



**BEST**

Board on Environmental Studies and Toxicology

# **Improving Health in the United States: The Role of Health Impact Assessment**

Committee on Health Impact Assessment

Board on Environmental Studies and Toxicology

Division on Earth and Life Studies

National Research Council

**THE NATIONAL ACADEMIES**  
*Advisers to the Nation on Science, Engineering, and Medicine*



# Outline

## **Statement of Task**

### **Committee composition**

### **Root Causes of Ill health**

### **Health Impact Assessment – committee definition**

### **Elements of HIA – screening, scoping, assessment, recommendations, reporting, monitoring and evaluation**

### **Major issues for deliberation**

- **-Need for Evaluation data**
- **Defining HIA boundaries**
- **Quantitative estimates**
- **Synthesizing dissimilar health effects**
- **Engaging stakeholders**
- **Quality and credibility of HIA**
- **Managing expectations**
- **Integrating HIA into EIA**

### **Advancing HIA in the US**

- **Societal awareness and education**
- **Structures and policies to support HIA**
- **Research and scholarship**

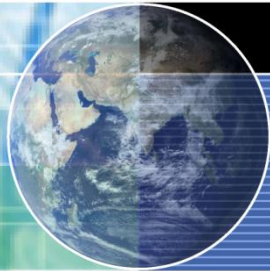
### **Concluding thoughts**



# Statement of Task

The committee was asked to do the following:

- Develop a framework, terminology, and guidance for conducting HIA of proposed policies, programs, and projects.
- Assess the value and potential value of such assessments; the impediments and countervailing factors that have limited the practice of HIA to date; the circumstances and criteria for conducting them; the concepts, tools, and information required; and the types, structure, and content of HIAs.



# Committee

**Richard J. Jackson** (*Chair*), University of California, Los Angeles

**Dinah Bear**, Attorney at Law, Washington, DC

**Rajiv Bhatia**, San Francisco Department of Public Health; University of California, San Francisco

**Scott B. Cantor**, The University of Texas MD Anderson Cancer Center, Houston

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**Ana V. Diez Roux**, University of Michigan, Ann Arbor

**Carlos Dora**, World Health Organization, Geneva, Switzerland

**Jonathan E. Fielding**, Los Angeles County Department of Public Health, Los Angeles, CA

**Joshua S. Graff Zivin**, University of California, San Diego

**Jonathan I. Levy**, Boston University School of Public Health, Boston, MA

**Julia B. Quint**, California Department of Public Health (retired), Berkeley

**Samina Raja**, University at Buffalo, State University of New York, Buffalo

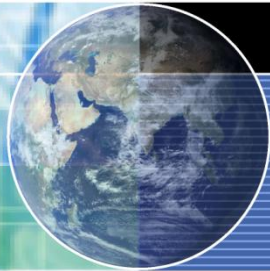
**Amy Jo Schulz**, University of Michigan, Ann Arbor

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# Root Causes of Ill Health

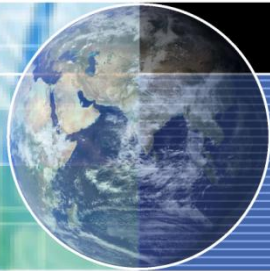
- Health is affected by a broad array of factors, including those that shape the conditions in which people are born, grow, live, work, and age.
- For example, public health has been linked to housing policies, transportation policies, urban planning policies agricultural policies, and economic-development policies.
- Thus, systematic assessment of the health consequences of various policies, programs, plans, and projects is critical for protecting and promoting health.



# Health Impact Assessment (HIA)

HIA holds promise for incorporating aspects of health into decision-making because of

- Its applicability to a broad array of policies, programs, plans, and projects.
- Its consideration of adverse and beneficial health effects.
- Its ability to consider and incorporate various types of evidence.
- Its engagement of communities and stakeholders in a deliberative process.



# Definition of HIA

The committee defined *health impact assessment* as follows:

HIA is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.

The committee recommended a six-step framework that includes the following elements:

- Screening
- Scoping
- Assessment
- Recommendations
- Reporting
- Monitoring and Evaluation





# Screening

**Screening** establishes the need for and value of conducting an HIA.

Factors to consider in determining whether to conduct an HIA:

- Potential for substantial adverse or beneficial health effects.
- Ability of HIA information to alter a decision or help a decision-maker to discriminate among options.
- Possibility that a disproportionate burden of the health effects is placed on vulnerable populations.
- Existence of public concern regarding health effects of a proposal.
- Opportunity to incorporate health information into a decision-making process.
- Ability of the HIA team to complete the assessment within the time and with the resources available.

*Scoping* identifies the populations that might be affected, determines which health effects will be evaluated in the HIA, identifies research questions and develops plans to address them, and identifies the data and methods to be used and alternatives to be assessed.

HIA should ultimately focus on the health effects of greatest potential importance.

*Assessment* describes the baseline health status of the affected populations and then characterizes the expected effects on health (and its determinants) of the proposal and each alternative under consideration relative to the baseline and each other.

A range of quantitative and qualitative analytic methods are used. Whatever approach is taken, an explicit statement of data sources, methods, assumptions, and uncertainty is essential.



# Recommendations

***Recommendations*** identify alternatives to the proposal or specific actions that could be taken to avoid, minimize, or mitigate adverse effects or to take advantage of opportunities for a proposal to improve health.

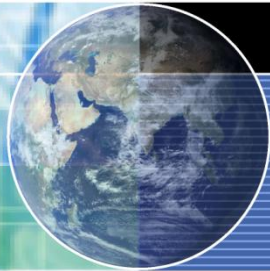
To formulate effective, actionable recommendations, the committee offers three points for consideration:

- Community input is essential for proposals that have localized effects.
- Recommendations should be drafted to address identified public-health risks; recognize feasibility issues, practical challenges, and other concerns; and fulfill the requirements of legal and policy framework governing the decision.
- Recommendations should include the elements of a health-management plan.

**Reporting** communicates findings and recommendations to decision-makers, the public, and other stakeholders.

At a minimum, the written HIA report should describe the proposed action or policy and alternatives that are the subject of the HIA, document the data sources and analytic methods used, identify the people consulted during the HIA process, and provide a clear, concise, and easily understood description of the process, findings, and recommendations.

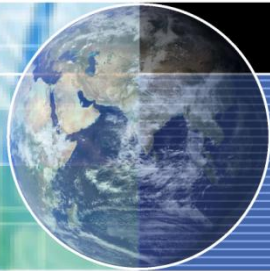
A well-designed dissemination strategy is critical for the success of an HIA. It should consider what groups need or will rely on the information and should determine the most effective ways to present the information, taking into account any barriers or challenges.



# Monitoring and Evaluation

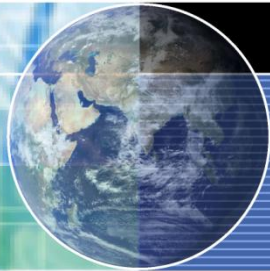
***Monitoring*** tracks the adoption and implementation of HIA recommendations or changes in health indicators as a new policy, program, plan, or project is implemented.

***Evaluation*** can assess (a) whether the HIA was conducted according to its plan of action and applicable standards, (b) whether the HIA influenced the decision-making process or had other important impacts, or (c) whether implementation of the proposal changes health outcomes or health determinants.



# Need for Evaluation Data

- Few HIA evaluation data have been published in the United States or elsewhere. The absence of evidence on the effectiveness and value of HIA may be a barrier to its more widespread use by decision-makers.
- However, the committee concluded that HIA is valuable because it seeks to correct the fundamental problem of failing to consider health at all in decision-making.



# Defining HIA Boundaries

- HIA practice should not be restricted by a narrow definition of health or restricted to any particular policy sector, level of government, type of proposal, or specific health outcome or issue.
- Instead, HIA should be focused on applications that present the greatest opportunity to protect or promote health and to raise awareness of the health consequences of decision-making.





# Quantitative Estimates

- Quantitative estimates of health effects have a number of desirable properties and should be provided when data and resources allow and when they will add valuable information to the decision-making process.
- However, it would be challenging or impossible for HIAs to predict all potentially important health effects quantitatively, given the breadth of health effects potentially considered in HIA, the sparse data available to support quantitative approaches, and the variability in practitioner capacity.



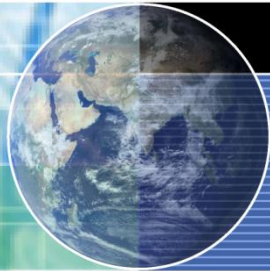
## Synthesizing Conclusions on Dissimilar Health Effects

- A practical challenge is synthesizing and presenting results on dissimilar health effects in a manner that is intelligible and useful to decision-makers and stakeholders.
- Although summary measures—such as quality-adjusted life years—can be used, the committee recommends that effects be described and characterized separately in a way that allows users to judge their cumulative nature.



# Engaging Stakeholders

- Stakeholder participation is critical for the quality and effectiveness of the HIA.
- It helps to identify important issues; focus the HIA scope; highlight local conditions, health issues, and potential effects that may not be obvious to practitioners from outside the community; and ensure that recommendations are realistic and practical.
- Whenever possible, strategies for stakeholder participation should extend beyond some minimal effort and address barriers and challenges to participation.



# Quality and Credibility of HIA

- Independent peer review could help to ensure that the process by which HIA is conducted and the conclusions and recommendations produced are as impartial, credible, and scientifically valid as possible.
- Some flexibility in the peer-review process would be necessary particularly for cases in which an HIA must be completed rapidly.



# Managing Expectations

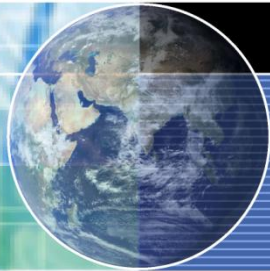
- HIA clearly is intended to inform decisions and ultimately to shape proposals so that adverse health effects are minimized and potential health benefits are optimized.
- However, health typically is only one factor in the decision-making process; practical factors—such as cost, feasibility, and regulatory authority—also play a prominent role.
- Thus, it is not reasonable to consider HIA successful only if it changes decisions.



# Integrating HIA into EIA

- The U.S. National Environmental Policy Act (NEPA) and some related state laws explicitly require the identification and analysis of health effects when environmental impact assessment (EIA) is conducted.
- Traditionally, EIA has included at most only a cursory analysis of health effects.
- Improving the integration of health into EIA practice under NEPA and related state laws is needed and would advance the goal of improving public health.

- Substantial improvements in public health will require a focused effort to recognize and address the health consequences of decisions made at all levels and in all sectors of government.
- International experience and the limited (but growing) experience in the United States provide important clues as to what is needed most to advance HIA.



# Societal Awareness and Education

- The common belief that our health depends only on genetic predisposition, health care, and personal choice is impeding the improvement of public health.
- There is a need to provide education and compelling examples that raise awareness of the many factors that affect health, the importance of considering them in all decision-making, and the role that HIA can play in the decision-making process.
- Also, high-quality education and training and continuing education of professionals will be vital for advancement of HIA in the United States.





## Structures and Policies to Support HIA

- Substantial interagency collaboration at the local, state, and federal levels is necessary to conduct HIA, especially those emanating from nonhealth sectors.
- Systematic use of HIA will depend on the full implementation of current requirements in existing laws—such as the National Environmental Policy Act—and, in certain cases, the adoption of policies and legal mandates to integrate health considerations into decision-making.



# Research and Scholarship

- Few evaluations of HIA effectiveness have been conducted in the United States.
- Because conducting HIA will probably require the investment of substantial public and private resources, research is needed to document HIA practices and their effectiveness in influencing decision-making processes and promoting public health.
- Also, the quality of HIA could be substantially improved if there were better evidence on the relationship of “distal” factors to health outcomes.



# Concluding thoughts (not from the academy)

- View from urban planning
  - Urban planning decisions are primarily local (at the scale of municipality, county, and occasionally state level)
  - HIA fits well within a long tradition of development impact analysis (DIA) in the United States
  - Important to consider the integration of HIA within existing planning processes