HUMAN IMPACT PARTNERS

Frequently Asked Questions about Integrating Health Impact Assessment into Environmental Impact Assessment

1. What is Health Impact Assessment (HIA)?

Many land-use and transportation decisions affect health, even ones that may not seem to be specifically about health. For example, a decision to widen roadways will have impacts on noise and air quality for adjacent residents and on the safety of pedestrians along the street; noise, air quality and pedestrian safety are related to health outcomes that include asthma, cardiovascular disease, hypertension, injury, and mortality. HIA is a straightforward and cost-effective tool that can be used to assess planning and policy proposals and make recommendations to improve the health outcomes associated with those proposals.

HIA is formally defined as a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a proposed project, plan, or policy on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects. (Adapted from the IAIA, 2006)

There are five stages in a HIA process:

Screening	Determines the need and value of a HIA
Scoping	Determines which health impacts to evaluate, methods for analysis, and a workplan
Assessment	Provides: 1) a profile of existing health conditions 2) evaluation of potential health impacts 3) strategies to manage identified adverse health impacts
Reporting	Includes: 1) development of the HIA report 2) communication of findings and recommendations
Monitoring	Tracks: 1) impacts on decision-making processes and the decision 2) impacts of the decision on health determinants

2. What health issues does a HIA consider?

Environmental, social, demographic, and economic conditions drive the health and wellbeing of communities. Factors such as housing, transportation, employment and income, noise, air quality, access to goods and services, access to parks, and social networks have well-demonstrated and reproducible links to health outcomes. A HIA analyzes health from a broad perspective by evaluating how a proposed project, plan, or policy affects these factors – often

collectively referred to as "determinants of health" – and in turn, how impacts to these factors are likely to positively or adversely influence health.

3. What are benefits to conducting Health Impact Assessment?

Overall, the information from a HIA, and close collaboration between public health experts, affected communities, and the decision-makers on a project, lead to practical, evidence-driven recommendations that address identified health concerns to the extent possible within the limitations of the regulatory or decision-making process.

- HIAs provide sound, objective data on health impacts. By using this information, potentially unexpected health consequences and unanticipated costs can be identified and thus avoided.
- HIA helps develop healthier communities by identifying design solutions that address the root causes of many prominent health problems like asthma, diabetes, and cardiovascular disease.
- The HIA process can be used to build consensus and buy-in by addressing the affected community's fears about a project directly and transparently and by providing practical solutions.
- HIAs help focus community involvement on real health concerns and on feasible mitigations to those health issues.
- Health issues are typically important to community members and HIA can serve to engage community residents in decisions that impact their lives.
- HIAs give project proponents a way to recognize positive health contributions of projects on communities. It also given businesses the information they need to distinguish themselves as smart planners and build positive working relationships with the community.
- HIAs help decision-makers by ensuring that any potential concerns about a project are identified and addressed early on.

4. Is a comprehensive analysis of health impacts required under NEPA/CEQA?

As stated in "Public Health Analysis Under the National Environmental Policy Act", a white paper by Wernham and Bear:

> The inclusion of a robust, systematic approach to public health is supported by NEPA, the regulations issued by the Council on Environmental Quality (CEQ), the agency in the Executive Office of the President charged with overseeing implementation of NEPA, Executive Orders 12898 and 13045, and available guidance on NEPA and environmental justice.
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> *Congressional Intent*
> In using the term "human environment," Congress signaled that protection of human communities was a fundamental purpose of the legislation. In the debates leading to NEPA's enactment, Senator Henry Jackson stated: "When we speak of the environment, basically, we are talking about the relationship between man and these physical and biological and social forces that impact upon him. A public policy for the environment basically is not a public policy for those things out there. It is a policy for people."
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> *Health in NEPA*

NEPA mentions health a total of six times. Among NEPA's fundamental purposes is: "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." NEPA § 102 [42 USC § 4321]

NEPA is intended, furthermore, to: "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings." [42 USC § 4331]

And finally to: "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences." [42 USC § 4331]

Health in the CEQ Regulations

Several general provisions of CEQ's NEPA regulations support the inclusion of health.

First, agencies respond to substantive public concerns in the draft EIS [40 CFR § 1503.4]. When, therefore, an agency can anticipate substantive health concerns based on scoping, it is sensible to include these issues for analysis in the DEIS.

Second, in determining whether an effect may be significant (and therefore require analysis in the EIS) one of the factors that agencies should consider is "the degree to which the effects on the human environment are likely to be highly controversial" [40 CFR § 1508.27 (b) 4]. Commonly, health often figures among the strongest concerns expressed by affected communities.

The CEQ regulations also specifically define health as one of the effects that must be considered in an EIS or an EA. In defining "effects," the regulations state that: "Effects" includes ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." [40 C.F.R. § 1508.8] And, the regulations instruct agencies to consider "the degree to which the proposed action affects public health or safety" in determining significance. [40 C.F.R. § 1508.27]

Health in Executive Orders

Executive Order 12898 instructs agencies to: "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."

Similarly, Executive Order 13045 states that agencies must: "make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and ... shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

Statements relevant to NEPA-based health analysis in Federal Guidance

CEQ guidance on implementing Executive Order 12898 contains several suggestions relevant to public health analysis, including:

- Lead agencies should involve public health agencies and clinics
- Agencies should review relevant public health data (as for any other resource)
- Agencies should consider how interrelated cultural, social, occupational, historical, or economic factors may contribute to health effects of the proposed action and alternatives.

5. What is the relationship between Health Impact Assessment and Health Risk Assessment (HRA)?

Health Risk Assessments are sometimes conducted as part of EIRs and sometimes conducted outside the EIR process. This is true of HIA as well. While there is significant overlap between HIA and the theoretical framework for HRA, in practice, HIA and HRA differ substantially because HRA is carried out in a manner much more limited than its theoretical framework allows for. Below we compare and contrast existing practice of HRA and HIA:

- The purpose of HIA is to make evidence based judgments on the health impacts of a decision and to make health-promoting recommendations while the purpose of HRA is to quantify the health risk from a change in exposure to a particular hazard.
- HIA uses a broad framework to predict all of the potentially significant health effects that could result from changes in the physical, social, and economic environment. In doing so, HIA includes analysis of impacts on the determinants of health, such as housing, transportation, employment and income, noise, air quality, access to goods and services, access to parks, and social networks. HRAs are typically used to analyze discrete relationships between a single environmental contaminant (e.g., diesel) and a single health outcome (e.g., lung cancer).
- Following the basic pattern of an EIA, HIA starts with an analysis of existing conditions in a community and, in particular, identifies special sub-populations who may be particularly vulnerable, or in which there are significant baseline health inequities. For example, HIA examines existing burdens to EJ communities and assesses impacts cumulatively. HRA does not typically take existing health conditions or disparities into consideration.
- HIA uses both quantitative and qualitative/descriptive methods in analysis, while HRA uses modeling to quantify risks. If there is strong evidence of the existence of a hazard but data does not exist to quantify a prediction, HRA will not consider that hazard while HIA will. Currently, sufficient data to conduct HRA exist for only a limited number of health-relevant environmental exposures and conditions.
- The HIA process can be used to engage stakeholders, including community residents, and build consensus, while HRA is typically conducted by expert risk assessors.
- HRAs can be a useful tool to analyze potential impacts, but by themselves do not provide all the information required by NEPA as can an integrated HIA/EIA approach (see answer to question 8).
- HRA is one analytical tool that could be used in the assessment phase of HIA.

6. Does a HIA use qualitative or quantitative data?

HIA may use both qualitative and quantitative data and methods to predict potential impacts. Where feasible and data allows, HIA uses quantitative modeling to increase the precision of analysis and to support significance judgments. Because of substantial data requirements, using quantitative forecasting methods exclusively may present a partial or biased accounting of health effects. Quantification can also be resource intensive and divert from other impact assessment activities. Qualitative analyses provide valuable data when quantitative analyses are not possible.

It is important to note that NEPA regulations do not require quantitative analysis and that many predictions in EIA are descriptive. Indeed, simple descriptions of *possible* causal links between the proposed action and a given outcome may be more legally defensible than quantitative modeling, and can still provide valuable insights into differences between the alternatives and potential mitigation measures.

HIA standards include the ethical use of evidence, whether it is quantitative or qualitative. This includes the utilization of evidence from diverse sources, such as available statistics, empirical research, original investigation results, professional expertise, local knowledge, and the findings of well-designed and peer-reviewed systematic reviews. HIA calls for the justification of the selection or exclusion of particular methodologies and data sources

and the explicit statement of assumptions used in judgments, particularly quantitative estimates of hazards or impacts. Data gaps, uncertainties, and limitations should be identified and stakeholders should be allowed to critique the validity of findings.

7. How would a comprehensive health analysis (e.g., using HIA) differ from what is already done in an EIR/EIS?

Currently, there are three ways in which health is incorporated into an EIR/EIS: 1) as a health risk assessment for a discrete exposure (described in question 5); 2) as a discussion of risk factors for health (e.g., air quality, traffic flow), but the link between those risk factors and health is not often made explicitly; and 3) as a demonstration of compliance with a health-based environmental regulation, such as the Clean Air Act.

A complete analysis of health effects responsive to NEPA would consider all potentially significant direct, indirect and cumulative health impacts associated with the proposed action and alternatives. The analysis would include descriptions of baseline heath status and determinants of health for the affected population. These elements could be systematically achieved through implementation of an HIA that would:

- Include a scoping of potentially significant direct, indirect, and cumulative health impacts;
- Analyze baseline health conditions and determinants of health;
- Analyze direct and indirect health impacts of the project; and
- Analyze cumulative impacts related to health outcomes.

8. How can HIA fit in with the EIR/EIS process?

The steps of Health Impact Assessment (described in question 1) parallel the steps of Environmental Impact Assessment and, therefore, the two processes can be easily integrated. By integrating HIA and EIA, redundancy in data collection and analysis is avoided, as information collected in the EIA process provides inputs into the health analysis. To conduct a HIA as part of an EIR/EIS, one would:

- Scope potential direct, indirect, and cumulative health concerns in the EIR/EIS Scoping stage. HIA Scoping includes stakeholder meetings to ensure the scope is complete and uses stakeholder knowledge and experience to prioritize the health concerns to analyze.
- Assess prioritized health concerns identified during Scoping. This assessment will include:
    - new analyses (e.g., collecting existing data on health conditions and on existing determinants of health; analyzing impacts not previously analyzed as a result of the expanded Scope);
    - extensions of existing analyses (e.g., using traffic data such as vehicle trips and volume to predict impacts on traffic injuries and physical activity); and
    - developing potential mitigation measures to address significant health impacts.

  In addition, HIA assessment could include methods that involve stakeholder participation, such as community surveys and focus groups.
- Report and receive public comment on baseline health conditions and determinants of health, the analysis of health impacts, and potential mitigation measures in the Draft EIR/EIS and respond to comments to develop the Final EIR/EIS.

9. How do you know when a health impact can or should be addressed or mitigated?

As for any other resource or impact more commonly analyzed in an EIS, the analysis of health effects is generally limited to those deemed to be potentially significant, as defined by the CEQ regulations (40 CFR § 1508.27). In practice, the HIA team will typically bring a public health-based perspective on significance which will drive the initial proposed scope of the analysis. The final scope of impacts included in the EIS, however, evolves over the course of the analysis through ongoing collaboration and discussions between the HIA team and the participating agencies, and based on determining which outcomes are best supported by the evidence.

10. Are there other examples of HIAs being done for major projects and policies and as part of EIA?

To date, HIAs have been included in five published NEPA documents, all in Alaska.[1] In San Francisco, the health department collaborates with the planning department to ensure the inclusion of health analyses for environmental analysis conducted under CEQA.

HIA is currently being applied to other important proposals. In Los Angeles, the I-710 Corridor Project Committee recently voted to include a HIA in the project EIR/EIS. HIA is also being applied to the proposed Cap and Trade regulations under the California Global Warming Solutions Act.

11. Are there practice standards for HIA?

Yes, the North American Health Impact Assessment Working Group released standards in 2009. Those are available at: http://www.humanimpact.org/HIA_PracticeStandards.pdf.

12. Where can I learn more about HIA?

The Human Impact Partners website (http://www.humanimpact.org/) contains information, tools, and resources regarding HIA. Other good resources include the Centers for Disease Control website (http://www.cdc.gov/healthyplaces/hia.htm), the Health Impact Project website (www.healthimpactproject.org), and the UCLA HIA CLIC website (http://www.ph.ucla.edu/hs/hiaclic/).

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[1] Wernham, A. (2007) Inupiat Health and Proposed Alaskan Oil Development: Results of the First Integrated Health Impact Assessment/ Environmental Impact Statement for Proposed Oil Development on Alaska's North Slope. Ecohealth. No. 4, p. 500.