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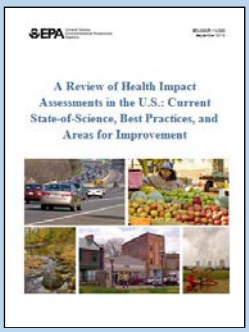
A Review of Health Impact Assessments in the U.S.: Current State-of-Science, Best Practices, and Areas for Improvement

A review was conducted of 81 HIAs from the U.S. to obtain a clear picture of how HIAs are being implemented nationally and to identify potential areas for improving 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 target areas for empowering communities to move toward more sustainable states (EPA 2011). These four sectors are Transportation, Housing/Buildings/Infrastructure, Land Use, and Waste Management/Site Revitalization.

The *Minimum Elements and Practice Standards for Health Impact Assessment* (North American HIA Practice StandardsWorking Group 2010) was chosen from the broad body of HIA guidance documents as the benchmark against which to review the HIAs. The HIA Review systematically documented organizations involved in conducting the HIAs; funding sources; the types of community-level decisions being made; data, tools, and models used; self-identified data needs/gaps; methods of stakeholder engagement; pathways and endpoints; characterization and prioritization of impacts; decision-making outcomes/recommendations; monitoring and follow-up measures; HIA defensibility and effectiveness; attainment of the *Minimum Elements of HIA*; areas for improvement; and identification of best practices.

The results of the HIA review were synthesized to identify the current state of the HIA practice in the U.S., best practices in HIA, and areas for improvement (Rhodus et al. 2013).

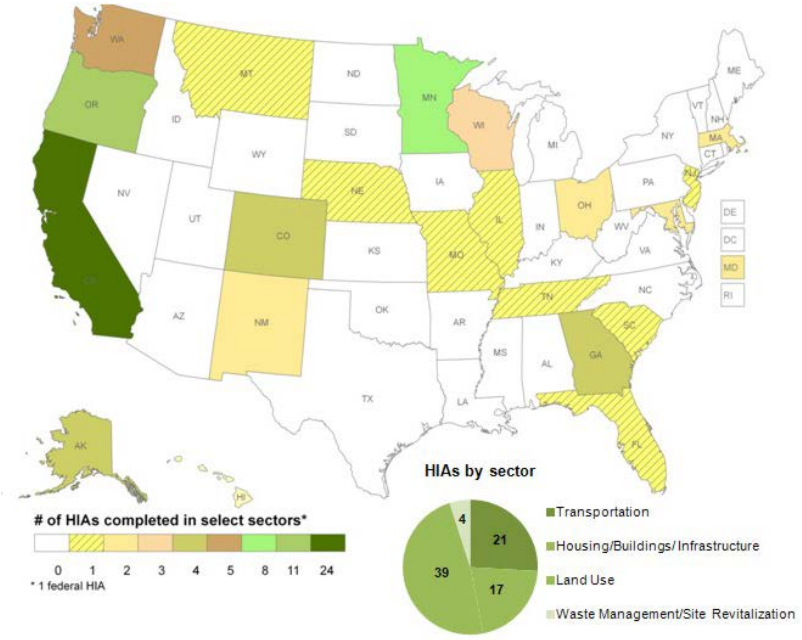


Health Impact Assessment

The National Research Council (2011) defines HIA as:

…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 health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.

Findings



State of HIA Practice

Use of HIA to inform decision-making is on the rise. Reviewed HIAs were implemented most frequently to inform decisions at the local level and less frequently at county, state, and federal levels.

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 was 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 (e.g., research questions, rationale for reductions in scope, etc).
- *Assessment* – The depth and defensibility of evidence is crucial to the effectiveness of impact assessment; however, considerable disparities existed in the depth of impact assessment, extent of data collection and analysis, and defensibility of evidence.

  The extent of baseline profiles created in some HIAs was very limited and in others, missing completely (n=18). Most HIAs qualitatively characterized direction and distribution/equity of impacts, but rarely considered likelihood, magnitude, or permanence of the impacts. In addition, quantification of impacts was lacking throughout the HIAs.
- *Recommendations* – Recommendations most often proposed modifications to the decision and/or mitigations of the decision's negative health impacts, but

sometimes stated support for or opposition to the proposed decision as-is.

Prioritization of impacts and/or recommendations can be based on a number of factors, but those utilized most frequently in the HIAs included stakeholder/community input, literature and research, impact on health and relevance to project/decision interests, and equity of impacts.

- *Reporting* – Reporting and communicating the results of HIA is crucial to informing decision-making; yet, only 5% of the HIAs included a communication plan for reporting and disseminating findings, and 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. Of the three forms of evaluation called for in HIA, process evaluation was found in only 6% of the HIAs and plans for impact evaluation and/or outcome evaluation were present in only 36% of the HIAs.

Adherence to Minimum Elements of HIA. Less than 20% of the HIAs met the *Minimum Elements of HIA*. Elements most often missing included using best available evidence to characterize impacts (direction, magnitude, likelihood, distribution, and permanence), monitoring and evaluation, and transparency in documentation.

Stakeholder/community engagement in each step of the HIA process is ideal, but was rarely witnessed. In fact, approximately 20% of the HIAs did not engage stakeholders or the community at all in the HIA process.

Characterization of environmental impacts was included in many of the HIAs, but typically only involved assessments of air quality impacts.

Effectiveness of HIA could not be discerned for almost 40% of the HIAs, but for those HIAs for which measures of effectiveness could be obtained, the vast majority showed direct or general effectiveness.

Best Practices

Best practices identified in the HIA Review include:

- Use of the *Minimum Elements and Practice Standards for Health Impact Assessment*
- HIA as a tool in Environmental Impact Assessment
- Equity promotion
- Documented Screening & Scoping
- Rules of Engagement Memo/Memorandum of Understanding
- 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 methodology
- Use of Geographic Information Systems
- Impact pathways/logic frameworks
- Clear summary of impact assessment
- Use of best available data (qualitative and 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

The following areas for improvement, if addressed, would significantly advance the HIA community of practice:

Adherence to Minimum Elements and Practice Standards would ensure that the essential components of HIA are put in practice and would result in marked increases in rigor, quality, defensibility, and effectiveness. Essential components of HIA that are particularly lacking and should be targeted for improvement, include: establishment of baseline conditions, characterization of impact, stakeholder and community engagement, transparency in documentation, and monitoring and evaluation.

Use of HIA to inform decision-making at all levels, including county, state, and federal decisions.

Identification of data gaps would provide transparency in HIA reporting, but could also be useful in helping to refine methods and approaches used in HIA and identify areas for future research.

Broader utilization of existing tools and resources could contribute to a more robust impact assessment and help to close some of the data gaps found in HIA.

Closing the data gaps and maximizing the evidence available for use in HIA would result in more robust assessments and improved efficiency in predicting health impacts.

Consistency in HIA terminology, like transparency, would help to advance HIA reporting and rigor.

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 of practice 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, improve the quality of assessments upon which stakeholder and policy decisions are based, and promote healthy and sustainable communities.

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