	X	Excluded: not transparent, systematic or relevant	
Winters (1997)	Health impact assessment: a literature review	Unsure: 'to give some practical insight into the methods that can be applied to HIA'	X	X	X	Excluded: not transparent, systematic or relevant	