A Review of Health Impact Assessments in the U.S.: Current State-of-Science, Best Practices, and Areas for Improvement

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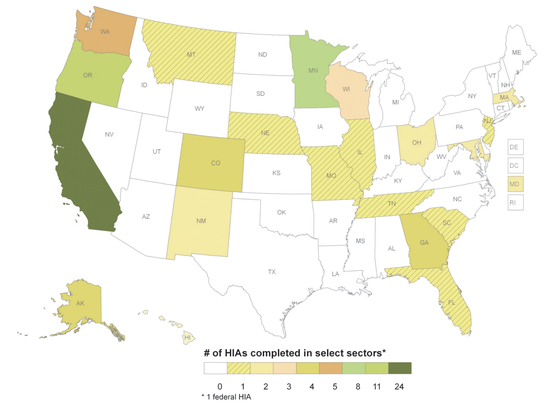
HIA Review

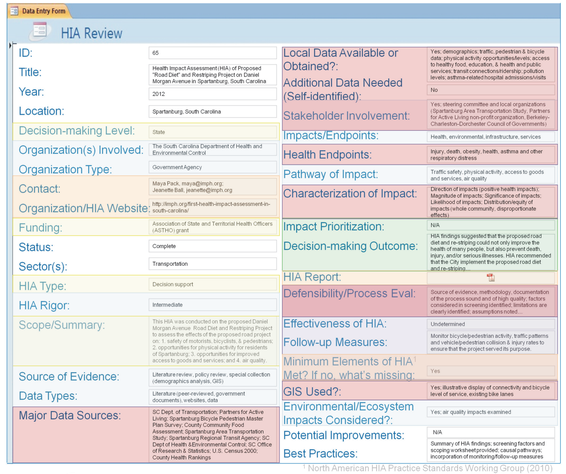
A systematic review was conducted of 81 health impact assessments (HIAs) from the U.S. to obtain a clear picture of how HIAs are being implemented nationally and to identify areas for advancing the HIA community of practice. The review was focused on HIAs from four sectors that the U.S. Environmental Protection Agency's (EPA's) Sustainable and Healthy Communities Research Program has identified as targets for empowering communities to move toward more sustainable states:

- Transportation (n=21)
- Land Use (n=39)
- Housing/Buildings/Infrastructure (n=17)
- Waste Management/Site Revitalization (n=4)

Reviewed HIAs were completed between 2005 and spring 2012, when the HIA Review began, at locations throughout the nation:



The *Minimum Elements and Practice Standards for Health Impact Assessment* (North American HIA Practice Standards Working Group 2010) was chosen from the broad body of HIA guidance documents as the benchmark against which to review the HIAs. The results of the reviews were recorded in a Microsoft Access database and synthesized to identify the current state of the HIA practice in the U.S., best practices in HIA, and areas for improvement.



North American HIA Practice Standards Working Group (2010)

State of the HIA Practice

Use of HIA to Inform Decision-Making

On the rise

HIA is being used with increased frequency to bring health to the decision-making process. This trend is consistent with trends in the overall community of practice. HIA used most frequently across the four sectors to inform decisions at the local level.

Inputs

Existing Data, Tools, and Methods

Data Type	Existing Data Sources	
Demographics and Background (social, economic, housing, education)	- U.S. Census Bureau - U.S. Department of Housing and Urban Development	- U.S. Department of Labor - State Employment Department
Health and Vital Statistics	- U.S. Centers for Disease Control and Prevention (CDC)	- State/County/Local Health Department
Other	- Police Department - Department of Environmental Quality - U.S. Department of Agriculture - Maps and GIS Repository - Parks and Recreation - County Auditor/Assessor	- Planning Department - School District - Federal Transit Administration - U.S. Department of Transportation - State/County/Local Department of Transportation/Transit
Benchmarks	- CDC Physical Activity Guidelines - EPA Air Quality/Pollution Standards - Robert Wood Johnson Foundation County Health Rankings and Roadmaps - Transportation Research Board Crash Reduction Factors	- Crime Prevention Through Environmental Design - World Health Organization Initiatives, Strategies, and Guidelines - U.S. Department of Health and Human Services Healthy People Initiative
Indicators	- Sustainable Communities Index (formerly HDMT)	

In the Spotlight

Tools
- Geographic Information Systems (GIS)/Mapping Applications
- Health Economic Assessment Tool (HEAT)
- Living Wage Calculator
- Neighborhood Environment Walkability Scale (NEWS)
- Retail Food Environment Index (RFEI)
- Traffic Noise Model (TNM) and Noise Annoyance Relationship
- Walk Score

Primary Data Collection Methods

Special Collection includes:	
- accessing unpublished data	- health surveys
- advisory committee	- mediation group
- aerial photography	- modeling/forecasting
- air quality study	- PhotoVoice/community photography
- applicant information	- public/project meetings
- community forums/workshops	- residents panel
- demographics analysis	- risk assessment
- expert consultations	- stakeholder interviews
- field visits/site observations	- community/stakeholder surveys
- focus groups	- threshold scoring
- food audit/retail food availability survey	- traffic assessment/counts
- GIS and photo mapping	- walkability audits
- Healthy Development Measurement Tool (HDMT)	- windshield surveys/tours

Implementation of the Six-Step HIA Process

Varied greatly among the HIAs, leading to large disparities in rigor and quality

- ***Screening*** – Documentation of the screening process often lacking, making it difficult to discern what factors went into making the decision to perform the HIA
- ***Scoping*** – Documentation of the scoping process was inconsistent and often lacked details of the overall HIA plan – research questions, rationale for reductions in scope, etc.
- ***Assessment*** – Considerable disparities in the depth of impact assessment, extent of data collection and analysis, and defensibility of evidence
  - Extent of baseline profiles created in some HIAs very limited and in others, missing completely (n=18)
  - Most HIAs qualitatively characterized direction and distribution/equity of impacts
  - Characterization of impacts rarely considered likelihood, magnitude, and permanence
  - Quantification of impacts also lacking
- ***Recommendations*** – Typically included alternatives or modifications to the decision to promote positive health impacts or minimize negative health impacts and/or direct mitigations for negative health impacts. In some cases, support for or opposition to the decision was also offered
  - Factors utilized most frequently for prioritization of impacts and/or recommendations in the reviewed HIAs:
    - stakeholder/community input
    - impact on health
    - relevance to project/decision interests
    - literature and research
    - equity of impacts
- ***Reporting*** – Reporting and communicating the results of HIA is crucial to informing and influencing decision-making
  - Only 5% of the HIAs included a communication plan for reporting and disseminating findings
  - Over 35% of the HIAs lacked transparent documentation of the processes, methods, findings, sponsors, funding source(s), and/or participants and their roles
- ***Monitoring and Evaluation*** – This step of the HIA process was severely lacking
  - Process evaluation found in only 6% of the HIAs
  - Plans for impact evaluation and/or outcome evaluation present in only 36% of the HIAs

Adherence to Minimum Elements of HIA

Elements most often missing:

- Use of best available evidence to characterize direction, magnitude, likelihood, distribution, and permanence of impacts
- Monitoring and evaluation
- Transparency in documentation

Met by less than 20% of reviewed HIAs

Stakeholder/Community Engagement

Engagement in each step of the HIA process is ideal, but rarely witnessed

- Approximately 20% of the HIAs did not engage stakeholders or the community at all in the HIA process

Characterization of Environmental Impacts

Included in many of the HIAs, but typically only involved assessments of air quality impacts

Effectiveness of HIA

- Effectiveness could not be discerned for almost 40% of the HIAs
- Vast majority of HIAs for which measures of effectiveness could be obtained, showed direct or general effectiveness

Best Practices

- ☆ Use of the *Minimum Elements and Practice Standards for Health Impact Assessment*
- ☆ HIA as a tool for Environmental Impact Assessment
- ☆ Equity promotion
- ☆ Documented Screening & Scoping
- ☆ Rules of Engagement Memo/Memorandum of Understanding
- ☆ Impact pathways/logic frameworks
- ☆ Communication/Reporting Plan
- ☆ Stakeholder involvement
- ☆ Transparent literature search/review
- ☆ Quality of evidence evaluation
- ☆ Identification of data gaps
- ☆ Use and/or adaption of existing tools, methods, and metrics
- ☆ Detailed documentation of data and methods
- ☆ Use of GIS
- ☆ Clear summary of impact assessment
- ☆ Use of best available data (qualitative & quantitative)
- ☆ Impact prioritization/ranking
- ☆ Confidence estimates of projected impacts
- ☆ Feasible/actionable recommendations
- ☆ Implementation plan for recommendations
- ☆ Clear/transparent HIA Report
- ☆ Process evaluation
- ☆ Monitoring plan

Areas for Improvement

Adherence to Minimum Elements and Practice Standards

- Targets for improvement: Establishment of baseline conditions • Characterization of impact • Stakeholder and community engagement • Transparency in documentation • Monitoring and evaluation

Use of HIA to inform decision-making at all levels – local, county, state, and federal

Identification of data gaps – provide transparency in HIA reporting, help refine methods and approaches used in HIA, and identify areas for future research

Broader utilization of existing tools and resources

- HIA Tools Database and C-FERST HIA Roadmap (under development by EPA) will include an inventory of tools, methods, and resources for use in HIA

Closing the data gaps and maximizing the evidence available for use in HIA

Consistency in HIA terminology

Conclusions

While HIAs have helped to raise awareness and bring health into decisions outside traditional health-related fields, the effectiveness of HIAs in bringing health-related changes to pending decisions in the U.S. varies greatly. The HIA Review found considerable disparities in the quality and rigor of HIAs being conducted. This, combined with the lack of monitoring, health impact management, and other follow-up could be limiting the overall utilization and effectiveness of HIA in the U.S.

Understanding the current state and applicability of HIAs in the U.S., as well as best practices and areas for improvement, will help to advance the HIA community of practice in the U.S., improve the quality of assessments upon which stakeholder and policy decisions are based, and promote healthy and sustainable communities.

Look for the HIA Review Database and Synthesis Report coming soon at:

www.epa.gov/research/healthscience/health-impact-assessment.htm