

Improving Health in the United States The Role of Health Impact Assessment

Significant improvements in Americans' health will occur if health impacts are more fully considered when developing policies, programs, plans, and projects, particularly in sectors that historically have been viewed as unrelated to health, such as transportation, education, agriculture, and housing. Health impact assessment has arisen as an especially promising way to factor health considerations into the decision-making process. It is essentially a structured process that uses scientific data, professional expertise, and stakeholder input to identify and evaluate the public-health consequences of proposals and suggests actions that could be taken to minimize adverse health effects and optimize beneficial ones. This report discusses the need for health-informed decision-making, reviews the current practice of health impact assessment, and provides a framework, terminology, and guidance for improving the assessment of health impacts in the United States.

With the United States ranked third in the world in total expenditures on health care and 32nd in life expectancy, it is becoming increasingly clear that good health depends on more than the amount of money spent on health care. Despite major medical advances, almost 50 percent of American adults suffer from chronic illnesses; and obesity, which contributes to many health conditions, has grown to epidemic proportions in children and adults.

A growing body of research indicates that health is determined by the conditions in which people are born, grow, live, work, and age. Policies and programs that historically have not been recognized as related to health are now thought or known to have important health consequences. For example, public health has been linked to housing policies that determine the quality and location of housing developments, to agricultural policies that influence the availability of healthy food, to urban planning policies that determine land use and street connectivity, to transportation policies that affect



Credit: istockphoto/alija

the availability of public transportation, and to economic-development policies that affect the location of businesses and industry.

That research highlights the importance of systematically assessing the health consequences of policies, programs, plans, and projects to protect and promote public health. Health impact assessment is a tool that can help factor health considerations into the decision-making process. It is applicable to a broad array of decisions, considers adverse and beneficial effects, can incorporate various types of evidence into the analysis, can engage communities and stakeholders in a deliberative process, and can offer practical recommendations to improve health. This report provides a framework, terminology, and guidance for conducting health impact assessments of proposed policies, programs, plans, and projects.

The Elements of Health Impact Assessment

The committee reviewed definitions, practice, published guidance, and peer-reviewed

Health impact assessment 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. Health impact assessment provides recommendations on monitoring and managing those effects.

Adapted from the International Association for Impact Assessment's definition of health impact assessment.

literature on the topic of health impact assessment and developed a six-step framework that organizes and describes the elements of health impact assessment (see Figure 1).

Screening establishes the need for and value of conducting a health impact assessment and is an essential element for high-quality practice.

Scoping identifies the populations that might be affected by a decision, determines which health effects will be evaluated in the health impact assessment, identifies research questions and develops plans to address them, identifies the data and methods to be used and alternatives to be assessed, and establishes the team for conducting the health impact assessment and a plan for stakeholder participation throughout the process.

Assessment describes the baseline health status of affected populations and then characterizes the expected health effects of the proposal and each alternative under consideration.

Recommendations suggest design alternatives that could be implemented or actions that could be taken to avoid, minimize, or mitigate adverse health effects or to take advantage of opportunities to improve health.

Reporting communicates findings and recommendations of the health impact assessment to decision-makers, the public, and others.

Monitoring and Evaluation tracks the adoption and implementation of health impact assessment recommendations or changes in health indicators as a new policy, program, plan, or project is implemented. Evaluation can be an analysis of whether the health impact assessment was conducted according to its plan of action; an analysis of whether the health impact assessment influenced the decision-making process or had other beneficial outcomes, such as informing the public and building new partnerships or collaborations; or an analysis of whether the health impact assessment caused changes in health outcomes.

The definition and criteria described in the committee's report should not be considered rigid requirements, but instead reflect an ideal of practice.

Challenges Ahead for Health Impact Assessment

Several challenges may impede the successful emergence, development, and practice of health impact assessment. Here, the committee provides suggestions for addressing these issues.

Defining health and the boundaries for health impact assessment. Because many factors can influence individual and public health, health-impact-assessment practice should not be restricted by a narrow definition of health or to any particular policy sector, level of government, type of proposal, or specific health outcome or

issue. Rather, health impact assessment should focus on applications that present the greatest opportunities to protect or promote health and to raise awareness of the health consequences of decision-making.

Balancing the need to provide timely, valid information with the realities of varying data quality.

To maximize the validity of health-impact-assessment findings given data and time constraints, the committee offered three strategies. First, consider diverse types of evidence and use expertise from multiple disciplines; second, critically evaluate data quality and select the strongest available evidence and methods; and third, assess, acknowledge, and manage uncertainties to ensure the credibility of health-impact-assessment findings and recommendations.

Producing quantitative estimates of health effects.

Quantitative estimates of health effects have a number of desirable properties and should be provided when data and resources allow and when responsive to the information needs of the decision-maker and stakeholders. However, it would be challenging or even impossible for all health impact assessments to predict all potentially important health effects quantitatively given the array of health effects that need to be considered in health impact assessments, the often 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 could be used, effects should be described and characterized separately in a way that allows users to judge their cumulative nature and to consider their value explicitly or implicitly in the decision-making process.

Enabling stakeholder participation. Stakeholder participation is critical for the quality and effectiveness of the health impact assessment. It helps to identify important issues; focus the 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.

Ensuring the quality and credibility of health impact assessment. Several aspects of the health impact assessment process could benefit from peer review, which could highlight overlooked issues, identify opportunities to improve data or methods, and increase the legitimacy of conclusions and their acceptance and utility in the decision-making process. Some flexibility in the peer-review process would be necessary, particularly for cases in which

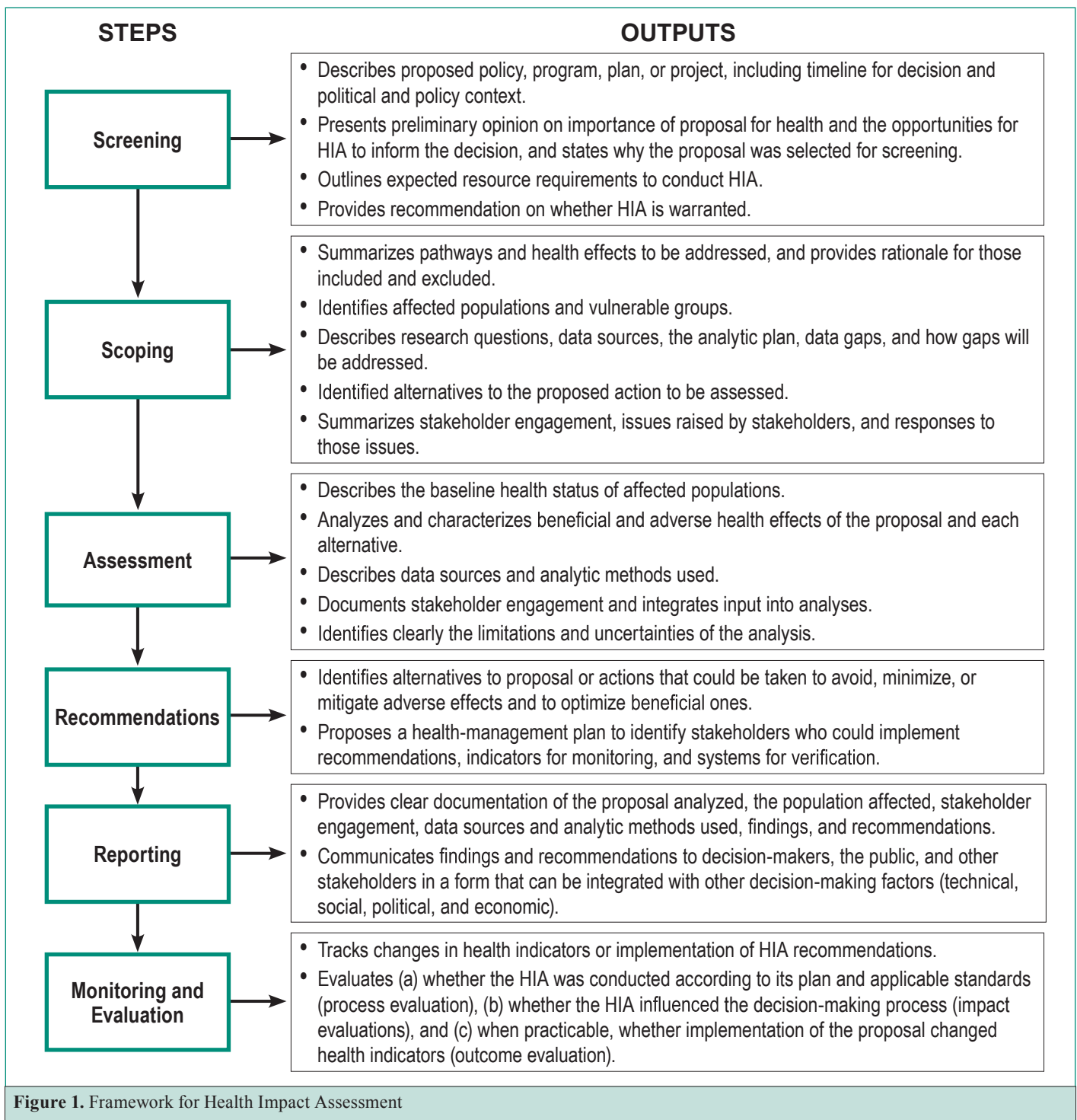


Figure 1. Framework for Health Impact Assessment

a health impact assessment must be completed rapidly to be relevant to the decision that it is intended to inform.

Managing expectations. Health impact assessment clearly is intended to inform decisions and ultimately to shape policy, programs, plans, and projects 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 health impact assessment successful only if it changes decisions.

Integrating health impact assessment into environmental impact assessment. The U.S. National Environmental Policy Act and some related state laws explicitly require the identification and analysis of health effects when environmental impact assessment is conducted. However, environmental impact assessment

has traditionally included only a cursory analysis of health impacts. Improving the integration of health considerations into environmental impact assessments is needed and would advance the goal of improving public health.

Advancing Health Impact Assessment

To advance the use of health impact assessment in the United States, the committee made the following suggestions:

Societal awareness and education. The health implications of many decisions are not widely recognized by policy-makers or the general public and are often not obvious or easily identified. Those factors impede efforts to address many important health problems in the United States. Thus, 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 health impact assessment can play in the decision-making process. Furthermore, high-quality education and training and continuing education of professionals, policy-makers, and the public will be vital for the advancement of health impact assessment in the United States.

Structures and policies to support health impact assessment. Substantial interagency

collaboration at the local, state, and federal levels is necessary to conduct health impact assessment, especially those of policies, programs, plans, and projects in nonhealth sectors. Furthermore, systematic use of health impact assessment 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 on and scholarship in health impact assessment. Few evaluations of health-impact-assessment practice have been conducted. Because conducting assessments will require the investment of public and private resources, research that documents the effectiveness of health impact assessment at influencing the decision-making process and promoting public health would help to support the field. Moreover, the quality of health impact assessment could be substantially improved with better evidence on the relationship of “distal” factors to health outcomes. Nevertheless, despite acknowledging the need for scholarship in health impact assessment, the committee concluded that health impact assessment is valuable even with a lack of perfect forecasting data and tools because it is better to consider potential health risk and benefits than to ignore them routinely.

Committee on Health Impact Assessment: **Richard J. Jackson** (*Chair*), University of California, Los Angeles; **Dinah Bear**, Attorney at Law, Washington, D.C.; **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; **Ben Cave**, Ben Cave Associates, Ltd., Leeds, United Kingdom; **Ana V. Diez Roux**, University of Michigan; **Carlos Dora**, World Health Organization, Geneva, Switzerland; **Jonathan E. Fielding**, Los Angeles County Department of Public Health; **Joshua S. Graff Zivin**, University of California, San Diego; **Jonathan I. Levy**, Boston University School of Public Health; **Julia B. Quint**, California Department of Public Health (retired); **Samina Raja**, University of Buffalo, State University of New York, Buffalo; **Amy Jo Schulz**, University of Michigan; **Aaron A. Wernham**, Pew Charitable Trusts, Washington, D.C.; **Ellen K. Mantus** (*Project Director*), **Heidi Murray-Smith** (*Program Officer*), **Keri Schaffer**, (*Research Associate*), National Research Council.

The National Academies appointed the above committee of experts to address the specific task requested by the Robert Wood Johnson Foundation, the California Endowment, the National Institute of Environmental Health Sciences, and the U.S. Centers for Disease Control and Prevention. The members volunteered their time for this activity; their report is peer-reviewed and the final product signed off by both the committee members and the National Academies. This report brief was prepared by the National Research Council based on the committee’s report.



For more information, contact the Board on Environmental Studies and Toxicology at (202) 334-3812 or visit <http://dels.nas.edu/best>. Copies of *Improving Health in the United States: The Role of Health Impact Assessment* are available from the National Academies Press, 500 Fifth Street, NW, Washington, D.C. 20001; (800) 624-6242; www.nap.edu.

Permission granted to reproduce this brief in its entirety with no additions or alterations.

Permission for images/figures must be obtained from their original source.