Health Impact Assessment

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Health Impact Assessment (HIA)

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.

Benefits of HIA

• **Influences decision makers** using a broad understanding of health and a wide range of evidence

• Highlights potentially **significant health impacts** that are unknown, under-recognized, or unexpected

• **Assesses** how proposals, policies, plans will affect all community members, particularly the most vulnerable

• Facilitates **inter-sectoral collaboration** in decision making

• Supports **sustainable** development—considers short and long term impacts

• **Identifies opportunities** to mitigate harms and enhance health benefits
Ecologic Model of Health

Interventions
- Policies
- Programs
- Information

Outcomes
- Behavioral outcomes
- Specific risk factors, diseases & conditions
- Injuries
- Well-being & health-related Quality of Life
- Health equity

Assessment, Monitoring, Evaluation & Dissemination

Action Model to Achieve Healthy People 2020 Overarching Goals
Many Types of Policies Affect the Public’s Health

- Regulation of Air & Water Pollution
- Energy Conservation
- Public Safety Services
- Schools
- Land-Use
- Transportation Infrastructure
- Food Regulation and Access
- Housing
- Health Care Access
- Labor Regulations
Examples of Sector-based Policy

- **Agriculture**
  - Direct agricultural subsidies toward more nutritious food (corn/corn syrup → fresh fruits and vegetables)

- **Transportation**
  - Increase development and utilization of mass transit → less driving, more walking → better air and weight loss
  - Complete streets initiatives

- **Tax**
  - Use tax policy to reduce percentage in poverty
  - Increase proportion of eligible residents claiming earned income tax credit

- **Environment**
  - Support environmental policies that improve air quality (e.g., higher CAFE standards, cleaner energy sources)
Importance of Non-Health Sector Decisions and Policies

• Decisions in non-health sectors greatly influence our collective health
  – Positively
  – Negatively

• Distribution among sub-groups
How HIA Can Affect Policy-making

• **Tip the scales**
  Adding evidence in favor or against a certain course of action

• **Assures health effects will be on the table**
  Raising awareness by discussing un-/under-recognized health effects

• **Change the terms of debate**
  Encouraging open, transparent decision-making and consideration of best available evidence
How HIA Can Affect Policy-making

• **Tweak plans**
  Suggesting measures to modify implementation in ways that minimize potential harm and maximize potential benefits

• **Bring new parties to the table**
  Giving voice to concerns of affected stakeholders who have difficulty making their concerns known

• **Change institutional missions and responsibilities**
  Encouraging formulation of policies that anticipate potential health effects
HIA Framework: Steps and Outputs

**Screening**
- Describes proposed policy, program, plan, or project with timeline and context
- Presents preliminary opinion on proposal importance and opportunities for HIA to inform the decision
- Outlines expected resource requirements and provides recommendation on whether HIA is warranted

**Scoping**
- Summarizes pathways and health effects to be addressed with rationale (and rational for exclusions)
- Identifies affected populations, vulnerable groups
- Describes research questions, data sources & gaps, analytic plan
- Identifies alternatives to proposed action and summarizes stakeholder engagement, issues and responses to issues

**Assessment**
- Describes baseline health status of affected populations, data sources and analytic methods used
- Analyzes and characterizes beneficial and adverse health effects of the proposal and alternatives
- Documents stakeholder engagement and integrates input into analysis
- Identifies the limitations and uncertainties of the analysis

Adapted from *Improving Health in the United States: The Role of Health Impact Assessment*, 2011.
HIA Framework: Steps and Outputs (cont)

Recommendations

- Identifies alternatives to proposal or actions to avoid, minimize, and mitigate adverse effects and to optimize beneficial ones
- Proposes a health-management plan to identify stakeholders who could implement recommendations, indicators for monitoring, & systems for verification

Reporting

- Provides clear documentation of the proposal analyzed, the population affected, stakeholder engagement, data sources and analytic methods used, findings and recommendations.
- Communicates findings and recommendations to decision-makers, the public, and other stakeholders in a form that can be integrated with other decision-making factors

Monitoring & Evaluation

- Tracks changes in health indicators or implementation of HIA recommendations
- Evaluates: a) whether the HIA was conducted according to plan and applicable standards; b) whether the HIA influenced the decision-making process; and, c) when practicable, whether implementation of the proposal changed health indicators.

Timeline of HIA Development in the U.S.

1970

Environmental Impact Assessment (U.S. NEPA)

1980

Int’l HIA

1990

Healthy Cities (esp. Europe)

2000

Evidence-based Reviews

1st U.S. HIAs

2008

~3 dozen HIAs in the U.S.
Examples of HIAs in the U.S. 1999-2012

Local Projects
- Atlanta Beltline (GA)
- Buford Highway/Northeast Plaza (GA)
- Oak-to-Ninth Redevelopment (CA)
- Pagedale Redevelopment (MO)

Land-use & Transportation Plans
- Baltimore Zoning Code Rewrite (MD)
- East Palo Alto Ravenswood Business District Redevelopment (CA)
- Eastern Neighborhoods Zoning (CA)

Mining & Energy
- Arctic Outer Continental Shelf EIS (AK)
- Baldwin Hills Oilfield (CA)

Population-based Policies
- Energy Assistance for low income households (MA)
- Funding for Farm-to-School (OR)
- Living Wage Ordinances (CA)
- Paid Sick Days (CA)
- State funding for mass transit (CA)

Adapted from Brian Cole, UCLA
Growth in HIAs in the U.S. 1999-2012
Cumulative number by Year & Type of Project or Policy

Adapted from Brian Cole, UCLA
Growth in HIAs in the U.S. 1999-2012
Cumulative number by Year & Level of Project or Policy Decision

Adapted from Brian Cole, UCLA
What does a health impact assessment look like?

An HIA could be:

- A comprehensive 200 page report
- A 2-page policy brief
- A “logic framework” and supporting discussion showing causal pathways;
- A checklist completed by an agency or policy-makers;
- A spreadsheet or “calculator” allowing users to estimate health impacts for different scenarios;
- A process for guided community engagement, resulting in testimony given to a policy-making body.
HIA Example: 2002 Farm Bill

• Federal farm bill expected to have health effects on the U.S. population
  – Primarily stemming from nutrition, bio-energy and agricultural subsidies provisions
  – Also, indirect budgetary effects, opportunity costs, regional and sectoral redistribution effects
5 Major Pathways Were Identified

- Title I: Commodities
- Title II: Conservation
- Title III: Trade
- Title IV: Nutrition
- Title V: Rural Income & Quality of Life
  - Poverty
  - Lifestyle
  - Preservation of family-farm & farming community
- Title VI: Rural Devel.
- Title VII: Research
- Title VIII: Forestry
- Title IX: Energy
- Title X: Miscellaneous

- Dietary Consumption Patterns
  - Fruit & Vegetable Consumption
  - Consumption of processed, calorically dense food
  - Consumption of domestically grown or raised products
- Food Safety
  - Agricultural biodiversity
  - Irradiated food
  - Genetically modified & organic food
- Environmental Pollution
  - Water pollution
  - Air pollution
- Other Environmental Degradation
  - Soil degradation
  - Natural resource depletion
HIA Focused on 2 Pathways

- Rural Income & Quality of Life
- Dietary Consumption Patterns
- Food Safety
- Environmental Pollution
- Other Environmental Degradation

- Affected by farm subsidy policy?
- Air pollution affected by ethanol production?
Logic Framework for Commodity Supports

Policy Change → Proximal Change → Intermediate Change → Health Outcomes

- Farm Income
- Rural Quality of Life
- Mental Health Outcomes

Commodity Price Supports:

- Commodity Prices
  - Retail Food Prices
  - Purchasing Patterns
  - Dietary Consumption
  - Physical Health Outcomes

Production Controls:

- Commodity Supply
  - Planting Choices
    - Food Exports
    - Food Imports
Findings and Limitations

• HIA found little, if any, likely effect of changes in commodity supports on consumer prices and consequently consumption (primarily since commodity price is only a small portion of the consumer price for most foods)

• In 2002, when the analysis was conducted, the air pollution effects of increased ethanol production were uncertain due to contradictory results from competing models
  – Recent data suggest a net negative given current production technology and distances

• Data limitations (uncertainty precluded researchers from quantifying potential impacts from the pathways)
  – Even in areas with data, conclusions of different experts hinge on different assumptions in competing quantitative models
HIA Example: Local Policy

Reducing Sodium Consumption in the County of Los Angeles with Food Procurement Policy

Lauren N. Gase, Tony Kuo, Diane Dunet, Steven M. Schmidt, Paul A. Simon, and Jonathan E. Fielding.  
County of Los Angeles

- Complex governing structure
  - Over 101,000 employees
  - 37 departments

- Operate food service venues and contract with many food service vendors

- 87 regional and local parks, 344 miles of trails, 19 public golf courses (world’s largest system), beaches, museums, libraries, theaters, prisons, juvenile prisons, juvenile detention centers, and probation camps are managed by the County
Setting the Stage for a Local Health Impact Analysis

• In 2009-10, strategies to reduce sodium consumption were examined

• Food procurement policies were identified as the most promising mechanism to reduce sodium intake among patrons at LA County venues
Estimated Reach of County Food Procurement Policies

- Hospital cafeterias (90,000+ visitors each year)
  - Serve ≈ 600 adults per day
- Senior meals program
  - Serve ≈ 9,200 adults per day
- Childcare venues
  - Serve ≈ 24,000 children per day
- Other County cafeterias
  - Serve ≈ 1,800 adults per day
Methods

• Used qualitative input and data provided by County food service vendors

• Mathematical simulation:
  – Varying levels of reductions in the sodium content of foods served
  – Estimated potential impacts on the mean Systolic Blood Pressure (SBP) in the targeted patron groups
Preliminary Study Findings

Results

• Analysis predicted that adults eating at the targeted food service venues could consume 233 fewer mg of sodium each day.

• This corresponded to:
  – a decrease of approximately 0.71 mm Hg in SBP among adult hypertensives;
  – fewer cases of uncontrolled hypertension in the study population;
  – lower costs of treatment

• Preliminary finding: food procurement policy can have positive health impacts in Los Angeles County
Common HIA Challenges

- Complexity of the relationships between determinants and health outcomes.
- Lack of research on these causal pathways.
- Insufficient data on interventions to improve health status.
- Lack of reliable and valid indicators of environmental effects.
HIA is One Tool to Increase Healthy Policies

- The process of HIA may help agencies to learn about determinants of health, establish or strengthen intersectoral collaboration, and increase the consideration of health outcomes in decision making.
HIA-CLIC: An on-line resource for HIA information

- Searchable index of HIAs conducted in the U.S.
- Tutorials and links to more info. on HIA methods & data
- Background on impact pathways, policy-health linkages
- Training resources, HIA-related legislation

The goal of HIA and this website is to support more informed policymaking that contributes to improved public health and to promote...

hiaguide.org