

Florida: Health Impact Assessment

Final Report

June 2012



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Prepared for

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DISCLAIMER

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the Florida Department of Health or the Technical Advisory Committee.

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EXECUTIVE SUMMARY

Summary of Final Report
June 2012

Background

Health Impact Assessment (HIA) is a systematic process that uses a combination of methods, tools, and data sources, including input from stakeholders, to determine the potential health effects of a proposed policy, plan, program, or project on a population and the distribution of those effects (National Research Council [NRC] 2011, CDC 2012b). HIA is a relatively new process in the United States that is continuing to be developed to ensure that health impacts are considered in plans, policies, programs, and projects. HIAs in the US have been conducted for decision-makers at the federal, state and local level across the a variety of sectors, including agriculture and food; built environment (35%); education (4%); housing(9%); labor and employment(5%); natural resources and energy(13%); and transportation(21%). Currently, only one HIA, the Taylor Energy Center HIA, has been completed and another, HIA on Kings Ridge Apartments, is being conducted in Florida.

Objectives

This report analyzes and compares the HIA process that Florida has used with best practices described by the Center for Disease Control and Prevention (CDC) and focuses the following objectives: identify how HIA is used nationally and internationally; identify methods of performing HIAs that would be most successful in Florida; identify how HIAs performed in Florida compare to national HIAs; and recommend priority areas currently affecting public health for which the HIA tool could be applied.

Methodology

This research used a range of methodologies to understand the existing practices in HIA and the opportunities for using HIA in Florida, including internet research, literature review, questionnaires for the study's Technical Advisory Committee (TAC), interview of professionals with HIA experiences, and informal discussion between and among project staff.

Findings

Early on in the research process, the TAC unanimously decided to adopt the National Research Council's (NRC) *Improving Health in the United States: The role of HIA* (2011) as an updated, more comprehensive version of the CDC's HIA process. Thus, this research adopts the NRC (2011) HIA process, which consists of six phases: screening, scoping, assessment, recommendations, reporting, and monitoring and evaluation. The final report for Florida's only completed HIA, The Taylor Energy Center HIA is comparable to national HIAs conducted. Florida has many other public health initiatives (e.g., MAPP, PACE-EH, ACHIEVE, CHANGE) that are funded by the Center for Disease Control and Prevention (CDC) and the National Organization of City and County Health Official (NACCHO) that provide a good basis for HIA; generally such initiatives can be used as a part of the scoping and screening phases of HIA, however, would need to be expanded to complete the HIA phase. The research reinforces the importance of including the affected community in the HIA process; however, the level of involvement will depend on the type of HIA conducted. Stakeholders can be include a variety of actors in a different roles from steering committees, expert panels (e.g., planners, public health officials), the affected community, the project developer, advocacy organizations and other interested persons. Peer review of the HIA is also encouraged as a critical review process. HIA may benefit from inter-sectoral, or inter-

disciplinary, collaboration between agencies and/or organizations, such as the county health departments, regional planning agencies and decision makers in the affected communities.

Recommendations

Due to the lack of HIA trained practitioners and the lack of precedent and imperatives for HIA, the research team proposes several recommendations to begin to implement HIA in Florida: a comprehensive review of existing assessment processes in Florida health departments; basic guidance to health department personnel; educational efforts to inform the Surgeon General, county health department directors and administrators, and professionals (e.g., public health professionals and planners) about the importance and usage of the HIA process to inform public decisions, and training for professionals who conduct HIA (e.g., online training modules); and an FDOH HIA webpage with basic information and an HIA database that contains information such as HIAs conducted in Florida, resources, methods, tools, and data sources.

TABLE OF CONTENTS

DISCLAIMER.....	iii
TECHNICAL ADVISORY COMMITTEE MEMBERS.....	iv
ACKNOWLEDGMENTS.....	v
EXECUTIVE SUMMARY	vi
LIST OF TABLES AND FIGURES.....	x
LIST OF ABBREVIATIONS/ACRONYMS.....	xi
INTRODUCTION.....	1
LITERATURE REVIEW AND BACKGROUND	6
International and Domestic Use of HIA	7
Best Practices: Phases in the HIA Process.....	10
Screening.....	11
Scoping.....	13
Assessment	16
Recommendations	19
Reporting.....	21
Monitoring and Evaluation	23
Types of HIAs.....	27
Barriers and Challenges in Current Practices.....	28
METHODOLOGY	29
Internet Search	29
Literature Review.....	29
Technical Advisory Committee	30
Informal Discussion.....	31
Interviews.....	31
RESULTS	32
The HIA Procedure.....	36
Technical Advisory Committee Questionnaires.....	37
HIAs in Florida	42
North Florida Power Plant HIA.....	43
HIA Initiatives	45

HIA Related Activities.....	46
Use of HIAs in the US and the Lessons for Florida	56
DISCUSSION.....	58
RECOMMENDATIONS	61
Basic Guidance and Technical Assistance	63
Training and Education	63
FDOH HIA Webpage and HIA Database	65
CONCLUSIONS.....	67
REFERENCES.....	69
APPENDICES	72
Appendix A: Best Practices in the USA.....	I
Appendix B. 1: Number of HIAs Conducted in the USA	II
Appendix B.2: UCLA HIA- CLIC: HIAs in the USA.....	III
Appendix B. 3: Health Impact Project: HIA in the USA	XIII
Appendix C.1: TAC Questionnaire 1.....	I
Appendix C. 2: TAC Questionnaire 2a	VIII
Appendix C.3: TAC Questionnaire 2b.....	X

LIST OF TABLES AND FIGURES

Table 1: HIA Opportunities for Collaboration	26
Table 2: Type and Description of HIA.....	27
Figure 1: Responses to “Who Should Conduct HIAs?” (Source: TAC Survey).....	39
Table 3: HIAs conducted by sector and decision-making level.....	33
Figure 2: US HIAs conducted per sector.....	34
Figure 3: US HIAs conducted per decision-making level.....	34

LIST OF ABBREVIATIONS/ACRONYMS

ACHIEVE	Action Communities for Health Innovation and Environmental Change
CDC	Center for Disease Control and Prevention
CEDS	Comprehensive Economic Development Strategy
CHANGE	Community Health Assessment and Group Evaluation
CHARTS	Community Health Assessment Resource Tool Set
CHD	County Health Department
CIO	Community institution/organization
COMPASS	Community Health assessment and health improvement planning cycle
CPPW	Communities Putting Prevention to Work
CTSTs	Community Traffic Safety Teams
ECT	Environmental Consulting & Technology Inc.
EnvPHPS	Environmental Public Health Performance Standards
EPA	Environmental Protection Agency
EssEPHS	Essential environmental public health services
FDEA	Florida Department of Elder Affairs
FDOH	Florida Department of Health
FDOT	Florida Department of Transportation
FGDL	Florida Geographic Data Library
FPHI	Florida Public Health Institute
GIS	Geographic Information Systems
HIA	Health Impact Assessment
HIP	Human Impact Partners
IAIA	International Association of Impact Assessment
LHD	Local Health Department
MAPP	Mobilizing Action through Planning and Partnerships
NAAQS	National Ambient Air Quality Standards
NACCHO	National Association of County and City Health Officials
NACDD	National Association of Chronic Disease Directors
NPHSP	National Public Health Performance Standards Program
NRC	National Research Council
NRPA	National Recreation and Park Association
PACE EH	Protocol for Assessing Community Excellence in Environmental assessment Health
PPHR	Project Public Health Ready
QoL	Quality of Life
SPROUT	Sustainable Practices to Reduce Obesity Using Teachable Stewardship
SRTS	Safe Routes to School
SSP	Spatial Structure Plan
SWMS	Solid Waste Management Services
TAC	Technical Advisory Committee
UCLA	University of California Los Angeles
UCLA HIA-CLIC	University of California Los Angeles HIA Clearinghouse Learning & Information Center
WHO	World Health Organization
WPHF	Winter Park Health Foundation

INTRODUCTION

Health Impact Assessment (HIA) 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. HIA provides recommendations on monitoring and managing those effects (National Research Council [NRC] 2011, 5).

The HIA process is based on a broad model of health research that proposes that social, behavioral, physical (Cole and Fielding 2007, 397; Lock 2000, 1395); psychological; (Lock 2000, 1395) economic, political, environmental; (Lock 2000, 1395; NRC 2011, 91) and cultural factors (NRC 2011, 91) are determinants of population health. This comprehensive model of health is based on the definition of health that states that health is, “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity,” (Preamble WHO Constitution, 1948; Florida Department of Health [FDOH] 2012, n.d.). This broad definition is inclusive of the social determinants of health which ultimately are indicators of quality of life in a population.

Emerging in the 1980s and developing rapidly in the 1990s, the HIA process has attracted interest among public health, planning and transportation professionals world-wide (Forsyth, Slotterback and Krizek 2010, 1; Dannenberg et al. 2008, 241). Internationally, the HIA process has been institutionalized and used as a means to promote health conscious decision-making that aims to “protect and enhance health and health equity” (Collins and Koplan 2009, 315). Interest in, and application of, the HIA process internationally has led to legislation that not only enables, but requires, this regulatory process to ensure health consideration in policy, programs, plans, and projects. In the US, the HIA process has recently begun to gain interest, particularly among public health leaders and planners (Forsyth, Slotterback and Krizek 2010, 2; Cole and Fielding, 2007, 401). However, legislation is still lacking and formal institutionalization of the HIA process (e.g., formal HIA training; some form of

organizational or agency oversight) has yet to be accomplished by a majority of states. This lack of legislation and institutionalization may contribute to the reason “U.S examples of HIA are still rare” (Cole and Fielding, 2007, 401). Meanwhile, Cole and Fielding (2007) partially attribute the relative lack of HIAs conducted in the United States to the “lack of practitioners trained in HIA,” and, “lack of precedent and imperatives for HIA” (Cole and Fielding, 2007, 401). Nonetheless, more domestic examples of HIAs are needed to document their application in U.S. settings. More examples would be used to increase awareness of their value and political acceptability, to further develop models for usage in the US, and to formalize HIA training courses (Dannenberg et al. 2008, 241).

HIA is cited as a valuable public health tool with a methodology that can help identify potential health benefits or risks, and may be used to minimize health disparities among affected communities, particularly among vulnerable groups (Dannenberg et al. 2008, 243; Forsyth, Slotterback and Krizek 2010, 6). By highlighting the importance of health disparities and identifying any disproportionate burden of a proposed policy, plan, program, and project, and alternatives, on any particular group, HIAs may be used to ensure social and environmental integrity, (Dannenberg et al. 2008, 243; Bhatia 2011, 3; Mindell, Ison and Joffe 2003; 647) economic and social rights (O’Keefe and Scott-Samuel 2002, 734), and improve the health and welfare of underserved populations. Cole and Fielding (2007, 396-7) state that HIA’s “greatest value lies in its ability to identify and communicate potentially significant health impacts that are under-recognized or unexpected.” For example, these HIAs address “potential health effects of policies such as agriculture subsidies, wage laws, education programs, and urban redevelopment projects” (Cole and Fielding 2007, 396-7).

HIA allows for multiple sources of information to provide insight into health concerns and health benefits associated with a policy, program, plan or project. The process and application of HIA allows for greater public health awareness by providing input across disciplines, including those that are outside

the health sector, and by evaluating alternative policy solutions that might not otherwise be considered. In this sense, the HIA process can “increase decision-makers’, planners’, and other stakeholders’ general awareness about health issues and the health effects of actions outside the health sector” (Cole and Fielding, 2007, 397). Thus, HIA is a tool that examines a proposal, as well as possible proposal alternatives and potential mitigation strategies, in order to provide a number of opportunities for minimizing the health risks associated with the proposal, and allow for improved decision-making.

Community engagement is another means to bring health concerns to the table by allowing affected residents to engage in the decision-making process and voice their issues (Bhatia 2011, 3). Based on this observation, “proponents see HIA as a means to advance public health objectives and improve communication between local governments and their associated health departments” (as cited in Forsyth et al. 2010, 2, Dannenberg et al. 2006, 268), or why “others strive to involve more people in discussion about health” (as cited in Forsyth et al. 2010, 2; Kemm and Parry 2004a, 16; Ahmad 2004). After consideration of all parties’ health concerns and the assessment of health impacts of all scenarios, alternatives and mitigation strategies should produce outcomes that ensure decisions protect and promote health (Bhatia 2010, 3).

Florida should be interested in HIA because the Florida Department of Health’s (FDOH) mission statement and values are consistent with what the HIA process intend to do. The FDOH mission statement is: “to protect and promote the health of all residents and visitors in the state through organized state and community efforts, including cooperative agreements with counties” (Florida Department of Health [FDOH] 2012b, n.p.). The FDOH embraces the following values:

Excellence: We achieve and maintain quality results and outcomes through continuous performance improvement and learning.

Commitment to Service: We dedicate ourselves to provide services unconditionally and without partiality.

Accountability: We take full responsibility for our behavior and performance.

Empowerment: We create a culture that encourages people to exercise their judgment and initiative in pursuit of organizational goals.

Integrity: Our guide for actions--which incorporates our commitment to honesty, fairness, loyalty and trustworthiness--is in the best interests of our customers and employees.

Respect: We recognize and honor the contributions of one another in our daily activities and create an environment where diversity is appreciated and encouraged.

Teamwork: We encourage active collaboration to solve problems, make decisions, and achieve common goals (FDOH 2012a, n.p.).

Acting upon these values, the FDOH (2012a) has committed to accomplish their mission by actions such as,

identifying health risks in the community; maintaining a safe and healthful environment; detecting, investigating, and preventing the spread of disease; promoting healthy lifestyles; providing primary care for individuals with limited access to such care from the private sector; and ensuring that health care practitioners meet the requirements for providing adequate care; informing the public on health issues.

Additionally, in the recently-released *Florida State Health Improvement Plan, 2012-2015* (FDOH 2012, 10), the DOH committed to “offer comprehensive support and technical assistance to CHDs to perform Health Impact Assessments that will inform the decision-making process about health consequences of plans, projects and policies.”

HIA provides a means for the decision-makers, stakeholders, and public to learn more about health effects of policies, plans, projects, and programs in all sectors, not just those traditionally thought of as health related, serving as a “vehicle to institutional learning” (Bhatia 2011, 3) that is consistent with the FDOH’s “mission to promote and protect the health and safety of all Floridians” (FDOHa, 2012). Bhatia (2011, 3) states that, “at least three distinct types of learning may occur through HIA: identification of technical solutions to identified problems, the redefinition of problems and goals, and the growth of mutual understanding among stakeholders.” FDOH’s values of empowerment and teamwork directly support HIA through processes that enable community engagement in decision-making, involvement of stakeholders, and inter-sectoral collaboration throughout the HIA process, also establishes the foundation for values such as respect and integrity. By finding a means to institutionalize

HIA, the FDOH would be demonstrating its commitment to health promotion and its accountability to the state's residents to ensure that health impacts are assessed in policies, programs, plans, and projects and protect the health of affected communities, especially vulnerable populations.

The FDOH has sponsored the Center for Health and the Built Environment in the Department of Urban and Regional Planning at the University of Florida, to perform an analysis of current HIA initiatives in Florida. The analysis compares Florida HIAs with the current Centers for Disease Control (CDC) model for performing an HIA¹ and focuses on accomplishing the following objectives: identify how HIA is used nationally and internationally, including the model used by the CDC; identify Florida specific HIA processes; identify which HIAs were successful and why; identify how HIAs performed in Florida compare to national HIAs that have been conducted; and recommend priority areas currently affecting public health (such as climate change) for which the HIA tool could be applied.

¹ In 2011 by the National Research Council, which advises the Institute of Medicine, completed a report called *Improving Health in the United States: The role of HIA* that defines best practices in HIA. As such the report supersedes the guidance provided by the CDC.

LITERATURE REVIEW AND BACKGROUND

HIA is a vehicle for institutional learning that considers multiple pathways across sectors to determine health effects and aims to minimize health disparities among affected communities, especially vulnerable groups, in order to protect and promote health. Pathways (e.g., indoor or outdoor air quality, education, healthcare access, land-use) explore and demonstrate “how inter-related determinants may be affected by a proposed policy, program or project” (Quigley et al. 2006, 2) by aiming to trace the changes through to their impact, directly or indirectly, on health status (Dalhlgren 1995, as cited in Quigley et al. 2006, 2). The University of California Los Angeles (UCLA) HIA Clearinghouse Learning and Information Center (UCLA HIA-CLIC 2011, np) suggests that, “HIAs need to consider two sets of linkages for each relevant pathway: first, how the proposed policy or project affects upstream determinants of health.” This is to suggest that changes in policy or projects may have unforeseen future health impacts that could alter the current determinants of health and replace them with new conditions that have the potential to influence health too. “Second, how changes in these determinants affect health outcomes” (UCLA HIA-CLIC 2011). Since health is determined by a wide variety of factors, health and health outcomes are products of proposed decisions in a variety of sectors.

Non-health sectors and health sectors, whether public and private, are so closely interrelated that proposed decisions in a single sector have the capacity to impact objectives of other sectors (The HIA Gateway 1999). For example, increased traffic congestion may lead a highway to be widened to accommodate a surge in vehicle use that has resulted once again in congestion. The efforts to widen the highway to relieve congestion may result in increasing users and an increase in air pollution that has the potential to exacerbate and produce adverse respiratory health outcomes in the community along the roadway. In this instance, an effort to resolve a problem within a single sector –transportation – produces an adverse impact on another sector, public health.

HIA has been cited as a valuable tool used to increase collaboration across disciplines and within the health sector as a whole (UCLA HIA-CLIC 2011). It also increases action and promotes continuous conscious consideration of potential health effects of proposed decisions and support improved opportunities for health (UCLA HIA-CLIC 2011). “Whether or not a formal health impact assessment is conducted for a proposed policy or project, the growing body of HIA work can help decision-makers and stakeholders better understand potential policy opportunities for improving the public’s health from agriculture to education to transportation” (UCLA HIA-CLIC 2011, np). In doing so, HIA is a tool that can better inform decision-makers of possible health impacts that may not have been considered, and improve the context for making decisions. The HIA process can also provide options on how to alter a proposal to ensure that adverse health impacts are minimized and maximize health benefits.

International and Domestic Use of HIA

In the United States, HIAs have been conducted in a variety of sectors, including agriculture and food; built environment; climate change; economic policy; education; gambling; housing; labor and employment; natural resources and energy; physical activity; and transportation. Educational institutions; government agencies at the local, county, state, regional, and federal levels; non-profit organizations at the local, county, state, regional, federal levels; and undetermined organizations (e.g., Bernalillo County Place Matters Team; Consulting MITHUN firm, and Denver Housing Authority; EnvironHealth, Stapelton Foundation Be Well Initiative; Central Oregon Intergovernmental Council, and Warm Springs Tribe) have conducted HIAs (UCLA HIA-CLIC 2011). Thus, HIA goes beyond environmental health and addresses broader issues, such as how funding cuts to mass transit may impact public health; how the 2002 Farm Bill might affect health through factors ranging from its impact on the rural economy, to the dietary choices of all citizens; how four different models of after-school programs may

potentially affect children's' health; how a slot-machine casino may influence health; and how carpeting may impact asthma rates (UCLA HIA-CLIC 2011).

According to the Health Impact Project (2011), as of April 21, 2012, 159² HIAs have either been conducted or are currently in-progress in the US. The long term outcomes of those HIAs are still being assessed through processes of monitoring and evaluation, and some long term health effects of an HIA may not be realized for a long period of time. Therefore, it is important that an ongoing catalogue and database of HIAs conducted in the US is recorded in a transparent fashion, and is available to the public so that HIA processes may continue to develop and be studied to ensure evidence for healthy policies, plans, programs, and projects. Currently, two organizations have begun this process- Health Impact Project and UCLA HIA-CLIC; however, as you may view their catalogues in the appendices their records are incomplete and partly inconsistent with one another. For example, the UCLA-HIA-CLIC lists only 100 HIAs. This may suggest that the websites may not be maintained and updated regularly or they may use different definitions of what constitutes an HIA. It is important to have updated and comprehensive access to HIAs, past and presently, for an on-going catalogued database.

Internationally, HIA is well-established and has been more widely conducted. The World Health Organization (WHO, 2012) cites the following areas as of concern in HIAs: agriculture, air, culture, development, energy, environment, housing, integrated impact assessment, mining, noise, other subjects, overview, recreation/leisure, social welfare, tourism, transport and communications, waste, and water. To further demonstrate that HIAs include more than environmental impacts, the research team has highlighted several HIA conducted internationally that have been reported by WHO and The HIA Gateway. The level of detail on each HIA depends on available information.

² New HIA are being added daily to the Health Impact Project's HIA database. As of June 29, 2012 there are 110 completed HIA and 91 in-progress for a total of 201 HIA in the US.

In 2003, the United Kingdom conducted a rapid HIA to assess the health benefits of cultural activities on the broader community. WHO (2012) reports that the London Mayoral Strategy on Culture HIA resulted in the following actions:

defining how cultural activity can affect the different aspects of individual and community life; acknowledging food as an important vehicle for expressing and celebrating cultural diversity; considering how the creative industries may improve working conditions and provide career paths; considering the tensions involved in a 24-hour economy with areas of mixed land use; and strengthening social and economic development through cultural policy by valuing communities; recognizing the importance of transport in London for sustaining cultural activity and development. (WHO 2012, n.p.)

In 2001, a rapid HIA of the draft Municipal Waste Management Strategy was conducted by the London Health Commission to develop the London Mayoral Strategy on Waste (WHO 2012). The resulting document provides guidance and proposed the following actions for improvements: developing and implementing better communication and advocacy strategies, including leading by example (WHO 2012). The HIA Gateway reports that the Wiri Spatial Structure Plan (SSP) HIA in Wiri, New Zealand, conducted in 2010 by the Manukau City Council with the expertise and support of Synergia, was aimed to develop guidelines and controls that would determine the built form and spatial system of Wiri and support the vision for the Wiri area to be a vibrant extension of the Manukau City Centre (The HIA Gateway 2007, n.p.). The HIA Gateway states that, “the central findings of this HIA cover the desire for the Wiri SSP to support open space, cultural diversity, leisure/recreation, healthy affordable housing, safety, and access to amenities and services.” The description of the Wiri SSP HIA states that,

The key strength of this HIA was the way it was able to work effectively in partnership with a range of sectors, agencies and organizations, building on the strength of the relationships established through the Wiri Improvement Project. This process embraced the principles of Kaupapa Maori research by way of centralizing Maori concerns, setting out to make a positive difference for Maori, promoting equity, supporting Maori determination and employing a bottom up approach (The HIA Gateway 2007, n.p.).

In 2008, the City of Toronto, Canada, directed Solid Waste Management Services (SWMS) to retain Golder Associates to conduct an HIA to ensure that all aspects of human health were considered for the Proposed City of Toronto Mixed Waste Processing Facility (The HIA Gateway 2007). The HIA was used to inform the City's plans for the period 2010 to 2035 in an effort to achieve the City's Target 70 waste diversion objectives (The HIA Gateway 2007). The report was made available in 2010 and used staff suggestions, and input from the affected communities and stakeholder groups (First Nations, public health, local government and public liaison committee) for recommendations (The HIA Gateway 2007).

Best Practices: Phases³ in the HIA Process

In a study that compared 45 local, national and international guidelines, Hebert et al. (2012, 76) found that 100% of guidelines included a definition of HIA, 100% had a screening phase, 100% had a scoping phase, 100% had an assessment phase, 76% had a recommendations phase, 73% had a reporting phase, and 91% had a phase for evaluation/monitoring. The CDC identifies the following phases in the HIA process: screening, scoping, assessment of risk and benefits, developing recommendations, reporting, and evaluating. Other HIA guidebooks and frameworks have phases consisting of screening; scoping; assessment of health effects, risk and benefits; recommendations, including mitigation and alternatives; reporting, including communication; and monitoring and evaluating, in some cases monitoring and evaluation are recognized as separate phases (Bhatia 2010;

³ Due to the nature of HIA and the inconsistency in the literature, the authors have decided to call what is sometimes referred to as steps, as phases in the HIA process. By its nature the HIA process involves interactions between the phases. For example, the decision on the scope of a project may be determined in that step but the scope may be modified in the assessment if the required data is not available. Similarly recommendation may merge during the assessment phase. The term phase suggests what activities need to be completed in a project, while step implies that the process is sequential. As such, this report will use the term phases to refer to the six major activities in an HIA – screening, scoping, assessment, recommendations, reporting, and monitoring and evaluation. Note that even in the literature cited we have modified the usage of steps to be identified as phases to provide internal consistency throughout this report.

Bhatia 2011; National Research Council [NRC] 2011). The purpose of each phase in the HIA process is described below.

Screening

The underlying purpose of the screening phase is to determine whether conducting an HIA would be useful and warranted. In this preliminary phase, “screening determines whether a proposal is likely to have health effects and whether the HIA will provide information useful to the stakeholders and decision-makers” (NRC 2011, 47). According to Hebert et al. (2012, 76) 96% of the guidelines reviewed in the study described the screening phase as a selection process for HIA that identifies potential health impacts and judges its potential to add value to the decision making process. The central considerations of the screening process is whether health considerations are being observed and whether those considerations are legally sanctioned, whether resources and technical capacity permit, including data and staff conducting an HIA, and whether there is an adequate amount of time to complete an HIA that will provide important insight in the decision-making process (NRC 2011, 48). During the screen process, it is important that the preparers consider whether the proposal is likely to exacerbate health disparities and disproportionately burden the affected community, especially vulnerable populations (NRC 2011, 48).

The screening process should describe the proposed policy, program, plan, or project, the decision-making process and context, and map out a timeline for the decision-making process (NRC 2011, 49). In some instances it may be beneficial to identify the agencies involved and their jurisdictional authority (NRC 2011, 49). Careful consideration of the ideology behind why the proposed policy, program, plan, or project was proposed in the first place is an important point of deliberation (NRC 2011, 49). For example, the screening should consider “the major political drivers of the proposal, the arguments made by political supporters and those opposed to the proposal, and any economic or

technical constraints that limit the alternatives that can be considered” (NRC 2011, 49). According to the committee of the NRC (2011, 51-2) report, some of the most important factors to consider in the screening process are as follows:

- The potential for substantial adverse or beneficial health effects and the potential to make changes in the proposal that could result in an improved health risk-benefit profile.
- The potential for HIA-based information to alter a decision or help a decision-maker discriminate among decision options.
- The potential for irreversible or catastrophic effects (including effects of low likelihood).
- The potential for health effects to place a disproportionate burden on or substantially benefit vulnerable populations.
- Public concern or controversy regarding health effects of the proposed decision.
- The opportunity to bring health information into a decision-making process that may otherwise not include this information.
- The potential for the HIA to be completed in the time allotted and with the resources available.

Public involvement in the screening process is a valuable source of information that can identify potential effects of a proposal, and has the capacity to contribute to decisions regarding the usefulness of conducting HIA and whether it is warranted (NRC 2011, 49).

Bhatia (2010, 11) suggests that the screening phase may also consider the following questions regarding the value of HIA, feasibility and capacity, and receptiveness of the decision making process:

Value of HIA:

Are there potentially significant health effects associated with decision alternatives?
Could these impacts create or exacerbate health inequities?
Are the impacts already well understood or are they hidden, uncertain or controversial?
Are there potential approaches to mitigate health effects or leverage the decision to promote health not yet included in policy proposals?

Feasibility and capacity to do an HIA:

Do available data and evidence support an HIA?
Are there resources and technical capacity to conduct analyses?
Is there leadership and commitment to communicate findings and recommendations within the decision-making process?

Receptiveness of the decision-making process:

Is the decision-making process open?
Do policy or legal requirements mandate addressing or mitigating health impacts?

In addition to the description of the proposal, the outcomes of screening should state the rationale for the selection of the proposal for screening, present preliminary opinion regarding the potential importance of the proposal for health, and the opportunities for an HIA to inform the decision, outline expected resources, and ultimately recommend whether an HIA is warranted or whether it is not warranted (NRC 2011, 49) and at what scale⁴ (Quigley et al. 2006, 3). It is important that the screening process is well documented and provides a transparent account of what factors were considered when deciding to conduct an HIA, even when stakeholders decide to forego an HIA.

Scoping

In 98% of guidelines reviewed by Hebert et al. (2012, 76) the scoping phase is intended to establish the “framework, work plan, or terms of reference for how the HIA will be conducted and what impacts will be studied.” Ninety-three percent of the guidelines reviewed “iidentifies stakeholders and/or forms a steering committee,” 88% “sets geographic and population boundaries,” and 67% “iidentifies which level or type of HIA to conduct” as part of the scoping phase (Hebert et al. 2012, 76).

According to Bhatia (2011, 14), scoping is an aggrandizement of the screening phase and provides answers to the following questions:

- Who will conduct the analysis (if not already determined)? Under what oversight?
- What is the timeframe for the assessment?
- Which specific decision alternatives will be evaluated?
- Which potential health impacts will be analyzed?
- What are the geographical and temporal boundaries for impact analysis?
- Who are vulnerable affected populations?
- What data, methods, and analytic tools will be employed?
- How will the HIA characterize health effects?
- Which experts and key informants will be engaged?
- What is the plan for stakeholder engagement and public review of the HIA?

⁴ Scale pertains to the degree of type or level of HIA, including desktop/mini HIA, rapid assessment or appraisal, integrated HIA, intermediate HIA, and full or complete HIA. Descriptions of the types of HIA are included later in this report.

How will the HIA be communicated and reported? By whom

While answering the questions above are an important part of scoping, it is just as important to ensure that an individual, organization, or agency undertaking the HIA has the necessary capacity and resources, including:

...some expertise in the likely public health impacts of the project; the ability to collect or access data or knowledge about the health conditions, economy, social environment, and cultural characteristics of the affected communities; the ability to coordinate participation among stakeholders and public and private organizations; and the ability to communicate findings to decision makers (Bhatia 2010,17).

The purpose of scoping is to identify issues and methods for assessment, permitting time and resources available, and communication, including the strategy for stakeholder engagement (Bhatia 2011, 14). Since “scoping considers input from many sources, including preliminary literature searches, public input, and professional or expert opinion in fields relevant to the proposal,” (NRC 2011, 52) it is important to clearly establish the “role and responsibilities of the different participants involved” (Bhatia 2011, 14). The benefits of having broad participation and a diverse group of input is that it “reduces the opportunities for introducing biases related to the interests of particular stakeholders or disciplines” (Bhatia 2011, 14). The National Association of County and City Health Officials (NACCHO 2008, 2) suggest that one of the main tasks of this critical phase is to set up a steering committee “to ensure a collaborative approach to this assessment.” A steering committee may be used as one of the key informants that contribute to developing the scope of the HIA. Involving the “affected communities in HIA helps to identify important health concerns and questions about a decision and provides insights about data and strategies for analysis,” (Bhatia 2011, 14-5) while stakeholders provide “knowledge and access to data sources” (Bhatia 2011, 14-15). Bhatia (2011) suggests that the participants “may want to develop and use a comprehensive list of health determinants to help to ensure that all potential effects are at least considered in the scoping process” (Bhatia 2011, 14-15).

The central tasks of scoping include, “determining the potential health effects to include in the HIA and proposing hypothetical causal pathways” (NRC 2011, 52). When choosing what to evaluate be cognizant of the specific “social, political, and policy context” involved with the proposal; “the needs, interests, and questions of stakeholders and decision-makers; and the health status of the affected population” (NRC 2011, 52). Keep in mind that, “it will often not be practical or possible to address all direct and indirect health effects that appear theoretically possible, it is important to select issues carefully” (NRC 2011, 52). Therefore, when setting the HIA priorities consider “pathways that appear most important from a public-health perspective and considers issues that have been raised prominently by stakeholders” (NRC 2011, 52). Once pathways and issues have been selected it is important to provide a documented, transparent account of the rationale for each issue, or pathway, selected (Bhatia 2011, 14).

In addition to the pathways or issues that will be selected, the scoping phase should establish “the boundaries of the HIA and identifies the health effects to be evaluated, the populations affected, the HIA team, sources of data, methods to be used, and any alternatives to be assessed” (NRC 2011, 52). This process may include “identifying communities and geographic regions; demographic, economic, racial, and ethnic groups; and vulnerable populations, such as children, elderly people, disabled people, low income people, racial and ethnic minorities, and people who have pre-existing health conditions” (NRC 2011, 53). Scoping does not involve a “full characterization of baseline health status,” (NRC 2011, 53) but may identify and superficially describe “pre-existing health issues, health disparities, and influences on health” (NRC 2011, 53).

As the scoping process addresses pertinent questions regarding time, resources (including data and methods), participants and stakeholders, etc. considerations of the type or level of an HIA to be conducted needs to be further deliberated and determined (NACCHO 2008, 2). Sources suggest that a variety of plans should be developed, including a research plan (Bhatia 2011, 14), a work plan (NACCHO

2008, 2), a plan for external and public review (North American HIA Practice Standards Working Group 2010, 4), and a plan for dissemination of findings and recommendations (North American HIA Practice Standards Working Group 2010, 4).

The National Research Council (2011) suggests that the final outputs of the scoping stage should include:

- An initial brief summary of the pathways through which health could be affected and the health effects to be addressed, including a rationale for how the effects were chosen and an account of any potential health effects that were considered but were not selected and why. Any logic models or scoping tables that were completed should also be included.
- Identification of the population and vulnerable groups—such as, children, the elderly, racial or ethnic minorities, low-income people, and communities— that are likely to be affected.
- A description of the research questions, data sources, methods to be used, and any alternatives to be assessed.
- Identification of apparent data gaps and of data collection that could be undertaken to address the gaps or a rationale for not undertaking data collection.
- A summary of how stakeholders were engaged, the main issues that the stakeholders raised, and how they will be addressed or why they will not be addressed. (NRC 2011, 58-9).

Assessment

Hebert et al. (2012, 76) found that 100% of the guidelines reviewed identified the assessment phase as, “using a combination of quantitative and qualitative methods to gather and organize information on the current status of a population and how the health of a population could be impacted.” Some of the approaches to analysis within the assessment phase that have been used include epidemiological and empirical research, baseline conditions, Geographic Information Systems (GIS) and geospatial analysis, using qualitative or quantitative evaluation standards (e.g., benchmarks, checklists, thresholds), qualitative research, quantitative estimation, original empirical investigations, analysis of disproportionate effects and environmental integrity, cumulative effects, and economic valuation of interventions and health impacts (Bhatia 2010, 25-40).

The NRC (2011, 60) identifies two tasks in the assessment phase: creating a profile of affected population, including information concerning demographics, baseline health status, and social, economic, and environmental conditions that contribute to health; and analyzing and characterizing the influences on health, determinants for the proposal and alternatives under consideration “relative to the baseline and to each other” (NRC 2011, 60). Meanwhile, Bhatia (2011, 21-2) identifies five tasks involved in a sequential approach to analysis of health effects that should be repeated for each health effect selected for assessment:

Task 1: Evaluate and weigh evidence of causal effects

- Utilize empirical literature and literature reviews to understand the nature of the relationship between the decision, health determinants, and health effects.
- Evaluate whether evidence demonstrates a cause and effect relationship and assess the generalizability of the evidence.
- Conduct original research (e.g., surveys, interviews, focus groups, epidemiologic analysis) in affected communities, if needed.

Task 2: Collect and synthesize data on baseline conditions

- Enumerate and characterize the affected population in the area affected by the decision.
- Identify measurable indicators for health determinants and health outcomes, and access and synthesize existing data on these determinants and outcomes.

Task 3: Forecast health effects quantitatively, where feasible

- Identify suitable prediction models (e.g., exposure response functions, regression equations, etc.)
- Evaluate whether data are available to estimate effects quantitatively.
- Compute estimated health effects for each decision alternative, based on the prediction model, baseline conditions, and changes in risk or resilience factors.

Task 4: Characterize expected health effects

- Characterize the likelihood, severity, magnitude, and distribution of health effects for each decision alternative, using causal models, empirical evidence, the baseline conditions assessment and quantitative forecasting tools.

Task 5: Evaluate the level of confidence or certainty in health effect characterizations

- Judge the confidence in the effect characterization, considering data limitations and assumptions with regards to population enumeration, exposure assessment, exposure assignment, evidence for cause and effect relationships, validity of dose response function, and unmeasured mediating factors.
- Evaluate how alternative assumptions may alter effect estimates and characterizations

These five tasks are used to identify what Bhatia (2011,20) regards as the three outputs of assessment, “ascertainment of baseline (existing) conditions in the affected population including health status, health determinants, and vulnerabilities to health effects; characterization of the anticipated health

effects of alternative decisions; and evaluation of the level of confidence or certainty in the health effects characterization.” NRC (2011, 61-2) cites the following descriptors of characterization of effects are commonly used:

Nature—describes the effect and the causal pathway.

Direction—indicates whether the effect is adverse or beneficial. In some cases, the direction of the effect may be unclear, or conflicting influences on a given health outcome may be identified (Harris et al. 2007).

Intensity—indicates the severity of the effect (for example, fatal, disabling, or no disability).

Magnitude—refers to the expected size of the effect and can be described by the number of people affected or by expected changes in the frequency or prevalence of symptoms, illness, or injury.

Distribution—delineates the spatial and temporal boundaries of the effect and identifies various groups or communities that are likely to bear differential effects. This factor is important for ensuring that health equity is addressed.

Other descriptors used to define groups are age, sex, ethnicity, socioeconomic status, locational disadvantage, health status or disability (NRC 2011, 62) may be used to recognize and address health equity or disparities between groups (NRC 2011, 62). Other terms of reference used within the characterization of the assessment phase include:

Timing and duration—indicates at what point of the proposed activity (such as construction vs. operation of a new power plant) the effect will occur, how long it will last, and how rapidly the changes will occur; also discusses whether effects are reversible or permanent.

Likelihood—refers to the chance or probability that the effect will occur.

Confidence or certainty—characterizes the effect according to level of confidence or certainty in the prediction; that characterization is based on the strength of the evidence as described below. (NRC 2011, 62)

The NRC (2011, 66) states the outputs of assessment should result in a report that,

- Describes the baseline health status of the affected population with appropriate indicators, including prevalent health problems, health disparities, and social, economic, and environmental factors that affect health. The baseline should be focused on the issues that are likely to be affected by the proposal.
- Analyzes beneficial and adverse health effects and characterizes the changes in the indicators selected, to the extent possible, in terms of nature, direction, intensity, magnitude, distribution in the population, timing and duration, and likelihood.
- Integrates stakeholder input into the analysis of effects.

- Describes data sources and analytic methods and methods used to engage stakeholders.
- Identifies limitations and uncertainties clearly.

Recommendations

The recommendations phase is part of the process of developing final recommendations, including mitigation strategies (NACCHO 2008, 2; NRC 2011, 70; Bhatia 2011, 41) that have the capacity to improve health and protect health by avoiding, or minimizing harmful effects (NRC 2011, 70; Bhatia 2011, 41), for proposals and design alternatives (NRC 2011, 70; Bhatia 2011, 41). Hebert et al. (2012, 76) found that 100% of the guidelines reviewed identified the recommendations phase as, “formulating ways to improve a proposal to maximize positive health impacts and minimize negative impacts.” In the event that an HIA fails to reveal significant health effects, recommendations may not be necessary (NRC 2011, 68; Bhatia 2011, 41); however, in this case rationale for not including recommendations should be explicitly stated in the report (NRC 2011, 72). The criteria for selecting alternatives and mitigations should be responsive to projected impacts, experience-based and effective, economically efficient, multi-objective, reflect technical feasibility, political feasibility, and should ultimately be enforceable and absent of adverse externalities (Bhatia 2011, 41). Recommendations should be based on the findings of the assessment phase and developed using available evidence (e.g., literature, case studies, etc.) that bolster effective strategies or solutions (NRC 2011, 68). Recommendations should be transcribed into the final report (NACCHO 2008, 2), and should be unbiased.

To avoid bias it is recommended that broad participation in the recommendations phase is undertaken. NRC (2011, 70) describes the value of public input in the development of recommendations providing the ability “to ensure that proposed measures are locally relevant, address context-specific factors that might render them more or less effective, and address public concerns and hopes,” (NRC 2011, 70) and that the success of recommendations hinges on “the public’s trust in and support of them” (NRC 2011, 70). Community input is a means to identify “living conditions and

community design that may not be obvious to an outside researcher” (NRC 2011, 72). Decision-makers and stakeholders input are needed not only to avoid bias but to ensure that mitigations and design changes are feasible (Bhatia 2011, 41).

NRC (2011, 68) suggests that the nature of proposals and their impacts will vary resulting in various forms of recommendations, such as:

- A major alternative to a proposal (for example, routing a proposed highway away from a vulnerable population or building a light-rail line rather than widening a road).
- Mitigation measures that address a specific impact identified in the HIA and are intended to minimize a potential harm (for example, a measure to reduce benzene emissions from gas wells near residential areas) or measures to maximize a potential benefit.
- Health-supportive measures that would generally support health but are not tied directly to a specific impact (for example, building a clinic in an underserved neighborhood that would be adversely affected by emissions from a new freeway).
- Adopting a position for or against a proposal (for example, support for or opposition to a legislative proposal). (NRC 2011, 68).

Ultimately, decision-makers must weigh the proposed recommendations according to the relevant political, economic, social, and technical factors that influence the proposal and decisions (NRC 2011, 70). Bhatia (2011, 42) advises that “HIA should explicitly acknowledge that the incorporation of mitigations only offers partial relief from adverse health effects.”

The following have been regarded as processes important to the recommendations phase: community input, as previously mentioned; regular communication with decision-makers to ensure that drafted measures are within relevant or legal framework and can contribute to statutes, regulations, zoning provisions, etc.; and identifying elements that will guide a health management plan, including indicators for monitoring and evaluation (NRC 2011, 72). A health management plan “determines authority for and assigns responsibility for implementing each recommendation, establishes a monitoring plan, and creates or suggests mechanisms to verify that assigned responsibilities are being

met” (NRC 2011, 71). Recommendations form the foundation for developing a health management plan to be implemented in the monitoring and evaluation phases (NRC 2011, 71).

The major outputs that the recommendations phase should provide in the final HIA report regarding the documentation of evidence, stakeholder input, and a health management plan should (NRC 2011, 71-2):

- Discuss what entity has the authority or ability to implement each measure and document any commitments to do so.
- Propose appropriate indicators for monitoring.
- Propose a system to verify that measures are being implemented as planned.

Reporting

The reporting phase is generally the process of providing a transparent account of the HIA process (Bhatia 2011, 43) and formally communicating the HIA findings and recommendations to decision-makers, the public, and other stakeholders in a succinct, transparent manner that addresses the needs of all audiences (Bhatia 2011, 43; NRC 2011, 73). Hebert et al. (2012, 76) found that 93% of the guidelines reviewed identified the reporting phase as, “providing stakeholders and decision-makers with information about the process, findings, and recommendations of the HIA.” Although reporting is identified as a phase, reporting may also occur throughout the HIA process during “public meetings; meetings with decision-makers, other stakeholders, and advisers; and dissemination of interim public reports, such as a scoping summary” (NRC 2011, 73).

Reporting includes “the production and dissemination of written materials that document the HIA process, methods, findings, recommendations, and limitations of the analysis; and includes the public dissemination of results through other channels, such as meetings with the public, decision-makers, and other stakeholders” (NRC 2011, 73). Some of the formats of disseminating the results of the HIA may include hard copies of the HIA report, electronic format, public meetings, or focus groups (NRC 2011, 73). Regardless of the format of dissemination, whoever is responsible for communicating the HIA

findings and recommendations will need to formulate a strategy for communication (NRC 2011, 77). This strategy for communication should consider the different barriers or challenges to communicating (e.g., language barriers, access to transportation, disability, or literacy), consider what the different needs are to successfully reach each group, or audiences, (e.g., graphics and visualizations, text, oral communication) and what information the different groups will rely on (e.g., cost benefit analysis, statistics) (NRC 2011, 77).

An HIA report should, at minimum, clearly describe the proposal and alternatives under review; data sources and analytic methods; stakeholders consulted during the HIA process, including public, steering committees, experts, and other participants; the process and findings of each phase; and conclusions and recommendations (NRC 2011, 76). A comprehensive report should: identify all the participants, their roles and describe the screening and scoping phases; discuss the available scientific evidence, profile existing conditions, document and describe analytic methods and results, and characterize the health impacts and their significance for each issue analyzed and provide recommendations or mitigations that link to corresponding impacts (Bhatia 2011, 43). In a comprehensive report, recommendations should be justified in terms of feasibility and efficacy (Bhatia 2011, 43). Bhatia (2011, 43) suggests that a successful report may prioritize findings on the characteristics of effects (e.g., magnitude, disproportionate impact on vulnerable populations, perceived public concerns, or quality of the evidence) to identify the key impacts or alternatives to focus on that will spur action.

A core objective of the HIA process is to inform affected communities, stakeholders, and decision makers of the possible health effects of a proposal (NRC 2011, 77). Dissemination of the HIA report allows for it to be reviewed and improved upon. Some HIAs have allowed a period for formal review and comment on the draft HIA report by the public or an internal body (e.g., steering group), and

have used these comments to incorporate “necessary changes or new information” into the final HIA report (NRC, 73). Other benefits of public access to the HIA report’s findings include the capacity to forecast potential changes in the demand for services (e.g., health care, emergency response, public safety) and permit a process to facilitate an appropriate response (NRC 2011, 77). Public access to the HIA report also has the capacity to: reduce the risk of litigation and tort liability by explicitly revealing potential risks; transparent reporting may lead to risk reduction by motivating change among industry and governments; reduce health disparities and address concerns about environmental integrity; and allow people to take voluntary actions to avoid risk (NRC 2011, 77).

The following are tips that may enhance reporting (Bhatia 2011, 43): document the HIA process and findings in writing, prioritize findings and recommendations, provide an opportunity for public review, use opportunities in the decision’s regulatory process (e.g., public hearings, EIA comment), develop messages and framing for specific audiences, identify stakeholders and decision-makers as communicators, and engage the media. The NRC (2011, 76) suggest that the final report should document the following:

- The nature of the proposal being assessed, including alternatives that were included in the analysis.
- The population, subgroups, vulnerable populations, and stakeholders likely to be affected and how they were involved in the HIA process.
- Data sources and analytic tools used.
- Findings of each stage of the HIA and a summary of outputs at the end of each stage.
- In addition to a final report, stand-alone executive summaries or fact sheets can help to disseminate and communicate the findings and recommendations of an HIA to various key audiences. (NRC 2011, 76).

Monitoring and Evaluation

Monitoring and evaluation are described as the last phase in many guidelines for the HIA process; however, other resources suggest that the phase should be conducted outside the HIA process (NRC 2011, 78). Hebert et al. (2012, 76) found that 91% of the guidelines reviewed listed

monitoring/evaluation as a phase within the HIA process, while 87% of the guidelines reviewed identified the monitoring and evaluation phase as, “reflecting on the HIA process, impact, and health outcomes.” Over half of the guidelines explicitly considered monitoring and evaluation as “an important phase to building the HIA field” (Hebert et al.2012, 76).

Monitoring involves tracking the process of decision implementation and subsequent health outcomes (Bhatia 2011, 47), including changes in health indicators (NRC 2011, 78) after implementation of a proposal to help ensure health protective outcomes over the long-term (Bhatia 2011, 47). The essential tasks in the monitoring phase is to decide on and define implementation tasks, outcomes, and indicators for long-term monitoring; identify a lead individual or organization to conduct monitoring; develop a monitoring plan or program, including a plan to report monitoring findings to decision-makers and HIA stakeholders; ensure resources are available to conduct, complete, and report the monitoring (Bhatia 2011, 47). Monitoring should supply the information needed to conduct an evaluation (NRC 2011, 80).

Several types of evaluation have been identified and may be conducted on an HIA, including:

- *Process evaluation.* Considers whether the HIA was carried out according to the plan of action and applicable standards.
- *Impact evaluation.* Seeks to understand the impact of the HIA itself on the decision-making process or on other factors outside the specific decision being considered.
- *Outcome evaluation.* Focuses on the changes in health status or health indicators resulting from implementation of the proposal. (NRC 2011, 78).

According to NRC (2011, 81) an evaluation report produced at the conclusion of the HIA should include the following:

- An evaluation of the HIA process against the HIA plan and applicable standards and consideration of whether the process used was appropriate given the decision-making context, needs, objectives, and resources available (a process evaluation).
- A description of the HIA’s impact on decision-making (to the extent that salient decisions have occurred by that time) as measured by an accounting of HIA recommendations that were adopted and an evaluation of available evidence that

suggests whether and how the HIA played a role in decisions or contributed to changes in decision-makers' knowledge, attitudes, or positions.

- A discussion of whether the HIA achieved its initial objectives.
- Acknowledgement of plans for future outcome evaluation or discussion of limitations that prevent such an evaluation.

The Role of Community Engagement and Public Participation

The public is regarded as an invaluable source of information that contributes to the HIA process. Input from community engagement, as describe throughout the phases of the HIA process, is instrumental in identifying areas of concern that are sensitive to the affected area and may not be overtly recognized by those conducting the HIA or stakeholders, developing the scope of the HIA, and developing recommendations and the success of recommendations. Final reports should be made available to the affected community for review, since disclosure of possible health effects on their health and well-being is a core objective of the HIA process (NRC 2011, 77). The involvement of the affected community in the reporting phase may prove instrumental in the review of content and an indicator of transparency of the HIA, assist identification of areas of improvement, reduce opportunities for litigation (NRC 2011,77), and may reflect receptiveness of the findings' corresponding recommendations. Including the community in the reporting phase may also allow the community to be educated of possible health impacts and permit an opportunity to address their decision-makers and exercise their rights to free speech and a democratic process. In this instance, community engagement may be instrumental in presenting the findings. The Human Impact Partners (HIP) (2012) defines potential collaborators to include, community advocates and organizations, public health departments, planning departments, regulatory agencies (e.g., USEPA), universities, school districts, HIA consultants and the affected community. These collaborators may be involved in these activities as shown in Table 1.

Although 98% of guidelines reviewed by Hebert et al. (2012, 79) encouraged community engagement, it may not be feasible to include public participation in the HIA process due to limitations such as time, costs, and resources, which influence the type or level of an HIA that can be conducted. Subsequently, the type of HIA selected for any given proposal warranting an HIA dictates how much community engagement can be involved.

Table 1: HIA Opportunities for Collaboration

HIA Phase	Examples of Roles for Collaborators
Process Oversight	<ul style="list-style-type: none"> Stakeholders and HIA practitioners develop a collaboration agreement for the conduct and oversight of the HIA process Identify agency or organization to oversee process Coordinate partners/activities for each phase of the process
Screening	<ul style="list-style-type: none"> Identify criteria for selection and priority process for an HIA Identify priority health issues needed to be studied through an HIA Understand context of decision-making process Contact stakeholders and decision-makers
Scoping	<ul style="list-style-type: none"> Identify issues through outreach to impacted communities Prioritize research questions Conduct outreach to potential HIA participants to broaden the spectrum of stakeholders involved Identify sources of data Establish timeline and boundaries (e.g., geographic, populations) Consider resources available Develop work plan
Assessment	<ul style="list-style-type: none"> Gather and organize data Conduct research and analysis Lead or participate in field observations and research Conduct surveys, interviews, or focus groups, and interpret or “ground truth” data and analysis
Reporting and Communications	<ul style="list-style-type: none"> Develop and prioritize alternatives or mitigation strategies Identify strategies to ensure implementation of recommendations (e.g., collaboration with decision-maker to develop feasible measures; advocacy, media) Write, review and edit the final HIA report Interpret and prioritize HIA findings and recommendations Develop presentation of findings Develop and execute communication, media and advocacy plans Create demand for public agencies to conduct HIA
Monitoring and Evaluation	<ul style="list-style-type: none"> Monitor decision outcomes and long-term results

- Hold decision-makers accountable to decision agreements

Source: Adapted from HIP (2012)

Types of HIAs

Selecting a type, or level, of an HIA depends largely on available time and resources, including funding. The types of HIAs vary according to effort, complexity, and duration (NRC 2011, 44). The following have been identified as the different types, or levels, of an HIA: Rapid HIA (NACCHO 2008, 3), including mini or desktop and rapid assessment or appraisal (Forsyth et al. 2010, 6; NRC 2011, 44); intermediate HIA (Forsyth et al. 2010, 6; NRC 2011, 44; NACCHO 2008, 3); integrated HIA (Forsyth et al. 2010, 6; NRC 2011, 44); and complete, comprehensive, or full HIA (NACCHO 2008, 3; Forsyth et al. 2010, 6; NRC 2011, 44). See Table 2 for descriptions of each type of HIA.

Table 2: Type and Description of HIA

Type (Level)	Description
Rapid HIA	Includes brief investigation of health impacts; Involves exchange of existing knowledge, expertise, and research from previous HIAs; usually carried out quickly and with minimal resources (NACCHO 2008, 3). May be completed in a short time (weeks to months), are often focused on smaller and less complex proposals, and generally involve primarily literature review and descriptive or qualitative analysis (NRC 2011, 44).
<i>desktop or mini HIA</i>	Similar to screening tool; involve a quick assessment to aid decision-makers (Forsyth et al. 2010, 6). Entails little or no public engagement (NRC 2011, 44)
<i>rapid assessment or appraisal</i>	A participatory workshop format (fully open or with invited participants); requires participants read background materials in advance; provides expertise input, including local knowledge; potentially involves additional people in the HIA process to build a long-term constituency that can influence and monitor implementation (Forsyth et al. 2010, 6). Includes explicit public engagement through an initial half-day workshop for stakeholders (NRC 2011, 44)
Integrated HIA	HIA is integrated with other impact assessments, typically environmental impact assessments (EIAs) and social impact assessment (SIAs); integration may consist of parallel reports or a fully integrated study (Forsyth et al. 2010, 6). May be integrated into an environmental impact assessment (NRC 2011, 44)

Intermediate HIA	<p>Requires a more detailed investigation of potential health impacts; reviews available evidence gained from similar HIAs or other community/environmental assessments (NACCHO 2008, 3).</p> <p>Incorporates some systematic analysis but does not require as much work as a full/comprehensive/full HIA (Forsyth et al. 2010, 6).</p> <p>Requires more time and resources and involves more complex pathways, more stakeholder engagement, and a more detailed analysis but include little collection of new data (NRC 2011, 44).</p>
Comprehensive/Complete/Full HIA	<p>Is an intense investigation; reviews available evidence, along with collection or analysis of new information; and is a community-based collaborative process (NACCHO 2008, 3).</p> <p>This is the most involved form of an HIA, requiring vast amounts of data and analysis (Forsyth et al. 2010, 6).</p> <p>Most commonly differentiated from rapid and intermediate HIAs by the scope of potential impacts and the need for collection of new primary data; can take longer than a year to complete(NRC 2011, 44)</p> <p>May include a rapid or desktop based assessment as part of the scoping phase (Harris-Roxas and Harris 2010, 396).</p>

Barriers and Challenges in Current Practices

The World Health Organization (WHO, 2012) cites the lack of relevant skills and expertise, lack of awareness and understanding, lack of resources, no recognized tools or methods, lack of political support, lack of time, other priorities, and gaps in the evidence base as barriers to using the HIA process in government policy making in a world-wide consensus. As previously noted, Cole and Fielding (2007) partially attribute the “lack of practitioners trained in HIA,” and “lack of precedent and imperatives for HIA” as barriers to conducting HIAs in the United States (Cole and Fielding, 2007, 401).

METHODOLOGY

Several methodologies were used to complete this research: literature review, including internet searches, meetings with the Technical Advisory Committee (TAC), questionnaires to members of the TAC, and interviews of experts in the use of the HIA process. Internet searches were used to identify current resources for HIAs. A literature review was conducted on the use of HIAs throughout the United States and internationally to understand best practices. To guide us through the research process a Technical Advisory Committee (TAC) was established and two questionnaires were distributed to them during the project. Copies of the questionnaire can be found in Appendix C. Informal discussions were also used to foster discussion on the HIA process, and interviews were conducted to gain additional background information.

Internet Search

Websites for organizations such as WHO, International Association of Impact Assessment (IAIA), CDC, NACCHO, Health Impact Project, HIP, Health Impact Project, UCLA HIA – CLIC, and Active Living Research (ALR) were used to identify most recent resources for best practices, and a catalogue of conducted HIAs and in-progress HIAs. In addition, Google Scholar was used to identify other HIA literature for the literature review.

Literature Review

Resources identified through the internet search were reviewed and consisted of the most recently published HIA guidelines, and literature pertaining to challenges in the HIA process and application. HIA guidelines primarily reviewed included are: the NRC (2011) *Improving Health in the United States: The role of HIA*; Bhatia (2011) *Health Impact Assessment: A guide for practice*; NACCHO (2008) *Quick Guide: HIA*; and North American HIA Practice Standards Working Group (2010) *Minimum*

Elements and Practice Standards for HIA. As part of the scope of this research best practices were compared to the CDC model for HIA.

Technical Advisory Committee

Selected based on their expertise and knowledge regarding the HIA process, the TAC consist of representatives from the FDOH's Office of Health Statistics and Assessment, Minority Health and the Division of Environmental Health; local health department directors and regional planning and health councils from throughout Florida, and knowledgeable national leaders and scholars familiar with HIAs. The TAC participated in six monthly meetings to discuss current progress and facilitate discussion concerning the HIA process, updates of HIA efforts in Florida, and comments on the final report. The name of TAC members are listed at the beginning of the report.

TAC Questionnaires

Two questionnaires were distributed to the TAC. The first questionnaire (TAC Questionnaire 1) was distributed through Survey Monkey and used to inform the study of best practices in HIA, and its use in Florida. The questions reviewed the individual TAC member's experience within the field of study touching on concepts such as Health Impact Assessment, types of HIA, phases in the HIA process, transparency, and quality of life. The 15 responses were used to contribute to the researchers' understanding of various aspects of the use of HIA. It should be noted that in this questionnaire the respondents were not asked to identify whether they worked at the state or federal level; therefore, it was difficult to sort out which of the responses were directly applicable to the Florida context.

The second questionnaire had two versions depending on the type of TAC member, a local Florida member (TAC Questionnaire 2a) or a national member (TAC Questionnaire 2b, and was distributed via email. The version for the Florida TAC member's was used to gain insight of their organization's technical capacity and the ability to implement HIA in your organization's service

territory. The questions were intended to probe the Florida TAC member's perceptions regarding their affiliated organization's technical capacity and the implementation of HIA and the HIA process, and were used to develop recommendations. The version for the national TAC member's was used to gain insight concerning best practices of implementing HIA and the HIA process. The questions were intended to probe their perceptions of concepts such as the successful implementation of HIA, barriers to implementation, and degree of institutional capacity necessary to conduct HIA.

The purpose of having questionnaires administered individually to each TAC member was to ensure that all members' professional opinions are accounted for, and that those opinions are reported confidentially, thereby reducing the probability of conformity and any bias that may come from other members' influence. Results of the TAC questionnaires, which will be presented in the results below, contribute to perceptions of the HIA process and best practices. The TAC questionnaires results guide recommendations concerning the HIA process and inform recommendations for capacity building and implementation of the HIA process in Florida.

Informal Discussion

Informal discussion with the project manager and other members of the TAC provided the direction of the research, provided background information on the projects and programs in the FDOH, addressed concerns and the HIA process.

Interviews

Interviews were conducted to obtain professional feedback and opinions of the HIA process. Interviewees were selected based on their experience with HIAs, and may be used to influence recommendations, as well as gain further insight into the HIA process.

RESULTS

The research team has come to understand the HIA process through the review of the literature, discussions with the project manager and members of the TAC, and the results of the TAC questionnaire. A combination of literature was used to analyze best practices, including the following guidelines: the NRC (2011) *Improving Health in the United States: The role of HIA*; Bhatia (2011) *Health Impact Assessment: A guide for practice*; NACCHO (2008) *Quick Guide: HIA*; and North American HIA Practice Standards Working Group (2010) *Minimum Elements and Practice Standards for HIA*. The TAC unanimously decided and the FDOH project manager concurred with the decision to adopt the NRC (2011) guidelines, which were prepared by a diverse group of experts serving as on scientific review committee in a process that involved extensive peer-review. These guidelines are recognized as an updated, more comprehensive version of the CDC's HIA process. The NRC report is recognized as best practices for HIA in the United States and as such replaces the previous CDC guidelines for HIA practice in the United States.

An analysis of the 159 HIAs conducted and identified as in-progress in the US (Health Impact Project 2012) has identified HIAs performed in the following sectors: agriculture and food(8%); built environment(35%); climate change(2%); economic policy(1%); education(4%); gambling (1%); housing(9%); labor and employment(5%); natural resources and energy(13%); physical activity(1%); and transportation(21%); see Figure 2. These HIAs were conducted at by various organizations with the largest percentage being conducted at the local level (44%) and the remaining as follows: 6% were federal, 18% were state, 8% were regional, 14% county, and 10% were described as unknown; see Figure 3. As is shown in Table 3, when the HIAs are considered by sector and decision-making level, housing and built environment HIAs appear to take place at the regional to local level, where project HIAs are more dominant, while HIAs on Labor and Employment, and Natural Resources and Energy are

more dominant at the state and federal level. HIAs have been completed at the state level in all policy areas, except the built environment.

The HIAs conducted represent a range of public health activities from health promotion to chronic diseases and environmental health with HIAs in topics such as Menu Labeling (California), Physical Education Requirements in California, Fort McPherson Interim Zoning (Georgia), Baltimore City Comprehensive Zoning Code Rewrite (Maryland), Oregon Wind Energy, Replacing Public Housing Units Destroyed by Hurricane Ike (Texas), and Marathon County Alcohol Density⁵ (Wisconsin)); see Appendix B.3 for a list of HIAs and HIA summaries.

Table 3: HIAs conducted by sector and decision-making level⁶

Sector	Decision- Making Level							Total
	Federal	State	Regional	County	Local	Unknown		
Agriculture & Food	1	3	0	2	3	3	12	
Built Environment	0	0	4	9	36	7	56	
Climate Change	0	1	0	0	2	0	3	
Education	0	2	0	0	3	2	7	
Gambling	0	1	0	0	1	0	2	
Housing	0	2	0	1	11	0	14	
Labor & Employment	1	4	0	0	3	0	8	
Natural Resources & Energy	6	7	1	4	1	2	21	
Physical Activity	0	1	0	0	0	0	1	
Transportation	1	6	8	7	10	2	34	
Total	9	27	13	23	70	16	158	

⁵ Marathon County Alcohol Density is listed as an in-progress HIA by Health Impact Project and thus does not include a description yet in Appendix B.3.

⁶ Health Impact Project (2012), as of April 21, 2012.

Figure 2: US HIAs conducted per sector ⁷

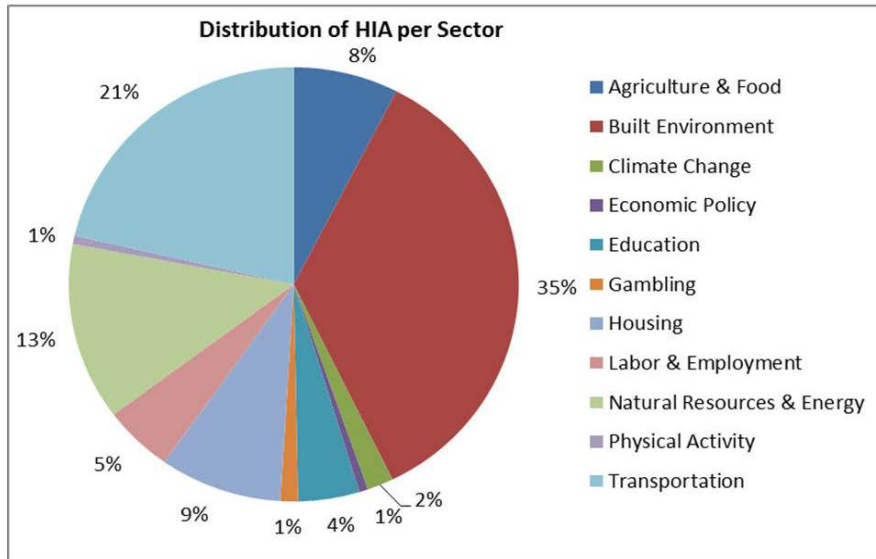
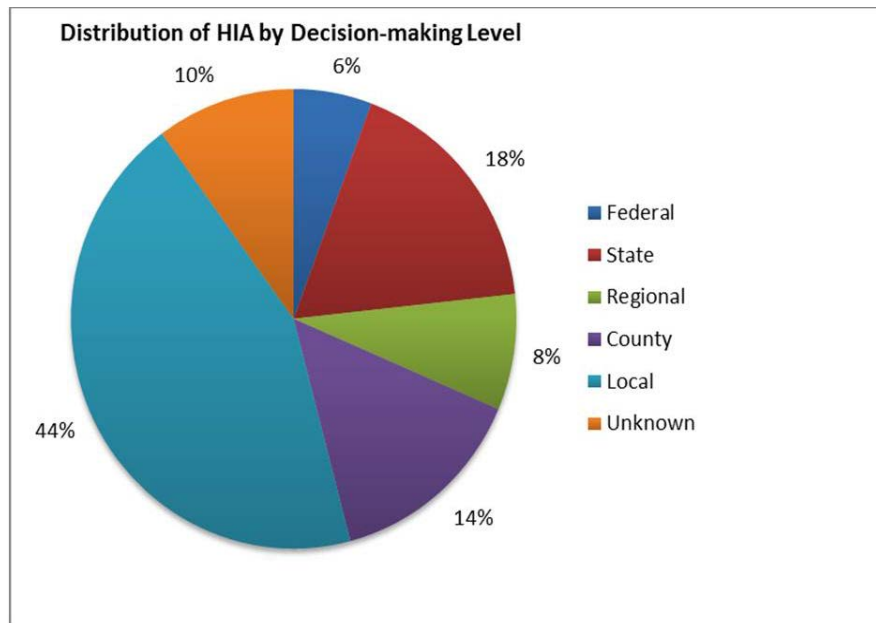


Figure 3: US HIAs conducted by decision-making level ⁸



Review of HIAs conducted in the United States found that Florida has conducted one HIA compared to states such as California (53), Oregon (20) and Minnesota (11); however, the state's efforts

⁷ Health Impact Project (2012), as of April 21, 2012.

⁸ Health Impact Project (2012), as of April 21, 2012.

with HIA are apparent and exceed those of 18 states that do not have any HIAs. In addition to the North Florida Power HIA, which is also called the Taylor Energy Center, the *Development of a Health Impact Assessment (HIA) Protocol for Polk County, Florida 2005-2006* acknowledges the need to do HIA as a part of the development review in the planning process⁹. The North Florida Power HIA process is comparable with national best practices, despite the accelerated screening phase, which was concluded as necessary due to public opposition to the project. However, the final report transparent in documenting the processes that occurred in scoping and screening. Although Florida has only one HIA that has been conducted, the state performs many health improvement initiatives that are instrumental to health conscious decision- making and the goals of Health in All Policies¹⁰.

The literature, the North Florida Power Project HIA report, and interviews with the TAC and Paul Lord have identified that public participation are instrumental to the HIA process and that the affected community should be regarded as valuable members of the stakeholders group. The extent of community engagement and public participation, however, is limited to the type of HIA that will be conducted, time and resources. Rapid HIA have the least capacity to incorporate public participation, while it is recognized that desktop or mini HIA, a form of Rapid HIA, does not have the capacity to include public participation.

⁹ One other HIA titled, *HIA of Kings Ridge Apartments*, is currently being completed in Jacksonville by Emily Suter as a part of her master's research at Florida State University.

¹⁰ Health In All Policies (HiAP) is a collaborative approach that has been used internationally to address "wicked" problems, which as be characterized as problems at "are multifactorial with many interdependencies, difficult to fully define, lacking a clear solution, and not the responsibility of any single organization or government department.. Such problems require a new policy paradigm and innovative solutions that reach across organizational silos and promote co-benefits" (CDPH, 2010, 4). "A HiAP approach recognizes that health and prevention are impacted by policies that are managed by non-health government and non-governmental entities, and that many strategies that improve health also help to meet the policy (CDPH, 2010, 5). The World Health Organization, European Union and other agencies across the world are exploring the use of the HiAP approach (CDPH, 2010).

The results section will be organized by a review of the best practices of the HIA procedure that has been described in the literature review followed by HIAs conducted in Florida, HIA initiatives, and the results of the TAC questionnaire.

The HIA Procedure

The literature review and technical advisory committee identified the best practices of the HIA process to include the following phases: screening, scoping, assessment of risks and benefits, recommendations, and monitoring and evaluation. The screening phase is intended to determine whether an HIA is warranted; should an HIA be done? The scoping phase is used to determine the plan on how the HIA will be conducted, including identifying health impacts. The assessment phase collects and analyzes data, including developing baseline conditions. The recommendations phase is used to develop recommendations such as mitigation strategies, supply options for alternatives proposals, and recommendations for monitoring and evaluation. Reporting concerns communicating the findings to the decision-makers, stakeholders, and public. The evaluation and monitoring phase entails tasks such as reflecting on the HIA process undergone, the health outcomes, and if recommendations were followed up on.

These phases are consistent with the best practices document prepared by the NRC in 2011. As have already been described above, the research team identified several sources including the CDC's *Healthy Places: Health Impact Assessment*, the NRC (2011) *Improving Health in the United States: The role of HIA*, Bhatia (2011) *Health Impact Assessment: A guide for practice*, NACCHO (2008) *Quick Guide: HIA*; and North American HIA Practice Standards Working Group (2010) *Minimum Elements and Practice Standards for HIA* that identified the steps in the HIA process. During the February 27 meeting of the TAC, the research team discussed the phases in the HIA process based upon these diverse sources. After discussion, the research team, the TAC, and the FDOH project manager unanimously decided to adopt

the NRC (2011) HIA process described in *Improving Health in the United States: The role of HIA* and equate it with an updated CDC model. Following that meeting, the research team prepared a questionnaire for the TAC and they unanimously confirmed this decision. A table representing the major sources reviewed for best practices in HIA is located in Appendix A.

Technical Advisory Committee Questionnaires

Sixty percent (9 of 15) of the respondents indicated that they considered the National Research Council (NRC) definition of HIA as most appropriate for Florida¹¹. Another 26.7% (4 of 15) accepted the definition proposed by Bhatia and another 13.3% (2 of 15) agreed to the definition shown by Quigley et al. (2006). All of the respondents (100%) agreed that public health officials and the affected community should be represented among the stakeholders involved in the HIA process. A significant majority (93.3% or 14 of 15 respondents) agreed that planning and environmental management should be represented among the stakeholders and 80% (12 out of 15) agreed that policy analysis should be represented among the stakeholders involved in the HIA process.

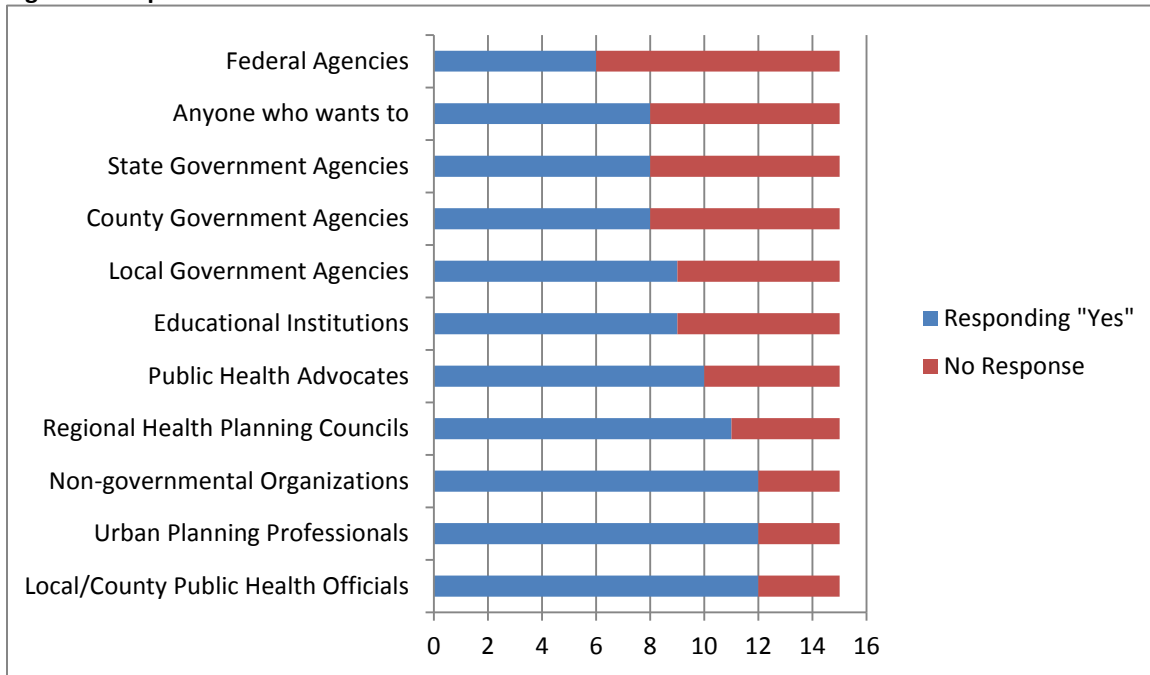
When asked, “How should public participation be incorporated into the HIA process?” Thirteen respondents gave a variety of responses that address who should participate, about what topics the public should provide input, and the methods of gathering input. The responses to who should provide input include: “gatekeepers”, community advocates/organizations; public agencies; public health department; planning department; regulatory agencies (e.g., EPA); universities; school districts; and HIA consultant) (see also HIP, 2012). The responses that addressed the topics on which the public should provide input include: explanations with relative costs and their direct consequences; input on potential impacts; input on their community's current conditions, concerns, social and economic information. These responses are somewhat limited compared to the opportunities for collaboration described by

¹¹ It is important to note that the general consensus during the April meeting of the TAC was to accept the NRC definition. This survey of TAC members was conducted after that meeting, which suggests some difference of opinion on the use of the NRC definition. The difference in consistency between the discussion in the meeting and the survey were not explored in the survey nor were they discussed at later meetings.

the HIP (see Table 1 above); however, this may reflect a lack of deep experience in conducting HIAs. The respondents identified several methods of gathering public input including town hall meetings; focus groups, surveys and key informant interviews (2 respondents); charettes (2 respondents); face-to-face when feasible; whatever method is practical thereafter; initial meetings to provide input then follow up meetings; could be public meetings, could be other methods, through informal meetings with neighborhood leaders; focus groups and community meetings or workshops. One third (5) of the respondents indicated that the type of public participation depends upon the type of HIA and the time and resources available to conduct it.

In response to: Who should conduct HIAs?, 80% of respondents (12 of 15) indicated that local/county health officials, urban planning professionals and non-governmental organizations should conduct HIAs. Over 60% of respondents (over 9 of 15) also agreed that regional health planning councils, public health advocates, educational institutions and local government agencies should conduct HIAs. In response to the “other” category, three respondents went beyond the response in the survey to point out that anyone who is trained to do an HIA should be allowed to conduct one. One of them stated, they “need to have technical expertise (or people on their team with expertise) to interpret health data correctly. The legitimacy of the HIA may be questioned if just anyone does the HIA.” One respondent pointed out that the survey did not include the option of the affected community conducting the HIA.

Figure 1: Responses to “Who Should Conduct HIAs?”



(Source: TAC Questionnaire 1)

Participants were asked questions pertaining to the following statement, “Transparency refers to the ability to easily identify, comprehend, and evaluate steps performed in an HIA. Some of the literature suggests that there is a lack of transparency in reporting the results of each phase in the HIA.” It then asks, “In your opinion, should we develop a standard for reporting each HIA phase and process to ensure transparency?” Of the 15 respondents, 11 (or 73.3%) agreed with this statement. However, only eight, or 53.3% responded that each phase in the process should have standard criteria to report. The results concerning the standard criteria to report to ensure a transparent account of the HIA process will be disclosed by each phase: screening, scoping, assessment, recommendations, reporting, and monitoring and evaluation. Because of the small sample size these results should not be over-interpreted.

Screening

Sixty percent of the TAC did not indicate any of the suggested criteria to be standard criteria to report in the screening phase. Of those that believe there should be standard criteria to report within

the screening phase 100% of respondents believe a description of the proposed policy, program, plan or project should be reported; 66.7% agree that you must state why the proposal was selected for screening; 83.3% agree that drafting an outline of expected resources required to conduct the HIA must be reported; and 66.7% agree that drafting a timeline for decision, the political context, and policy context are necessary to report. Meanwhile, only 33.3% think that the preliminary opinion on the importance of the proposal for health and the opportunities for HIA to inform the decision, and only 16.7% thought it was important to report the recommendations on whether the HIA is warranted.

Scoping

Sixty percent of the TAC did not indicate any of the suggested criteria to be standard criteria to report in the scoping phase. Of those that believe there should be standard criteria to report within the scoping phase, 100% of respondents stated the following are important elements to record for a transparent account of the HIA process: identify the affected populations, describe the research questions, data sources, and analytical plan; identify stakeholders, their area of expertise, and their role in the HIA process; identify and describe responses to issues raised by stakeholders; identify who will be responsible to communicate findings and recommendations to decision makers, the public, and the stakeholders. Although 100% of respondents stated that identifying the affected population was critical to transparency of the scoping phase, only 83.3% thought that the vulnerable groups needed to be explicitly identified and recorded. Results also identified that 83.3% of respondents cited the following were important for a transparent account of the scoping phase: identify health effects to be addressed, identify issues raised by stakeholders, and identify data gaps. The respondents also indicated the following elements as important to a transparent account of the scoping phase: identify alternatives to the proposed action to be assessed (66.7%), identify pathways to be addressed (50%), summarize stakeholder engagement (50%), and formulate stakeholders' plan of engagement (33.3%).

Assessment

Sixty percent of the TAC did not indicate any of the suggested criteria to be standard criteria to record for a transparent account of the assessment phase. Of those that believe there should be standard criteria the respondents identified the following as important to record for a transparent account of the assessment phase: description of the baseline health status of affected populations, data sources and analytic methods used (100%); description of stakeholder engagement (100%); clear identification of the limitations and uncertainties of the analysis, and description of analysis and characterization of the proposal's beneficial and adverse health effects (83.3%), and description of analysis and characterization of the each proposal alternatives (beneficial and adverse health effects), and integrate stakeholder engagement input into analyses (50%).

Recommendations

Sixty percent of the TAC did not indicate any of the suggested criteria to be standard criteria to record for a transparent account of the recommendations phase. Of those that believe there should be standard criteria to record respondents found the following as important to transparency of the recommendations phase: identify alternatives to proposal or actions that could be taken to avoid, minimize, or mitigate adverse effects and to optimize ones (100%), and propose a health-management plan to identify stakeholders who could implement recommendations, indicators for monitoring, and systems for verification (80%).

Reporting

Only 33.3% of the TAC indicated that there should be standard criteria needed to be recorded for a transparent account of the reporting phase. Of these respondents the following were found to be important for transparency in the reporting phase: provide clear documentation of findings and recommendations (100%); provide clear documentation of the population affected, stakeholder engagement, data sources, analytic methods used (83.3%), communicate findings and recommendations to decision-makers, the public, and other stakeholders (83.3%), communicate findings and

recommendations in a form that can be integrated with other decision-making factors (technical, social, political, and economic (83.3%); and provide clear documentation of the proposal analyzed (66.7%).

Monitoring and Evaluation

Forty percent of the TAC indicated that the monitoring and evaluation phase should have standard criteria to record for a transparent account of this phase. The results found that 100% of respondents indicated that process evaluation, impact evaluation, and outcome evaluation were important to record for a transparent account of the monitoring and evaluation phase. Also, 83.3% of respondents indicated that documenting and tracking changes in health indicators, and documenting and tracking changes in implantation of HIA recommendations were important to transparency of the monitoring and evaluation phase.

The TAC questionnaire also indicated that 92.3% of respondents thought Quality of Life(QoL) should be a component included in the HIA process; 57.1% of respondents believed that QoL should be defined by the affected community; 28.6% of respondents believed that County Health Rankings should define QoL; other responses regarding measures defining QoL include that it depends on the HIA and that both, the affected community and county health rankings could be effective, but it depends specifically on your study and what makes more sense for the type of HIA. QoL may be used as a means of evaluating the success of the HIA and criteria to track during monitoring.

HIA in Florida

According to efforts by the Health Impact Project and UCLA HIA-CLIC to collect information on HIAs conducted in the U.S., Florida only has one HIA that has been reported. The Health Impact Project has no record of any HIA being conducted in Florida¹², but UCLA HIA-CLIC reports one HIA conducted in Florida, which is the North Florida Power Project HIA. A complete list of HIA conducted in the USA, as

¹² On June 27, 2012, the *HIA of Kings Ridge Apartments* was added to the Health Impact Project website. The report on this HIA is still not completed.

documented by the Health Impact Project and UCLA HIA-CLIC, is shown in Appendix B. The Florida HIA is described below using the six phases for HIA that are adopted by the NRC.

North Florida Power Plant HIA

North Florida Power Plant (also referred to as the Taylor Energy Center) HIA was conducted in 2005 due to public opposition that resulted in a rally against a proposed coal-burning plant. The 800-megawatt coal-fired electric power plant brought up additional concerns of pollution in an area that already has a paper plant producing emissions. In response to the public's opposition, the Taylor County Development Authority commissioned Healthy Development, Inc. to conduct a rapid HIA. The power plant was proposed within a rural location with economic disadvantages and poor health; the affected community's health is below the state's average, including baseline conditions of smoking rates higher than the state average. The affected communities were reported to rely on local fishing opportunities as an important source of food. The area is also characterized by racial tension and significant health disparities. The HIA took one month to complete.

Screening

The screening phase was accelerated due to public opposition that resulted in a rally. Taylor County Development Authority commissioned Healthy Development Inc. to complete the HIA to enhance the discussion between the developer and the public.

Scoping

The scoping phase integrated public concerns of the affected area, including the City of Tallahassee, gathered through surveys, interviews, and general dialogue of public concerns directed at local organizations in opposition to the project. The stakeholders are not explicitly defined and their roles in the HIA are not stated in the final report; however, the community stakeholders' surveys and interviews were instrumental in developing the scope of the HIA. According to the Healthy Development Inc. (2007) the scope included: (1) risks to health from the air pollution, specifically,

particulate matter (PM₁₀), ground level ozone, mercury and carbon dioxide emissions, and (2) benefits to health from employment from the plant and the “community contribution.”

Assessment of Risk and Benefits:

Methods used for assessment of risks and benefits included peer-reviewed scientific evidence for potential impacts from emissions and economic impacts. The following methods were used for calculating particulate matter, ground level ozone, mercury, and carbon dioxide emissions, and economic benefits due to employment:

Mortality effects of PM₁₀ were forecast onto local population statistics using a log-linear risk model of population exposure. No point source model for ground level ozone was available however components of ozone were assessed. Mercury emissions will be modeled by Environmental Consulting & Technology Inc. (ECT) during the permitting phase. Carbon dioxide health impacts are an emerging area of health research that will be discussed. The impact of various employment scenarios on health of employees and their families was estimated based on evidence (Healthy Development, Inc. 2007, 8).

The risk of air pollution also included assessments for sulfur dioxide, nitrogen dioxide, and carbon monoxide compared to National Ambient Air Quality Standards (NAAQS), power plant work related injuries, income from minimum/median salary jobs, and community contribution. All health impacts are assessed by positive, neutral, or negative health effects; magnitude of impact, and long-term impacts of the TEC.

Recommendations

Recommendations were developed according to the assessment process. The public was not involved in the recommendations phase.

Reporting

The Health Impact Assessment—Final Report was published during the winter of 2007. The affected community was not included in the decision-making process because of a lack of trust between them and the decision-makers. The report was presented for peer-review to the Center

for Demography and Population Health at Florida State University. The role of the other stakeholders, including the affected communities, in the review of the final report is unclear; this is inconsistent with recommended best practices. The report includes limitations.

Monitoring & Evaluation

On July 12, 2007, the application to build the Taylor Energy Center was withdrawn. Due to the decision to withdraw the TEC application, the monitoring and evaluation phase have not been completed.

HIA Initiatives

Staff from the Polk County Health Department (CHD) prepared the report, *Development of a Health Impact Assessment (HIA) Protocol for Polk County, Florida 2005-2006* as part of an Environmental Public Health Leadership Institute Fellowship. The document summarizes the county's health statistics and suggests that implementation of HIA through the development review process, a planning process that reviews proposed development or modifications to structures for compliance with local zoning, to support healthy design of communities. The county health department would conduct the HIA along with the following stakeholders:

Health Department Director (by December 1, 2005) and health care providers, Polk County Development Services Director and staff (by December 1, 2005), Planning Director and staff (by January 15, 2006), development industry such as developers and builders through the Polk County Builders Association (by January 15, 2005), political entities such as the planning commission (by March 15, 2006), board of county commissioners (by May 1, 2006), and the general public. The document suggests that the land development code was under-going revisions that would support health design (Mayer 2006, 58).

The document suggests using the Protocol for Assessing Community Excellence in Environmental assessment Health (PACE EH) process to help facilitate HIAs and develop criteria for evaluation. The

document recommends that a framework for communication and coordination among stakeholders be developed.¹³

HIA Related Activities

The FDOH is currently involved in a variety of activities that are related to HIA in that they involve community participation to encourage better environmental health outcomes, or they involve some, but not all of the phases, involved in conducting HIAs. These building blocks include the CDC's **Action Communities for Health Innovation and Environmental Change (ACHIEVE)**, the **Protocol for Assessing Community Excellence in Environmental Assessment (PACE EH)**, **Mobilizing Action through Planning and Partnerships (MAPP)**, **Environmental Public Health Performance Standards (EnvPHPS) Self-Assessment**, **Community Health Assessment and Group Evaluation (CHANGE)**, **National Public Health Performance Standards Program (NPHPSP)**, **Project Public Health Ready (PPHR)**, the Orange County Health Department's **Sustainable Practices to Reduce Obesity Using Teachable Stewardship (SPROUT)**, **Safe Routes to School (SRTS)**, **Complete Streets**, project reviews, review of comprehensive plan elements, programmatic audits (e.g., water, septic and other programs), and, the Florida Chamber of Commerce's **Six Pillars communities**, and the Florida Department of Elder Affairs' (FDEA) **Communities for a Lifetime** initiative. These initiatives are being implemented by a patchwork of local public health departments using funding from a variety of sources that depends upon the structure of the program. Other programs to consider as HIA related activities are the **Brownfield Redevelopment Program** and the **Comprehensive Economic Development Strategy (CEDS) Plans**.

ACHIEVE

The ACHIEVE program involves a partnership between the CDC and the National Association of County and City Health Officials (NACCHO), the National Association of Chronic Disease Directors (NACDD), the National Recreation and Park Association (NRPA) and the YMCA of the USA for

¹³ Although these recommendations were made in 2005, the research team was not able to confirm if any of these recommendations were implemented.

community funding and NACCHO and the Society for Public Health Education (SOPHE) for translation and dissemination. The community funding aims to “facilitate program development; implement a coordinated community selection process; award funding to local entities; review and approve community action plans; provide community-based technical assistance and support; assist in the local development and implementation of needed health-related environmental change strategies; provide linkages to resources and other funding opportunities; connect local communities to national partners and experts; identify nontraditional partners who can provide additional technical assistance; provide assistance in community evaluation methods; and support sustainability planning” (CDC, 2012). The translation and dissemination funding is used to “develop health promotion tools and resources and provide effective environmental change strategies to communities, with a specific emphasis on the following activities: building leadership; disseminating effective tools, resources, and community-based models; promoting electronic communications; providing technical assistance; and creating training opportunities (CDC, 2012). The following Florida communities have received funding under this program (with the date when funded started and organization indicated): Daytona Beach (2/11 – NACDD), Jacksonville (2/11 – Y-USA), Manatee County (2/10 – NACCHO), North Miami (3/09 – NRPA), Palm Beach County (3/09 – NACDD), Tallahassee (2/10 – NACDD), Venice (3/09 – Y-USA), and Winter Park (2/10 – NACDD) (CDC, 2012).

PACE EH

The PACE EH process offers local health officials guidance in conducting a community-based environmental health assessment and creating an accurate and verifiable profile of the community’s environmental health status. The process is designed to improve decision making by taking a collaborative community-based approach to generating an action plan that is based on a set of priorities that reflect both an accurate assessment of local environmental health status and an understanding of public values and priorities (NACCHO, 2008: ix). The PACE EH process involves thirteen steps as a part of

a methodology: (1) determine community capacity; (2) define and characterize the community; (3) assemble a community-based environmental health assessment team; (4) define the goals, objectives, and scope of the assessment; (5) generate a list of community-specific environmental health issues; (6) analyze the issues with a systems framework; (7) develop locally appropriate indicators; (8) select standards against which local status can be compared; (9) create issue profiles; (10) rank the issues; (11) Set priorities for action; (12) Develop an action plan; and (13) evaluate progress and plan for the future (NACCHO, 2008). The Florida Department of Health has a long history with this process, dating back to membership on the project's steering committee in the mid-1990s. As of June 2012, over half of FDOH's sixty seven county health departments have administered PACE EH in communities and some counties have conducted multiple projects. Action plans that were formed to address priority community identified environmental health issues have resulted in tangible improvements that total over \$23 million in value.

CHANGE

The purpose of CHANGE is to “gather and organize data on community assets and potential areas for improvement prior to deciding on the critical issues to be addressed in a Community Action Plan” (CDC, 2010: 1). A Community Action Plan is a living document, usually time based, that enables the community to structure its activities around a common purpose and to prioritize needs” (CDC, 2010: 1). The CHANGE process involves five steps: (1) assemble the community team; (2): develop team strategy; (3) review all five CHANGE sectors (community-at-large sector; community institution/organization (CIO) sector; health care sector, school sector, and work site sector); (4) gather data; (5) review data gathered; (6) enter data; (7) review consolidated data; and (8) build the community action plan. The following counties are doing or have implemented the CHANGE tool: Clay County, DeSoto County, Jacksonville (Duval County), Leon County (Tallahassee), Manatee County, North Miami (Miami-Dade County), Winter Park (Orange County), Palm Beach County, Venice (Sarasota

County), and Daytona Beach (Volusia County) (personal correspondence from MR Street on April 23, 2012). These healthy community teams are not all county health department-led. Only those funded by the National Association of Chronic Disease Directors (NACDD) are required to have a County Health Department component. Clay and DeSoto CHDs were funded separately from ACHIEVE (personal correspondence from MR Street on April 23, 2012). Additionally, the Bureau of Chronic Disease Prevention & Health Promotion will fund 10 projects (12 counties) beginning July 1, 2012 to implement the CHANGE tool. These counties are: Charlotte, Collier, Lee, Madison/Jefferson, Marion, Monroe, Okaloosa, Pasco, Suwannee/ Lafayette, and Taylor (personal correspondence from MR Street on April 23, 2012).

MAPP

MAPP is a community-led comprehensive strategic planning process for improving community health and local public health systems. The phases of MAPP start with organizing the process, partnership development and visioning. Four critical assessments follow: community health status assessment, forces of change assessment, local public health system assessment using the National Public Health Performance Standards Program (NPHPSP), and an assessment of community themes and strengths. The local public health system partners use assessment findings to inform the selection of strategic community health priorities. They then develop a community health improvement plan by selecting goals and strategies and measurable objectives. Two important tangible products of MAPP-based efforts are a community health status profile report and community health improvement plan.

Florida has devoted considerable resources to implement MAPP-based community health assessment and health improvement planning and its County Health Departments are national leaders. Comprehensive Assessment, Strategic Success (COMPASS) is the Florida Department of Health's community health assessment and health improvement planning initiative. Using MAPP as a framework, COMPASS staff assist communities by providing resources, tools and technical assistance.

Through COMPASS, county health departments and the communities they serve also have access to health statistics via the web-based Community Health Assessment Resource Tool Set (CHARTS). In 2011, 85% of CHDs reported that they were active in a MAPP-based community health assessment and health improvement planning cycle (COMPASS annual survey). Most recently, COMPASS' Office of Health Statistics and Assessment allocated just under 1 million from the CDC's NIPHII grant to CHDs, most of whom are using it for community health improvement planning and agency accreditation preparation.

EnvPHPS

The Environmental Public Health Performance Standards (EnvPHPS) were developed to provide state, tribal, and local environmental health programs with an instrument that allows them to easily assess their capability to perform the essential environmental public health services (EssePHS). The PHPS were developed to more clearly describe what environmental health programs need to do to perform the EssePHS. Assessing this capability is important to improved health and reduced risk. The EnvPHPS complement the NPHSP and provide state, tribal, and local programs with a focused instrument. Environmental health programs can use the standards to measure their performance and identify program areas needing improvement (CDC, 2006).

PPHR

The PPHR is a "training and recognition program that assesses preparedness and assists local health departments, or groups of local health departments working collaboratively as a region, to respond to emergencies. (NACCHO, 2012b) The PPHR includes three project goals consisting of all-hazards preparedness planning, readiness planning through real-life events or exercises, and workforce capacity development. The program includes a comprehensive list of standards that must be met to achieve PPHR recognition (NACCHO, 2012b)

SPROUT

The SPROUT program is designed to overcome children's lack of knowledge on where food is grown and the difficulty of finding good vegetables. "The growing of the container gardens is being coupled with an education program tying the growing of crops to curriculum developed by the Orlando Junior Academy and the physical learning/activity component was developed by Nemours Children's Hospital" (personal correspondence from David Overfield, April 23, 2012).

Communities for a Lifetime

The FDEA's Communities for a Lifetime is a, statewide initiative, begun in 1999, that assists Florida cities, towns and counties in planning and implementing improvements that benefit their residents, youthful or elder. Communities use existing resources and state technical assistance to make improvements in housing, health care, transportation, accessibility, business partnerships, community education, employment, volunteer opportunities and recreation. The goal of the initiative is to help Florida communities become better places for elders to live, providing all residents the opportunity to contribute to the betterment of their communities. The ongoing process of self-assessment and improvement can help a community achieve the following goals: to create an inventory of services and opportunities that promote the independence and quality of life for older adults in the community; to initiate partnerships to promote the development of senior friendly community amenities (FDEA, 2012)

SRTS

Some local health departments have received funding under the SRTS program in which they work with other organizations to develop walking school buses under the Communities Putting Prevention to Work (CPPW). The county health departments involved in these programs include; Brevard, Indian River, St. Lucie and Martin (personal correspondence from Darlene Burton on April 20, 2012).

Six Pillars of Florida's Future Economy

The Florida Chamber of Commerce's Six Pillars of Florida's Future Economy provides a framework that brings together a diverse range of stakeholders, including county public health departments to organize strategic planning around six critical factors that determine Florida's future; talent supply and education, innovation and economic development, infrastructure and growth

leadership, business climate and competitiveness, civic and governance system, and quality of life and quality of place (FCC, 2012)

Redevelopment of Brownfields and Land Reuse

Brownfields (also called, Environmentally Impaired Properties) are “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant” (Environmental Protection Agency [EPA] 2006, 1). In the US, there are estimated to be 450,000 brownfield (EPA 2006; Agency for Toxic Substances and Disease Registry [ATSDR] 2010) and “land reuse sites—from old gas stations and abandoned buildings to former industrial sites, methamphetamine labs, vacant lots, and rural dumps” (ATSDR 2010, 1). Transforming these vacant or underutilized land into usable spaces not only eliminates harmful areas, but creates spaces and places that the whole community can benefit from (e.g., recreation areas, green space, community gardens, active and passive parks or spaces, affordable grocery stores, health care facilities, pharmacies). Figure 4 demonstrates how focusing attention on brownfields can improve and protect public health and safety.

Figure 4: Protecting Public Health & Safety through Brownfields (Source: EPA 2006)



The EPA (2006, 1) explains further how brownfields redevelopment can enhance safety, social and economic conditions, and environmental conditions that overall impact community health and wealth:

- Safety – abandoned and derelict structures, open foundations, other infrastructure or equipment that may be compromised due to lack of maintenance, vandalism or deterioration, controlled substance contaminated sites (i.e., methamphetamine labs) and abandoned mine sites;
- Social & Economic – blight, crime and vagrancy, reduced social capital or community ‘connectedness’, reductions in the local government tax base and private property values that may reduce social services; and,
- Environmental – biological, physical and chemical from site contamination, groundwater impacts, surface runoff or migration of contaminants as well as wastes dumped on site.

Unfortunately, not all brownfields redevelopment and land reuse plans “consider the community health issues that should be addressed” (ATSDR 2010, 1). Instead, redevelopment “tend to focus on environmental and economic impacts and rarely include measurement of health and social improvements” (ATSDR 2010, 1).

In response to this lack of health conscious land reuse planning ATSDR has taken an interest in brownfields and land reuse. ATSDR’s Brownfield/Land Reuse Health Initiative “helps communities incorporate health considerations in land reuse decisions” (ATSDR 2010, iii). Thus, redevelopment of brownfield sites provides excellent opportunities to improve public health, and also potentially provide “improved access to health and health care” through brownfields redevelopment. Miles Ballogg explains how Brownfield sites can be an opportunity to improve health and health care access:

For example, in the Greenwood community of Clearwater a contaminated gas station was redeveloped into a free clinic serving the health needs of the uninsured within Pinellas County. A more recent example is the use of Brownfields funding to begin the formative work of creating a health center within the City of Mulberry that does not have health care within 10 miles in any direction. Additionally, in Bradenton a Brownfields funds are being used to do due diligence to clear a property with surrounding environmental impacts for a grocery store in a food desert. I think the use of HIAs could be used to measure the potential positive transformation of environmentally stigmatized properties that can improve the health of the community.

Many Brownfield sites are located in older, existing neighborhoods that may be in decline due to the contamination. While the sites may have significant disadvantages because of the contamination, these sites may also be located in areas that are already served by public services (e.g., transit, water, and sewer). As such, HIA could be used to measure the potential positive transformation of environmentally stigmatized properties that can improve the overall health of the community or the health of disadvantaged residents who live nearby.

Florida Brownfield Redevelopment Program

The Florida Department of Environment Protection (FDEP 2012a) states that the primary goals of the Brownfield Redevelopment Act are to:

to reduce public health and environmental hazards on existing commercial and industrial sites that are abandoned or underused due to these hazards; create financial and regulatory incentives to encourage voluntary cleanup and redevelopment of sites; derive cleanup target levels and a process for obtaining a "No Further Action" letter using Risk-Based Corrective Action principles; and provide the opportunity for Environmental Equity and Justice.

The 2011 Florida Statutes for Brownfield Redevelopment Act (F.S. 376.77-376.86) specifically site measures that support HIA within F.S 376.78, the Legislative intent:

(1) The reduction of public health and environmental hazards on existing commercial and industrial sites is vital to their use and reuse as sources of employment, housing, recreation, and open space areas. The reuse of industrial land is an important component of sound land use policy for productive urban purposes which will help prevent the premature development of farmland, open space areas, and natural areas, and reduce public costs for installing new water, sewer, and highway infrastructure.

(2) The abandonment or underuse of brownfield sites also results in the inefficient use of public facilities and services, as well as land and other natural resources, extends conditions of blight in local communities, and contributes to concerns about environmental equity and the distribution of environmental risks across population groups.

(3) Incentives should be put in place to encourage responsible persons to voluntarily develop and implement cleanup plans without the use of taxpayer funds or the need for enforcement actions by state and local governments.

(4) Environmental and public health hazards cannot be eliminated without clear, predictable remediation standards that provide for the protection of the environment and public health.

(5) Site rehabilitation should be based on the actual risk that contamination may pose to the environment and public health, taking into account current and future land and water use and the degree to which contamination may spread and place the public or the environment at risk.

(6) According to the statistical proximity study contained in the final report of the Environmental Equity and Justice Commission, minority and low-income communities are disproportionately impacted by targeted environmentally hazardous sites. The results indicate the need for the health and risk exposure assessments of minority and poverty populations around environmentally hazardous sites in this state. Redevelopment of hazardous sites should address questions relating to environmental and health consequences.

(7) Environmental justice considerations should be inherent in meaningful public participation elements of a brownfields redevelopment program.

(8) The existence of brownfields within a community may contribute to, or may be a symptom of, overall community decline, including issues of human disease and illness, crime, educational and employment opportunities, and infrastructure decay. The environment is an important element of quality of life in any community, along with economic opportunity, educational achievement, access to health care, housing quality and availability, provision of governmental services, and other socioeconomic factors. Brownfields redevelopment, properly done, can be a significant element in community revitalization.

(9) Cooperation among federal, state, and local agencies, local community development organizations, and current owners and prospective purchasers of brownfield sites is required to accomplish timely cleanup activities and the redevelopment or reuse of brownfield sites.

The Florida Brownfield Redevelopment Program offers incentives such as voluntary cleanup tax credit, liability protection for any persons, state agency, local government, and lender's. In addition to state incentives the federal government also provides a variety of economic incentives including the Federal Brownfields Tax Incentive, Federal Grants and Funding (e.g.,

Community Health Projects Related to Contamination at Land Reuse and Brownfield Sites), and a Memorandum of Agreement with EPA (FDEP 2012b).

Comprehensive Economic Development Strategy (CEDS) Plans

Comprehensive Economic Development Strategy (CEDS) Plans are developed by the Florida's eleven regional planning councils (RPC). The RPCs are designated by the U.S. Department of Commerce, Economic Development Administration as Economic Development Districts. RPCs are responsible for developing and adopting a five- year Comprehensive Economic Development Strategy (CEDS) through a locally designated Strategy Committee and are guided by the Florida Chamber Foundation's Six Pillars of Florida's Future Economy framework (FDEO 2011). A CEDS plan is the result of a local planning process designed to guide the economic growth of an area. The CEDS process is intended to help create jobs, foster more stable and diversified economies, and improve living conditions. The strategy provides a mechanism for coordinating the efforts of individuals, organizations, local governments, and private industries concerned with economic development.

Use of HIAs in the US and the Lessons for Florida

An analysis of HIA conducted in the US, as of April 21, 2012, identified that 56% of HIAs conducted in the US were classified in the built environment and transportation sectors, while the majority of HIA were conducted at the local level. The one HIA conducted in Florida, the TEC HIA, was a project concerning impacts related to natural energy and resources, labor and employment, climate change, and the built environment. For a rapid HIA, the TEC HIA is comparable to national HIAs conducted, however final documentation of the HIA would benefit from a more transparent account of the screening and scoping phases processes. For example, it would have been beneficial to know the disciplines and expertise the stakeholders represented, their role on the stakeholder committee, and

how they participated in scoping. Beyond the HIA process the report effectively describes the impacts, their magnitude and importance to decision makers.

Beyond conducting HIA, public health departments have a history of conducting assessments in the community using various methods that are often associated with a number of different programs, funding sources, and objectives. Different assessments or programs may be utilized by many different branches of public health departments such as chronic disease, health statistics, health promotion, and environmental health. After reviewing a number of public health assessment programs the research team has concluded that these programs are HIA related activities that partially fulfill some of the phases in the HIA process. Generally speaking, many of the tasks or steps of the HIA related activities' processes could partially fulfill (e.g., PACE EH, MAPP, CHANGE, ACHIEVE) HIA's scoping phase; however, the TAC has suggested that combining programs such as ACHIEVE and CHANGE might fulfill the requirements of the scoping phase, and is consistent with our findings.

DISCUSSION

The review of the literature, discussion with the TAC and other documents all converges on the idea that as Florida moves forward to develop its HIA processes; it needs to build on its existing capacity and strengths to develop greater capacity to do HIAs. The six phases for conducting HIA—screening, scoping, assessment of risk and benefits, developing recommendations, reporting, and evaluating/monitoring – form the fundamental framework for preparing HIAs. Although only one HIA has been completed in the state to date, many public health employees, citizens, planners and others in the State of Florida are following a national trend towards the use of HIAs to understand the health implications of a variety of policies, plans, programs and projects that directly impact our communities every day. To move forward, the FDOH would need to provide community capacity through a number of activities including providing training on HIAs, building on institutional capacity, and continuing to strengthen community engagement efforts.

Local health departments in the state have a variety of capabilities depending upon their size, priorities, resources, and their participation in federal and state programs that allow them to assess community capacity or develop strategic or action plans related to specific community health outcomes. Each of these assessment processes and planning exercises involves an assessment of community needs and the development or use of community quality of life indicators and community-specific data that is used to bring together the community partnerships to address health problems. The introduction of HIA in the State will require training of local public health officials in HIA processes and their connection to existing activities of county health departments and the FDOH.

The introduction of the HIA process will facilitate institutional learning as it builds on the collaborations that have developed through existing programs that are currently being implemented in county health departments. ACHIEVE, PACE-EH, MAPP, CHANGE, Brownfields, CEDS plans and other

NACCHO and CDC-funded programs, the participation in SRTS and Complete Streets projects, the review of local projects, comprehensive plans and programmatic audits and the participation in programs, such as the Six Pillars, Project Public Ready and Communities of a Lifetime, have all allowed local public health departments to develop new partnerships and collaborations across various sectors of the economy ranging from economic development to urban planning and school planning. HIAs will take advantage of these existing collaborations and partnerships to enhance cooperation and reduce waste in local government processes.

The HIA process can also enhance the community engagement process. Existing processes for community engagement offer some opportunities to build to an HIA. One of the recommendations resulting from the project for the Development of a Health Impact Assessment (HIA) Protocol for Polk County was that the PACE-EH process could be enhanced to evolve to an HIA. In Taylor County, Healthy Development Corporation Inc. used the HIA to address social and environmental integrity for a group with significant health disparities that had historically been keep out of decision-making processes. The development of the HIA allowed new participants in the process while enhancing the opportunity to improve the health and welfare of underserved populations.

Those wanting to implement a HIA need to consider the requirements of community participation for each type. For example, a desktop or mini HIA would be prepared with minimum public participation while a rapid appraisal or assessment, intermediate and full HIAs all involve significant public participation in all phases of the process from screening to scoping, assessment of risks and benefits, reporting and monitoring. The public is likely to be more engaged in understanding and assessing health risks and benefits associated with a specific project or program, while they may be less engaged in understanding the health impacts of plans and policies.

Introducing the HIA process into local health departments in Florida will present a challenge because of the diversity of expertise, knowledge and experience of local health departments. While all CHDs will have experience in a variety of programs that use community health assessment and community engagement, their experience with programs that are most similar to HIA will differ. As such, the introduction of HIA will require a strong partnership between the state Department of Health and its state, regional and local partners. Partners should assess existing collaborations and programmatic experience; identify populations with significant health, economic, and social disparities; develop baseline conditions; and gauge the interest of residents and leaders in HIA. Several steps, which are outlined below, should be taken to introduce HIAs to local health departments throughout the state.

RECOMMENDATIONS

Due to the lack of HIA trained practitioners and the lack of precedent and imperatives for HIA the research team has developed several recommendations. The recommendations include conducting a comprehensive review of existing assessment processes in Florida health departments and tracking them in systematic manner; providing basic guidance to health department personnel and forming a regional association for technical assistance; promoting educational efforts to inform the surgeon general, directors, administrators, and professionals (e.g., public health professionals and planners) of HIA and the HIA process, conducting training for professionals that may conduct HIA (e.g., online training modules); and creating an FDOH HIA webpage with basic information and an HIA database that will contain extensive information such as HIAs conducted in Florida, resources, methods, tools, and data sources. Each of these recommendations is discussed in detail below.

Review Existing Assessment Processes in Health Departments

First, a comprehensive review should be conducted of existing and ongoing processes in the state and county health departments to determine which ones could be incorporated into an HIA perspective. While this report summarizes several forms of health assessment, the list is limited by the knowledge and experience of members of the TAC. Two additional state-level programs were identified during the review of draft report. Similarly, the activities of county health departments differ depending upon the health-related priorities of various counties. As such, this could be accomplished through review by various bureaus in the State Department of Health and via a survey of all, or at least the largest, County Health Departments in which they are asked to describe the types of assessments they are currently using.

Health departments are currently using the County Health Rankings to assist in their assessment of the health needs of the community. The County Health Rankings could also be used in the scoping process to determine in what area of health outcomes or health needs that HIA might be appropriate;

the other quality of life indicators that are developed throughout the HIA process may be more appropriate in the assessment, reporting, and monitoring and evaluation phases. For example, the Polk County study recommends that the PACE EH process be used as a basis for the HIA methodology, which includes steps similar to screening, scoping, assessment, recommendations, and reporting. Since PACE EH has the public participation built into the process and is a major source of information, it serves as a good foundation for the HIA process, especially the screening and scoping phases and developing baseline conditions; however, the monitoring and evaluation phases also needs to be introduced into the methodology.

CHDs are currently involved in activities to promote walking and bicycling as part of the Safe Routes to School program and review of comprehensive plans; both of these efforts would benefit with from a more systematic approach to assessment of the health impacts of these activities. The SRTS program offers another example of a partnership between local health departments, parents, transportation planners, regional planners, Community Traffic Safety Teams (CTSTs) and other community leaders who are interested in getting children safely to school. While at first glance, getting children to walk to school seems simple, a quick assessment shows that how the local school boards make decisions about where to locate school has a significant impact on whether any children can walk there. If the school is located far from any home, no students will be able to walk no matter how much money is spent on sidewalks or encouragement programs. As such, the state of Florida may benefit from an HIA of school siting regulations and guidelines to determine how to reduce the health and financial costs of locating schools where children depend upon a bus driver or their parents to get them to school. Similarly, local public health departments may benefit from an HIA on the comprehensive planning process, which is a plan that local governments prepare for the orderly development of the community and the review of development projects. While various checklists on reviews of comprehensive plans have been developed or adapted from lists from other states, an HIA that develops

a standard review checklist that accounts for the variety of development conditions in Florida could enhance the knowledge of local public health officials while increasing the effectiveness of the review.

Basic Guidance and Technical Assistance

The FDOH should establish basic guidance on the use of various types of HIAs, both within the agency and in the community. This guidance should inform local health department personnel about the differences between the types of HIAs, methods to increase public participation in HIAs, and other strategies to incorporate the HIA process into daily practice at the state and local health department levels. This guidance could be developed and refined as FDOH staff is trained in HIA.

The research team recommends the establishment of a regional association that would provide oversight and technical assistance to local and regional organizations that may lack the institutional capacity to conduct HIA or are seeking technical assistance. This regional entity may be formed through a private and public partnership (e.g., FDOH and Florida Public Health Institute (FHPI) or Winter Park Health Foundation (WPHF)) and would oversee coordination, networking, data provision, and training. Universities, County Health Departments, Regional Planning Councils, and Health Planning Councils could serve as members of the association and provide a variety of expertise and support. These members would be directed by the co-leaders (e.g., FDOH and FPHI/WPHF) to support local or regional organizations seeking assistance with services.

Training and Education

HIA training and education efforts are also recommended as ways to facilitate conducting HIA, to increase health considerations in proposals, and ultimately increase awareness of the importance of incorporating Health in All Policies. The TAC have identified that the surgeon general, among directors and administrators of the State and County Health departments and in related state and local government agencies need to be educated on HIA and the HIA process in order to promote action.

Educating the surgeon general, directors, and administrators that have much leverage on how our organizations are run and methods used will prove important in helping facilitate widespread education of HIA to professionals and implementation of HIA. Training methods to educate the surgeon general, directors and administrators should be catered to their role in the HIA implementation process. For example, the agency staff, who will be preparing the HIA documents, should be well versed in the phases of HIA; but, that kind of detailed training would not be relevant to decision-makers who need a general overview of what HIA is and how it can be used.

Since public health professionals are already complete continuing education training modules that are available online, the research team recommends including HIA training in the curriculum. Currently, planning professionals, who maintain their American Institute of Certified Planning (AICP) certification, can complete the CDC HIA training module as a part of their continuing education credits; however, public health professionals do not yet have the option to receive continuing education credits for HIA training.

The authors recommend promoting online HIA training for public health and planning professionals, including those that belong to institutions that have the capacity to perform HIA, and the ability to attain continuing education credit upon successful completion. State and County Health Departments are encouraged to host a one hour HIA overview session for planners and public health professions together so professionals in both fields may educate each other concerning the gaps in knowledge in opposing fields and facilitate discussion. Including HIA proficiency requirements to achieve accreditation is another way to promote education of the HIA process. Due to the lack of resources, CHDs may have limited capacity to provide this training. As such, the authors recommend that training be made available to CHDs at the regional level either through regional associations or a train-the-trainer model. Under such a program, the regional trainers would receive in-depth HIA

training and provide technical assistance to CHDs who are interested in preparing HIAs. Providing education on HIA at staff meetings may be another way to introduce HIA and generate interest in the process among health departments.

The WPHF is conducting HIA training in Orlando on June 27 and 28, 2012, and the National Networks of Public Health Institutes, the Pew Charitable Trusts and the Robert Wood Johnson Foundation (RWJF) are sponsoring HIA training for the FPHI. The research team recommends that the FDOH continue to partner with private and public sector partners to ensure that local and state health department personnel and their partners are included in such HIA training.

FDOH HIA Webpage and HIA Database

The research team recommends that the FDOH create a HIA webpage with basic information on HIA and with links to other resources on HIA. This basic information website should include links to the Florida HIA database that the research team recommends later on in this section. The website should also include links to information and technical assistance resources such as, HIP, Health Impact Project, the UCLA HIA-CLIC websites, and other state department of health HIA websites. This website includes a variety of basic information such as an HIA fact sheet, case studies, frequently asked questions, tools and resources, articles, a list of external resources, videos, current and past HIA projects, Health in All Policies projects, resources for capacity building, and proposed HIA policies.

The research team recommends that the FDOH create a Florida-specific, easily-accessible HIA database that catalogues HIAs conducted (see Appendix B.2 and B.3 for organizational examples) within the state and begins to develop common data sources that are used in the development of HIAs. Additional data that can be included in the database consist of a literature library representing an array of sectors and health impacts; HIA guidebooks and guidelines; checklists and tools that can facilitate the process and suggest potential health impact considerations; public participation methodologies; a list of

local or regional partners to network with; a list of public health and planning terminology; and inter-sectoral collaboration frameworks that can be readily tapped. The collection of specific health data and data on factors that impact health corresponding with location could be modeled after the successful Florida Geographic Data Library (FGDL) (see http://www.geoplan.ufl.edu/fgdl_source_links.htm for more information). This library provides a wide variety of geography data related to transportation and environmental factors. An FGDL for health data could eventually be used as a resource to speed up the HIA process and reduce costs.

CONCLUSIONS

After reviewing the literature and gathering input from experts in the field, the authors, with the concurrence of the TAC and the project manager, have concluded that the best practices of the HIA process include the following phases: scoping, screening, assessment of risk and benefits, recommendations, reporting, and monitoring and evaluation. These phases are consistent with the new guidelines on HIA that the NRC (2011) describes in *Improving Health in the United States: The role of HIA*.

Florida may not have as many HIAs conducted as California, Oregon, or Minnesota but many initiatives support health conscious decision-making that can be enhanced to become HIAs. The one HIA conducted in Florida, the North Florida Power HIA for Taylor Energy Center, is comparable to national HIAs conducted, but monitoring and evaluation need to be ongoing.

Deciding what type of HIA to conduct depends on available time, resources, and capacity. The type of HIA dictates whether public participation is feasible. If public participation is feasible, the affected community should be considered one of the key stakeholders; community engagement is regarded as an instrumental process to developing the HIA scope. Community engagement can also be used to develop locally-significant Quality of Life measures that may be used to evaluate the HIA's overall success. In the alternative County Health Rankings may be used, or a combination of both.

On-going communication among stakeholders and collaboration among agencies and organizations is an important part of being an effective part of working with communities. If the affected community is included in the process and the results of the HIA are reported in a transparent manner about the process and results the HIA process will be more effective and engender greater community support. A transparent account of the HIA, including details from all phases, will position the preparer

for the heightened scrutiny that is associated with controversial projects. Even for uncontroversial projects, an unbiased critical peer review is appropriate and is encouraged in the literature. The authors recommend that preparers submit a draft of the HIA report for stakeholder review and comments and make the final HIA report available for public review.

Building capacity to conduct HIA is vital to ensuring public participation, reducing health disparities, ensuring social and economic integrity and a democratic process. The type of HIA conducted directly affects the extent of community engagement and is a reflection of local capacity. By allowing affected communities to voice their concerns and be a part of the HIA process, including public access to the HIA report, the public has an opportunity to participate with their decision makers and be an active part of a democratic process. HIAs are meant to protect and promote health and they provide a means to minimize health disparities and promote social and economic integrity. In order to accomplish this it is important to review existing assessment processes and capacity in health departments; provide basic guidance and technical assistance (e.g., training and education opportunities, and regional HIA consortium); develop an FDOH HIA website that contains resources, such as partners to network with, data, tools, literature, and guidebooks/guidelines, and, finally, a comprehensive database of HIA conducted in Florida.

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APPENDICES

Appendix A: Chronological phases of the HIA process by different organizations referred to as Best Practices.

Appendix B.1: Displays the inconsistencies in the number HIA reported by organizations that have taken on cataloguing HIA in the US.

Appendix B.2-3: Actual listing of HIAs conducted in the US for the convenience of the reader to display the inconsistencies displayed in Appendix B.1. These tables also show a possible format for organizing the portion of the recommended Florida database that catalogues the HIA conducted in Florida.

Appendix C.1-3: TAC Questionnaires

Appendix A: Best Practices in the USA

Phase	Center for Disease Control and Prevention	National Research Council (2011)	North American HIA Practice Standards Working Group (2010)	Bhatia (2011) HIA: A Guide to Practice	National Association of County & City Health Officials (2008)
Screening	1	1	1	1	1
Scoping	2	2	2	2	2
Assessment	3	3	3	3	3
Recommendations	4	4	4	4	4
Reporting	5	5	5	5	
Monitoring			6	6	
Monitoring & Evaluation		6			
Evaluation	6		7		5

*Numbers show the numerical listing of phases in each of the documents described as best practices. The term *best practices* is used to describe these documents because they are guidance manuals to the HIA process that have been analyzed by their respective authors as the suggested phases.

Appendix B. 1: Number of HIAs Conducted in the USA

State	Health Impact Project ¹⁴	UCLA HIA-CLIC	State2	Health Impact Project	UCLA HIA-CLIC
Alabama	0	0	Montana	2	2
Alaska	9	4	Nebraska	1	0
Arizona	2	1	Nevada	0	0
Arkansas	0	0	New Hampshire	2	0
California	53	43	New Jersey	1	1
Colorado	4	2	New Mexico	2	1
Connecticut	0	0	New York	1	1
Delaware	0	0	North Carolina	1	0
District of Columbia	1	0	North Dakota	0	0
Federal/United States	2	0	Ohio	5	2
Florida	0	1	Oklahoma	0	0
Georgia	7	6	Oregon	20	7
Hawaii	1	0	Pennsylvania	1	2
Idaho	0	0	Rhode Island	0	0
Illinois	3	0	South Carolina	1	0
Indiana	0	0	South Dakota	0	0
Iowa	0	0	Tennessee	2	2
Kansas	1	0	Texas	4	0
Kentucky	1	0	Utah	0	0
Louisiana	0	0	Vermont	0	0
Maine	1	0	Virginia	1	0
Maryland	3	3	Washington	6	6
Massachusetts	5	2	West Virginia	0	0
Michigan	2	0	Wisconsin	6	1
Minnesota	11	5	Wyoming	0	0
Mississippi	0	0	Undisclosed		6
Missouri	3	1			

¹⁴ As of April 21, 2012.

Appendix B.2: UCLA HIA- CLIC: HIAs in the USA

State	City/ County	Title	Organizations	Sector	Decision Making Level	Organization Type	HIA Status/ Completion Date	Summary
Alaska		Chukchi Sea Oil and Gas Lease Sale	Alaska Intertribal Council, North Slope Borough				May-07	
Alaska		National Petroleum Reserve - Alaska Oil Development Plan	Alaska Intertribal Council, Columbia University Institute on Medicine as a Profession				Sep-08	
Alaska		Northeast National Petroleum Reserve - Alaska Final Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS)					Apr-08	
Alaska		Red Dog Mine Extension Aqqaluk Project - Final Supplemental Environmental Impact Statement	United States Environmental Protection Agency				Oct-09	
Arizona		Active School Neighborhood Checklist	Arizona Dept of Transportation - Safe Routes to School Program				Aug-10	
California	San Francisco	Assessing the Health Impacts of Road Pricing Policy Proposals	San Francisco Department of Public Health					
California	Los Angeles	Baldwin Hills Oilfield						

California	San Francisco	Bayview Waterfront Redevelopment Plan EIR						
California	San Francisco	Bernal Heights Preschool Community Health Assessment	San Francisco Department of Public Health				Jan-08	
California		California After School Programs Ballot Proposition	UCLA Health Impact Assessment Project Robert Wood Johnson Foundation Partnership for Prevention				Feb-03	
California		California Healthy Families, Healthy Workplaces Act of 2008	San Francisco Department of Public Health, Human Impact Partners				Jul-08	
California	Oakland	Crossings at 29th St. / San Pedro St. Area Health Impact Assessment	Human Impact Partners				Aug-09	
California	Alameda County	East Bay Greenway Health Impact Assessment	Human Impact Partners				Sep-07	
California	San Francisco	Executive Park Sub-Area Plan	San Francisco Department of Public Health				Mar-07	
California	San Francisco	Glen Park Community Plan - Environmental Impact Report	San Francisco Planning Department, San Francisco Municipal Transportation Agency, San Francisco Public Utilities Commission				Apr-11	

California	Oakland	HIA of Healthy Families Act of 2009 - New Hampshire Addendum	Human Impact Partners				Aug-09	
California	Oakland	HIA of the Healthy Families Act of 2009 - Maine Addendum	Human Impact Partners				Nov-09	
California	Oakland	HIA of the Healthy Families Act of 2009 - Milwaukee	Human Impact Partners				Nov-08	
California	Oakland	HIA of the Healthy Families Act of 2009 - National	Human Impact Partners, San Francisco Department of Public Health				Sep-09	
California	Oakland	HIA of the Healthy Families Act of 2009: Massachusetts Addendum	Human Impact Partners				Oct-09	
California		Humboldt County General Plan Update Health Impact Assessment	Human Impact Partners, Humboldt County Public Health Branch, Humboldt Partnership for Active Living				Mar-08	
California	Los Angeles	Injury liability protection for physical activity						
California	Oakland	Jack London Gateway Rapid Health Impact Assessment	Human Impact Partners, West Oakland Environmental Indicators Project, San Francisco Department of Public Health				May-07	
California	Los Angeles	Los Angeles City Living Wage Ordinance	Partnership for Prevention, UCLA School of				Mar-06	

			Public Health					
California		MacArthur BART Transit Village	San Francisco Department of Public Health, UC Berkeley				Jan-07	
California		Mass Transit Health Impact Assessment: Potential health impacts of the Governor's Proposed Redirection of California State Transportation Spillover Funds	UCLA Health Impact Assessment Project, UCLA School of Public Health				Jun-08	
California	Los Angeles	Menu Labeling as a Potential Strategy for Combating the Obesity Epidemic	Los Angeles County Department of Public Health				May-08	
California	Merced	Merced County General Plan Update	Human Impact Partners				Nov-09	
California	Oakland	Oak to Ninth Avenue Health Impact Assessment	UC Berkeley Health Impact Group				May-06	
California	Oakland	Oakland Estuary						
California		Park Merced Development Plan EIR						
California		Pathways to Community Health: Evaluating the Healthfulness of Affordable Housing Opportunity Sites	Human Impact Partners				Aug-09	
California	San Francisco	Pittsburg Railroad Ave. Specific Plan Health Impact Assessment	Human Impact Partners				Jun-08	
California	Oakland	Port of Oakland						

California		Potential Modifications to Physical Education Requirements in California	UCLA School of Public Health				Jun-07	
California	Oakland	Ravenswood Business District of East Palo Alto	Human Impact Partners				Dec-09	
California	San Francisco	Rincon Hill						
California	San Francisco	San Francisco Eastern Neighborhood Community	San Francisco Department of Public Health				Sep-07	
California	San Francisco	San Francisco Eastern Neighborhood Rezoning and Area Plans Environmental Impact Report	San Francisco Department of Public Health				Jun-07	
California	San Francisco	San Francisco Flooring Policy for Public Housing	San Francisco Department of Public Health					
California	San Francisco	San Francisco Living Wage Ordinance	San Francisco Department of Public Health				Mar-06	
California	Santa Monica	Santa Monica Airport Health Impact Assessment	UCLA CHAT (Community Health and Advocacy Training) Program				Feb-10	
California	San Francisco	South of Market/Mission/Portero/Showplace Square Area Plans						
California	San Francisco	Still/Lyell Freeway Channel/Excelsior District	San Francisco Department of Public Health				Nov-04	
California	Sacramento	The Sacramento Safe Routes to School Program: Natomas Unified School District	Centers for Disease Control and Prevention, UCLA School of Public Health				Nov-04	

California	San Francisco	Treasure Island Community Transportation Plan HIA	San Francisco Department of Public Health, San Francisco Bicycle Coalition				May-09	
California	San Francisco	Trinity Plaza Housing Redevelopment	San Francisco Department of Public Health				Sep-03	
California	Los Angeles	Wilshire Subway Extension	UCLA School of Public Health					
Colorado	Battlement Mesa	Battlement Mesa Health Impact Assessment					Sep-10	
Colorado	Commerce City	Derby Redevelopment Health Impact Assessment	Tri-County Health Department				Sep-07	
Florida	Taylor County	North Florida Power Project, Taylor County Development Authority	Healthy Development Inc.					
Georgia	Atlanta	Atlanta Beltline	Georgia Tech - Center for Quality Growth and Regional Development Centers for Disease Control and Prevention				May-07	
Georgia	Atlanta	Atlanta Regional Plan 2040						
Georgia	Atlanta	Buford Highway and NE Plaza Redevelopment Project	UCLA Health Impact Assessment Project, Centers for Disease Control and Prevention				Nov-04	
Georgia	Decatur	City of Decatur Community Transportation Plan	Georgia Tech - Center for Quality Growth and Regional Development				Nov-07	

Georgia	Atlanta	Fort McPherson Interim Zoning HIA	Georgia Health Policy Center				Jun-10	
Georgia	Atlanta	Hospitals Impacts on Community Health: A Study of Piedmont Hospital	Georgia Tech - Center for Quality Growth and Regional Development				Jun-08	
Maryland	Baltimore	Baltimore Red Line Transit Project	Baltimore City Department of Transportation Baltimore City Health Department				December 2008	
Maryland		Boston Public Library Branches						
Maryland	Baltimore	Transform Baltimore Health Impact Assessment	Johns Hopkins University - Center for Child & Community Health Research				Aug-10	
Massachusetts	Boston	Child Health Impact Assessment of Energy Costs and the Low Income Home Energy Assistance Program (LIHEAP)	Child Health Impact Working Group (Boston Medical Center)				Apr-07	
Massachusetts		Child Health Impact Assessment of the Massachusetts Rental Voucher Program	Boston Medical Center, Boston University School of Medicine				Jun-05	
Minnesota	Apple Valley	Apple Valley 2030 Comprehensive Plan	Apple Valley Community Development and Planning Dept				Oct-09	
Minnesota	Arden Hills	Arden Hills 2030 Comprehensive Plan Update	City of Arden Hills				Sep-09	

Minnesota	Ramsey	City of Ramsey HIA Threshold Analysis	City of Ramsey, MN, Design for Health, Blue Cross Blue Shield of Minnesota				Apr-08	
Minnesota	Columbia Heights	Columbia Heights Ped. and Bicycle Plan						
Minnesota	Bloomington	Xcel Energy Corridor- Alt. Trans. Plan						
Missouri	Pagedale	Pagedale Redevelopment						
Montana		RiverStone Aquatic Center						
Montana		RiverStone Health/Yellowstone County Growth Policy						
New Jersey	Trenton	Modifications to the Trenton Farmer's Market	UCLA Health Impact Assessment Project, UCLA School of Public Health				Mar-07	
New Mexico		Highway 550 HIA						
New York		Climate Change Impact Assessment for the NYC Metropolitan Region						
Ohio	Columbus	Columbus Northeast Area Plan HIA	Columbus Public Health					
Ohio	Cincinnati	Interstate 75 Focus Area Study HIA	Cincinnati Health Department				Dec-10	
Oregon		Benton County Accessory Dwelling Units						
Oregon	Portland	Columbia River Crossing	Portland Health Impact Assessment Workgroup				Jun-08	
Oregon	Portland	Lake Oswego to Portland Transit Project	Oregon Public Health Institute				Dec-10	

Oregon		North Central Public Health District Walkability (Chenoweth Walkability Assessment)						
Oregon	Portland	Policies Reducing Vehicle Miles Traveled in Oregon Metropolitan Areas	Upstream Public Health				May-09	
Oregon	Eugene	Transportation Policies in the Eugene Climate and Energy Action Plan (CEAP)	Upstream Public Health, City of Eugene Office of Sustainability, Community Health Partnership, Lane County Public Health				Aug-10	
Oregon	Tumalo	Tumalo Community Plan	Deschutes County Public Health, Deschutes County Planning				Nov-10	
Pennsylvania	Philladelphia	Boxers' Trail						
Pennsylvania	Philadelphia	Health Impacts of Urban Gambling	Center for Health Equality at the Drexel School of Public Health				Nov-10	
Tennessee	Nashville	Nashville Employer Transit Subsidies	Nashville Metropolitan Planning Organization					
Tennessee	Nashville	Nashville Northwest Corridor Transit HIA	Nashville Metropolitan Planning Organization				Apr-10	
Washington	Seattle	Beacon Hill						
Washington	Vancouver	Highway 99 Sub-Area Plan	Clark County Public Health				Dec-08	

Washington		Multimodal Transportation HIA						
Washington	Spokane	Spokane Downtown Bike and Ped Connections	City of Spokane Planning Department, Spokane Regional Health District, The Lands Council					
Washington	Seattle	State Route 520	Public Health - Seattle & King County, Puget Sound Clean Air Agency				Sep-08	
Washington	Tacoma	Tacoma/Pierce County/Puyallup						
Wisconsin		HIA of Global Climate Change: Expanding on Comparative Risk Assessment Approaches for Policy						
		Aerotropolis Atlanta Brownfield Redevelopment	Georgia Tech - Center for Quality Growth and Regional Development					
		Carbon Cap-and-Trade/Climate Change II					In Progress	
		Concord Naval Weapons Station Reuse Project	Human Impact Partners				Jan-09	
		Federal Farm Bill, 2002	Partnership for Prevention, UCLA School of Public Health				Dec-04	
		Oregon Farm to School and School Garden Policy	Upstream Public Health				May-11	
		Planning for Active Walkable Neighborhoods (Clark County Pedestrian Master Plan)					In Progress	

Appendix B. 3: Health Impact Project: HIA in the USA¹⁵

State	City/County	Title	Organizations	Sector	Decision Making Level	Organization Type	HIA Status	Summary
Alaska	Thomson Sand reservoir	Point Thomson Oil and Gas leasing EIS/HIA		Natural Resources and Energy	Regional	Government Agency	Complete	This health impact assessment (HIA) aims to identify human health impacts associated with the proposed ExxonMobil development of the Thomson Sand reservoir.
Alaska		Health Impact Assessment for Proposed Coal Mine at Wishbone Hill		Natural Resources and Energy	State	Government Agency	In Progress	This HIA provides decision makers with a review of potential positive and negative human health impacts related to the proposed Wishbone Hill Mine (WHM). The proposed project area is located in the Matanuska-Susitna valley near Sutton, Alaska.
Alaska		Arctic Outer Continental Shelf Oil and Gas Multiple Lease Sale Environmental Impact Statement	Alaska Inter-Tribal Council	Natural Resources and Energy	State	Government Agency	Complete	An HIA that addressed a proposed oil and gas leasing off the north coast of Alaska and the potential health risks and benefits for the predominantly Alaska Native communities in the area, who depend on locally-harvested fish and game.

¹⁵ As of April 21, 2012.

Alaska		Chukchi Sea Planning Area - Oil and Gas Lease Sale 193 and Seismic Surveying Activities in the Chukchi Sea	Minerals Management Service, Alaska OCS Region	Natural Resources and Energy	Federal	Government Agency	Complete	An HIA that addressed proposed oil and gas leasing off the north coast of Alaska, with a focus on health concerns expressed by the predominantly Alaska Native communities in the area, who depend on locally-harvested fish and game.
Alaska	North Slope Borough	Northeast National Petroleum Reserve Supplemental Environmental Impact Statement	U.S. Bureau of Land Management, Alaska Intertribal Council, Columbia University Institute on Medicine as a Profession	Natural Resources and Energy	Federal	Government Agency	Complete	An HIA that addressed proposed oil leasing in the National Petroleum Reserve - Alaska. Health considerations included exposure to pollution, the impact on fish and game (a staple of the local diet), and social and cultural stress and change.
Alaska		Outer Continental Shelf Oil & Gas Leasing Program: 2007-2012 Final Environmental Impact Statement	U.S. Mineral Management Service	Natural Resources and Energy	Federal	Government Agency	Complete	An HIA that addressed the Federal Government's plans for offshore oil and gas leasing, with a focus on the potential impacts and benefits for Alaska Native communities in the remote North Slope region of Alaska.
Alaska		Pebble Mine	University of Alaska	Natural Resources and Energy	Federal	Educational Institution	In Progress	An HIA of the proposed Pebble Mine, a copper and gold mine that would be located in the Bristol Bay region of Southwest Alaska.
Alaska	Kaktovik	Point Thomson Project Environmental Impact Statement	Alaska Department of Health and Social Services	Natural Resources and Energy	Federal	Government Agency	In Progress	An HIA as part of the permitting process for ExxonMobil's proposed oil and gas development in Alaska's Point Thomson area.

Alaska		Red Dog Mine Extension Aqqaluk Project Final Supplemental Environmental Impact Statement	U.S. Environmental Protection Agency	Natural Resources and Energy	State	Government Agency	Complete	An HIA was integrated into a federal environmental impact statement (EIS) for a proposal to expand the Red Dog Mine, the world's largest producer of zinc. The HIA addressed the potential impacts and benefits for the region's Alaska Native communities.
California	Fresno County	Fresno County Regional Transportation Plan and Sustainable Communities Strategies	California Rural Legal Assistance, Inc.	Transportation	County	Non-profit Organization	In Progress	An HIA to inform the development of Regional Transportation Plans and Sustainable Communities Strategies that will guide local land use, transportation, and other decisions important to greenhouse gas emissions. (Supported by funding from The California Endowment.)
California	Kern county	Kern County Regional Transportation Plan and Sustainable Communities Strategies	California Rural Legal Assistance, Inc.	Transportation	County	Non-profit Organization	In Progress	An HIA to inform the development of Regional Transportation Plans and Sustainable Communities Strategies that will guide local land use, transportation, and other decisions important to greenhouse gas emissions. (Supported by funding from The California Endowment.)
California	Alameda County (Oakland)	San Francisco Bay Area's Regional Transportation Plan	Alameda County Public Health Department	Transportation	Regional	Government Agency	In Progress	An HIA to examine the equity impacts of the proposed Regional Transportation Plan, with a focus on the potential health impacts on bus riders in Alameda County. (Supported by funding from The California Endowment.)

California	La Jolla	Placer County Biomass Energy Facility	Sequoia Foundation	Natural Resources and Energy	County	Non-profit Organization	In Progress	An HIA to inform decisions regarding a proposed biomass energy facility.
California	San Francisco	San Francisco Living Wage Ordinance	San Francisco Department of Public Health	Labor and Employment	Local	Government Agency	Complete	An HIA of a proposed city ordinance that would require city contractors and property leaseholders to pay their employees a living wage of \$11.00 per hour.
California		Food Desert	California Department of Public Health	Agriculture and Food	Undetermined	Government Agency	In Progress	
California		El Camino Real	California Department of Public Health	Transportation	Undetermined	Government Agency	In Progress	
California		California Domestic Worker Equality, Fairness and Dignity Act	San Francisco Department of Public Health	Labor and Employment	State	Government Agency	Complete	An HIA that addressed proposed legislation in California that would require employers to provide paid sick days for workers.
California	San Francisco	Western SOMA Community Plan	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA that addressed a comprehensive land use plan for the Western South of Market Neighborhood in San Francisco.
California	San Francisco	Eastern Neighborhoods Community	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA on the development of community plans for three different neighborhoods in San Francisco, California.
California		After-School Programs - Proposition 49	Partnership for Prevention, UCLA School of Public Health, with support from the Robert Wood Johnson Foundation	Education	State	Educational Institution	Complete	An HIA that compared the potential health effects of four different models of after-school programs in anticipation of California's Proposition 49, the After School Education and Safety Program Act of 2002.
California	San Francisco	Bernal Heights Preschool	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA to inform decision-making related to the choice between three potential future school locations.

California		California Cap and Trade Rulemaking	California Department of Public Health, California Public Health Institute	Climate Change	State	Government Agency	In Progress	An HIA to inform the development of new regulations that aim to reduce emissions of carbon dioxide as a way to help curb global warming.
California		California Paid Sick Days	Human Impact Partners, San Francisco Department of Public Health	Labor and Employment	State	Non-profit Organization	Complete	An HIA that addressed California Assembly Bill 2716: Healthy Families, Healthy Workplaces Act of 2008.
California	Concord	Concord Naval Weapons Station Reuse Project	Human Impact Partners	Built Environment	Local	Non-profit Organization	Complete	An HIA that addressed the health implications of plans to repurpose the Concord Naval Weapons Station, a 5,028-acre former US Navy weapons storage site that is to be redeveloped by the City of Concord, CA.
California	Los Angeles	The Crossings at 29th and San Pedro St. - South Central Redevelopment	Human Impact Partners, Los Angeles Association of Community, Organizations for Reform Now	Built Environment	Local	Non-profit Organization	Complete	An HIA that addressed the health implications of plans for The Crossings at 29th Street, a proposed 11.6-acre development in South Los Angeles providing more than 450 units of affordable housing, as well as retail and multipurpose space for community activities.
California	Alameda County	East Bay Greenway	Human Impact Partners, Urban Ecology, The California Endowment	Built Environment	County	Non-profit Organization	Complete	An HIA that addressed a proposed plan for twelve miles of pedestrian and biking trails under the elevated Bay Area Rapid Transit (BART) tracks from East Oakland to Hayward, known as the East Bay Greenway.

California	San Francisco	Executive Park Sub Area Plan	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA that was the first pilot application of San Francisco's Healthy Development Measurement Tool to a land use development plan. The report looked at the health impacts of the Executive Park Sub-Area Plan, which proposes to build 2,800 units of new, residential housing on a 71 acre area in the southeastern corner of San Francisco.
California	San Francisco	Flooring in Public Housing	San Francisco Department of Public Health	Housing	Local	Government Agency	Complete	An HIA that was conducted by the San Francisco Health Department to inform the San Francisco Housing Authority's policy on flooring for public housing. The main health issue addressed was the impact of carpeting on asthma rates.
California	San Francisco	HOPE VI to HOPE SF: San Francisco Public Housing Redevelopment	University of California Berkeley Health Impact Group, Human Impact Partners	Housing	Local	Educational Institution	Complete	An HIA that looked retrospectively at efforts to rebuild two affordable housing projects in San Francisco, California under the U.S. Department of Housing and Urban Development's HOPE VI program.
California	Humboldt County	Humboldt County General Plan Update	County of Humboldt Department of Health and Human Services: Public Health Branch, Human Impact Partners, Humboldt Partnership for Active Living, and the California Endowment	Built Environment	County	Non-profit Organization	Complete	An HIA that addressed the health implications of an update of the General Plan in Humboldt County, a rural community in Northern California.

California	Los Angeles	I-710 Expansion	Human Impact Partners	Transportation	Undetermined	Non-profit Organization	In Progress	An HIA that will address the health implications of the expansion and improvements planned for the I-710 freeway in Los Angeles, an artery that links the Ports of Long Beach and Los Angeles to the Southern California region.
California		Injury Liability Protection for Recreational Physical Activity	UCLA Health Impact Assessment Project	Physical Activity	State	Educational Institution	Complete	A rapid HIA that examined the potential health effects of a proposed legislative initiative aimed at providing protection against liability for facilities and services promoting physical activity in California.
California	Oakland	Jack London Senior Housing	Human Impact Partners, West Oakland Environmental Indicators Project, San Francisco Department of Public Health	Housing	Local	Non-profit Organization	Complete	An HIA that addressed the health implications of a proposed residential and commercial development at the Jack London Gateway in Oakland, California.
California	Oakland	Lake Merritt BART Station Specific Plan	Human Impact Partners	Transportation	Local	Non-profit Organization	In Progress	An HIA that will address the health implications of the station area planning process for land use improvements around the Lake Merritt BART station in downtown Oakland.
California	San Francisco	San Francisco Living Wage Ordinance	San Francisco Department of Public Health	Labor and Employment	Local	Government Agency	Complete	An HIA of a proposed city ordinance that would require city contractors and property leaseholders to pay their employees a living wage" of \$11.00 per hour."

California	Los Angeles	Los Angeles Living Wage Ordinance	UCLA School of Public Health Health, Partnership for Prevention	Labor and Employment	Local	Educational Institution	Complete	An HIA that addressed the health implications of the City of Los Angeles' Living Wage Ordinance, which gave an employer the ability to choose whether to provide health insurance or additional income.
California	Long Beach	Long Beach Downtown Plan	Human Impact Partners	Built Environment	Local	Non-profit Organization	In Progress	An HIA that will address the health implications of the proposed Downtown Development Plan for Long Beach, California.
California	Oakland	MacArthur BART	University of California Berkeley Health Impact Group	Built Environment	Local	Educational Institution	Complete	An HIA that addressed the health implications of the MacArthur Transit Village "a proposed development project that included multi-family housing, retail and community space, community and retail parking, and renovations to public infrastructure" located near the MacArthur BART Station in Oakland, California.
California		Mass Transit - CA	UCLA School of Public Health	Transportation	State	Educational Institution	Complete	An HIA that addressed how funding cuts to mass transit may impact public health.
California		Menu Labeling	Los Angeles County Department of Public Health	Agriculture and Food	State	Government Agency	Complete	An HIA that explored how a law requiring chain restaurants to provide nutritional information might impact the obesity epidemic.
California	Merced County	Merced County General Plan Update	Human Impact Partners	Built Environment	County	Non-profit Organization	Complete	A rapid HIA that addressed the health implications of the General Plan Update in the county of Merced, California.

California	Los Angeles	Metro Westside Subway Extension (Wilshire Corridor)	UCLA School of Public Health, Los Angeles County Department of Public Health	Transportation	Local	Educational Institution	In Progress	An HIA done in coordination with the Los Angeles County Department of Public Health that will assess the potential health effects of a proposed subway and other mass-transit alternatives through Los Angeles high-density, highly congested Wilshire Corridor running from mid-town Los Angeles to the city of Santa Monica.
California	Oakland	Oak to Ninth Avenue	University of California Berkeley Health Impact Group	Built Environment	Local	Educational Institution	Complete	An HIA on Oak to Ninth, a waterfront development project on approximately 64 acres of waterfront property owned by the Port of Oakland.
California		Physical Education Requirements in California	UCLA School of Public Health	Education	State	Educational Institution	Complete	An HIA that addressed the health implications of policy options that would increase the quality and quantity of physical education in California.
California	Contra Costa	Pittsburg Railroad Avenue Transit-Oriented Development	Human Impact Partners	Built Environment	Local	Non-profit Organization	Complete	An HIA that addressed the health implications of the Pittsburg Railroad Avenue Specific Plan, which included a new commuter rail (BART) station located in the middle of State Highway 4 in Pittsburg, California.
California	Ports of Los Angeles, Oakland and Long Beach	Port Container Fee	Human Impact Partners	Transportation	State	Non-profit Organization	In Progress	An HIA that addressed a proposed California state bill that would assess a fee on each container moving through the Ports of Los Angeles, Long Beach and Oakland.
California	Los Angeles and Long Beach	Port of Los Angeles and Long Beach	Human Impact Partners	Transportation	Federal	Non-profit Organization	In Progress	An HIA will address the health implications of expansion projects and plans at the Ports of Los Angeles and Long Beach.

California	Oakland	Port of Oakland	University of California Berkeley Health Impact Group	Built Environment	Local	Educational Institution	In Progress	An HIA that will address the health impacts of the Port of Oakland's growth on West Oakland residents. Some of the influences on health that will be explored include transportation, labor, air quality and noise.
California	San Francisco	Potrero Public Housing Redevelopment	San Francisco Department of Public Health	Housing	Local	Government Agency	In Progress	An HIA that focuses on a public housing redevelopment project in San Francisco.
California	San Francisco	Rincon Hill Area Plan	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA provided comment on the Rincon Hill Area Plan Draft Environmental Impact Assessment. In the form of a letter to the San Francisco Planning Department, the San Francisco Health Department provided recommendations based on the HIA, for additional analysis related to health implications related to the Plan's impacts on affordable housing, transportation systems, schools and parks.
California	Sacramento	Sacramento Safe Routes to School	UCLA School of Public Health, U.S. Centers for Disease Control, Project MOVE	Education	Local	Educational Institution	Complete	This HIA looked at the health impacts of the Sacramento Safe Routes to School Program, with a focus on physical activity, pedestrian safety, crime, and exposure to air pollution.
California	San Francisco	San Francisco Road Pricing	San Francisco Department of Public Health	Transportation	Local	Government Agency	In Progress	An HIA that will address a policy under consideration in San Francisco that would charge a use fee for driving in congested areas, and use the revenue to support transportation infrastructure and services.

California		San Pablo Corridor	Human Impact Partners	Built Environment	Regional	Non-profit Organization	Complete	An HIA addressed the health implications of placing affordable housing units along the San Pablo Corridor, a high-traffic transit and retail corridor in Richmond and El Cerrito, California.
California	Santa Monica	Santa Monica Airport	UCLA Community Health and Advocacy Training Program	Built Environment	Local	Educational Institution	Complete	An HIA addressed the health impacts on neighboring communities related to air quality, noise and the lack of a buffer zone around the Santa Monica Airport.
California		School Discipline Policies	Human Impact Partners	Education	Undetermined	Non-profit Organization	In Progress	An HIA will assess the health implications of three different approaches to disciplining students in California schools.
California	Los Angeles	School Physical Activity Report Cards	UCLA Health Impact Assessment Project	Education	Undetermined	Educational Institution	In Progress	An HIA that will address the health implications of various policy options to increase physical activity in schools.
California	San Francisco	South of Market, Mission, and Potrero/Showplace Square Area Plans	San Francisco Department of Public Health	Built Environment	Local	Government Agency	Complete	An HIA of three neighborhood area plans in San Francisco.
California	San Francisco	Still/Lyell Freeway Channel in Excelsior District	San Francisco Department of Public Health, UC Berkeley, People Organizing to Demand Environmental and Economic Rights	Transportation	Local	Government Agency	Complete	An HIA that addressed the traffic and transportation system in the Excelsior District of San Francisco. It was undertaken as a collaboration between PODER, a citizen's group, and the San Francisco Department of Public Health.
California	San Francisco	Sunnydale Public Housing Redevelopment	San Francisco Department of Public Health	Housing	Local	Government Agency	In Progress	An HIA that focuses on a public housing redevelopment project in San Francisco.

California	San Francisco	Treasure Island Transportation Plan	San Francisco Department of Public Health	Transportation	Local	Government Agency	Complete	An HIA was done as part of a transportation plan funded by the California Department of Transportation and written by the San Francisco Department of Public Health and the San Francisco Bicycle Coalition.
California	San Francisco	Trinity Plaza Housing Redevelopment	San Francisco Department of Public Health	Housing	Local	Government Agency	Complete	An HIA that addressed a proposed redevelopment project in San Francisco that would demolish an older apartment building with over 360 rent-controlled units, and replace them with 1,400 market-rate condominiums.
California	San Francisco	Westside Courts Public Housing Redevelopment	San Francisco Department of Public Health	Housing	Local	Government Agency	In Progress	An HIA that focuses on a public housing redevelopment project in San Francisco.
Colorado	Denver	South Lincoln Homes	EnviroHealth Consulting, MITHUN firm, and Denver Housing Authority	Housing	Local	Undetermined	Complete	An HIA done as part of a master plan for the Denver Housing Authority's South Lincoln Homes community in downtown Denver.
Colorado	North Aurora	North Aurora Regional Recreation	EnvironHealth; Stapleton Foundation's Be Well" Initiative"	Built Environment	Regional	Undetermined	Complete	An HIA conducted to inform the decision regarding where to locate a new regional recreation center.
Colorado	Garfield County	Battlement Mesa	Colorado School of Public Health, Garfield County Public Health, Habitat Human Impact Consulting, Inc.	Natural Resources and Energy	County	Educational Institution	In Progress	An HIA on a natural gas development project in Garfield County, Colorado.

Colorado	Commerce City	Derby Redevelopment	Tri-County Health Department	Built Environment	Local	Government Agency	Complete	An HIA that looked at the proposed redevelopment of the Derby District in Colorado's Commerce City commercial core. The HIA considered how the redevelopment might affect issues such as opportunities for physical activity; access to supermarkets that stock fruits, vegetables, and other healthy foods; and traffic safety.
Connecticut	Hartford	A Rapid Health Impact Assessment of the New Britain-Hartford Busway Project	Connecticut Association of Directors of Health, Southern Connecticut State University	Transportation	Regional	Non-profit Organization	In Progress	A Health Impact Assessment was performed to determine the health impacts of an express Busway planned to run between New Britain and Hartford Connecticut.
District of Columbia	Washington	Alabama Avenue Bike Lanes	Safe Routes to School Network, Johns Hopkins University	Built Environment	Undetermined	Educational Institution	In Progress	An HIA on proposed bike lanes in Southeast Washington, DC.
Federal		Federal Farm Bill	Partnership for Prevention, UCLA Health Impact Assessment Project	Agriculture and Food	Federal	Non-profit Organization	Complete	An HIA that focused on how the 2002 Farm Bill might affect health through the implications of factors ranging from the rural economy, dietary choices and air pollution.
Federal		Federal Paid Sick Days	Human Impact Partners, San Francisco Department of Public Health	Labor and Employment	Federal	Non-profit Organization	Complete	An HIA that addressed the health implications of the federal Healthy Families Act of 2009—a bill that would have entitled all employees to accrue paid sick time at a rate of one hour of paid sick time for every 30 hours worked, up to nine days per year.

Georgia	Atlanta	Aerotropolis Atlanta	Center for Quality Growth and Regional Development, Georgia Institute of Technology College of Architecture	Built Environment	Local	Educational Institution	In Progress	A comprehensive HIA on the site of a former Ford assembly plant in Hapeville, Georgia.
Georgia	Atlanta	Atlanta Beltline	Center for Quality Growth and Regional Development at Georgia Tech University, CDC, Robert Wood Johnson Foundation	Built Environment	Local	Educational Institution	Complete	An HIA that addressed the health implications of the proposed Atlanta Beltline, a major public transit, trails, parks and urban-redevelopment project.
Georgia	Atlanta	Atlanta Regional Plan 2040	Center for Quality Growth and Regional Development, Georgia Institute of Technology College of Architecture	Transportation	Regional	Educational Institution	In Progress	An HIA that will examine how Plan 2040’s metropolitan transportation and comprehensive growth plan for counties in the Atlanta region will consider a range of health issues that could be impacted, such as injury and asthma rates, and the risks of obesity and diabetes.
Georgia	Atlanta	Buford Highway and NE Plaza Redevelopment	UCLA, CDC	Transportation	State	Educational Institution	Complete	An HIA that examined the expected health benefits of proposed highway design changes (e.g., reducing lanes, adding sidewalks, medians, bike lanes and on-street parking) to the Buford Highway Corridor. Special emphasis was placed on the potential impacts on physical activity and pedestrian injuries.

Georgia	Decatur	City of Decatur Community Transportation Plan	Georgia Tech Center for Quality Growth and Regional Development	Transportation	Local	Educational Institution	Complete	An HIA that addressed the health implications of the City of Decatur's community transportation plan. The assessment focused on potential health impacts related to safety, social connections and physical activity as they are affected by transportation and land use.
Georgia	Atlanta	Fort McPherson Interim Zoning	Georgia Health Policy Center at Georgia State University	Built Environment	Local	Educational Institution	Complete	An HIA that addressed the health effects of zoning provisions on residents' nutrition, physical activity and social cohesion during the interim-use phase of a major redevelopment and new land use plan for Atlanta's Fort McPherson's Base Realignment and Closure (BRAC) process.
Georgia	Atlanta	Piedmont Hospital: Hospitals and Community Health	Georgia Tech Center for Quality Growth and Regional Development, Robert Wood Johnson Foundation	Built Environment	Local	Educational Institution	Complete	An HIA that analyzed the health impacts of a proposed expansion of Piedmont Hospital, one of the major anchor institutions along the Peachtree Corridor in Atlanta, Georgia.
Hawaii	Hawaii County	Hawaii County Agriculture Development Plan	The Kohala Center, Hawaii State Department of Agriculture, Kaiser Permanente Center for Health Research, Hawaii	Agriculture and Food	County	Non-profit Organization	In Progress	An HIA that guides the creation of the County of Hawaii's Agriculture Development Plan.

Illinois	Springfield	Supplemental Nutrition Assistance Program HIA	Illinois Public Health Institute	Agriculture and Food	State	Non-profit Organization	In Progress	An HIA of legislative proposal(s) under consideration in the Illinois General Assembly that would require the Illinois Department of Human Services to request a waiver from USDA to ban the use of Supplemental Nutrition Assistance Program benefits to purchase sugary drinks.
Illinois	Geneva	Kane County Farmland Protection	Kane County Development and Community Services Department	Agriculture and Food	County	Government Agency	In Progress	An HIA of a proposed amendment to a farmland protection ordinance.
Illinois	Chicago	Advanced Metering Infrastructure	National Center for Medical Legal Partnership at Boston Medical Center, Citizens Utility Board	Housing	Local	Non-profit Organization	In Progress	An HIA that will address the health effects of a proposal by Commonwealth Edison to implement smart metering" technology in western metropolitan Chicago
Kansas		Southeast Kansas Casino	Kansas Health Institute	Gambling	State	Non-profit Organization	In Progress	An HIA to inform deliberations in the Kansas legislature on a proposal to amend the Kansas Expanded Lottery Act, facilitating the expansion of casino development in rural Kansas.
Maine		Maine Paid Sick Days	Human Impact Partners, Maine Women's Policy Center, Maine Health Access Foundation and Family Values, Work: A Multi-state Consortium	Labor and Employment	State	Non-profit Organization	Complete	An HIA that addressed Maine's version of the federal Healthy Families Act, a bill that would have entitled an employee to accrue paid sick time at a rate of one hour for every 30 hours worked, up to nine days per year.

Maryland	Columbia	Baltimore-Washington Rail Intermodal Facility HIA	National Center for Healthy Housing	Transportation	State	Non-profit Organization	In Progress	HIA to determine the impacts of the proposed Baltimore-Washington Rail Intermodal Facility at several potential sites in the region. (Supported by The Kresge Foundation.)
Maryland	Baltimore	Baltimore City's Comprehensive Zoning Code Rewrite	Johns Hopkins Bloomberg School of Public Health	Built Environment	Local	Educational Institution	In Progress	An HIA that examined the potential health impacts of the city's proposed zoning code revisions, and focused on issues including obesity, physical activity, nutrition and violent crime.
Maryland	Baltimore	Baltimore Red Line	Baltimore City Department of Transportation	Transportation	County	Government Agency	Complete	An HIA that addressed the potential health impacts of a proposed 14-mile transit line to extend across sections of Baltimore City and Baltimore County, Maryland.
Massachusetts		Healthy T for a Healthy Region HIA	The Metropolitan Area Planning Council, with Harvard School of Public Health and the Boston University School of Public Health	Transportation	Regional	Educational Institution	Complete	An health impact assessment (HIA) of the two proposals of fare increases and service cuts aimed at closing the Boston T's projected deficit.
Massachusetts	Springfield	Biomass Plant	Massachusetts Department of Public Health	Natural Resources and Energy	State	Government Agency	In Progress	An HIA that will assess the potential health impacts of a proposed biomass power plant in Springfield, Massachusetts.
Massachusetts		Massachusetts Paid Sick Days	Human Impact Partners	Labor and Employment	State	Non-profit Organization	Complete	An HIA that addressed the health implications of Massachusetts' version of the federal Healthy Families Act. The bill would have entitled an employee to accrue paid sick time at a rate of one hour for every 30 hours worked, up to nine days per year.

Massachusetts		Massachusetts Low Income Energy Assistance Program	Boston University Child HIA Working Group	Natural Resources and Energy	State	Non-profit Organization	Complete	An HIA that addressed the health outcomes associated with the Low-Income Home Energy Assistance Program (LIHEAP) and high energy costs, including budget tradeoffs that can increase the risk of poor nutrition, fire-related injuries and burns and unhealthy housing conditions.
Massachusetts		Massachusetts Rental Voucher Program	Boston University Child HIA Working Group	Housing	State	Non-profit Organization	Complete	An HIA that addressed the potential health effects on children of proposed changes to the Massachusetts Rental Voucher Program (MVRP), a housing assistance and homelessness prevention program.
Michigan	Ann Arbor	Urban Forest Canopy as a Climate/Health Adaptation	Michigan Department of Community Health	Climate Change	Local	Government Agency	In Progress	The HIA will inform the way that Urban Forestry decisions are made for the City of Ann Arbor as a means to mitigate the health effects of high heat events.
Michigan	Ingham County	Ingham County HIA	Ingram County Health Department, University of Colorado Denver	Built Environment	County	Government Agency	In Progress	A checklist-based HIA tool to evaluate proposed development projects has been applied to a number of development proposals in Ingham County, Michigan.
Minnesota	Minneapolis	Bottineau Transitway HIA	Hennepin County's Department of Housing, Community Works and Transit	Transportation	County	Government Agency	In Progress	An HIA of a proposed transitway connecting Northern Minneapolis to county suburbs. (Supported by funding from the Blue Cross and Blue Shield of Minnesota Foundation.)

Minnesota	Minneapolis	City of Minneapolis Above the Falls Master Plan	Minneapolis Department of Health and Family Support	Built Environment	Local	Government Agency	In Progress	An HIA to inform revisions to the City of Minneapolis Above the Falls Master Plan, which is intended to increase public access and use of the waterfront, improve housing and employment opportunities, and reduce environmental contamination. (Supported by the Blue Cross and Blue Shield of Minnesota Foundation.)
Minnesota		Environmental Assessment Worksheet	Minnesota Department of Health	Built Environment	Undetermined	Government Agency	In Progress	
Minnesota		Comprehensive Planning	Minnesota Department of Health	Built Environment	Undetermined	Government Agency	In Progress	
Minnesota	Duluth	Complete Streets	Minnesota Department of Health	Built Environment	Undetermined	Government Agency	In Progress	
Minnesota	Douglas County	Douglas County Comprehensive Plan	Minnesota Department of Health	Built Environment	Undetermined	Government Agency	In Progress	
Minnesota	Duluth	6th Avenue East Duluth HIA	St. Louis County Public Health & Human Services; Arrowhead Regional Development Commission; Public Solutions Inc.; Minnesota Department of Health; Northpoint GIS	Built Environment	Local	Government Agency	Complete	An HIA on Duluth, Minnesota's Complete Streets Resolution, Mobility in the Hillside Neighborhood and The Sixth Avenue East Schematic Redesign Study

Minnesota	Dakota County	Apple Valley	Design for Health, City of Apple Valley, HKGI	Built Environment	Local	Educational Institution	Complete	An HIA that addressed the Apple Valley 2030 Comprehensive Plan through a rapid/abbreviated public process, with a primary focus on improving options for physical activity.
Minnesota	Ramsey	City of Ramsey Threshold	City of Ramsey, MN; Design for Health; Blue Cross and Blue Shield	Built Environment	Local	Government Agency	Complete	An HIA that addressed the potential health impacts of the City of Ramsey's Comprehensive Plan update.
Minnesota	Minneapolis	Lowry Corridor, Phase 2	Hennepin County Planning and Public Health	Built Environment	Local	Government Agency	Complete	An HIA that addressed the health implications of the planned reconstruction of the Lowry Avenue Corridor in Minneapolis, Minnesota.
Minnesota	St. Paul	St. Paul Light Rail	ISAIAH, Policy Link, Take Action Minnesota	Built Environment	Local	Non-profit Organization	Complete	An HIA of proposed land-use changes related to a new light rail transit line that will connect Minneapolis and St. Paul, Minnesota.
Minnesota	Bloomington	Xcel Energy Corridor	City of Bloomington	Transportation	Local	Government Agency	Complete	An HIA that addressed the health implications of the planned Xcel Energy Corridor Trail in Bloomington, Minnesota.
Missouri	Columbia	Columbia Transit System Expansion	Columbia/Boone County Dept. of Public Health & Human Services	Transportation	Local	Government Agency	In Progress	An HIA to be conducted on proposed expansion of transit system, including highlighting health benefits.
Missouri	Independence	City of Independence Complete Streets	City of Independence Health Department	Built Environment	Local	Government Agency	In Progress	An HIA to inform the implementation of a complete streets policy in Independence, MO.
Missouri	Pagedale	Page Avenue Revitalization	Washington University in St. Louis Institute for Public Health	Built Environment	Local	Educational Institution	Complete	An HIA that addressed a \$45-million revitalization project in the City of Pagedale, Missouri, focusing on issues such as safety and access to healthy foods.

Montana	Yellowstone	South Billings Master Plan	Yellowstone City-County Health Department	Built Environment	Local	Government Agency	In Progress	An HIA on the South Billings master plan in Billings, MT.
Montana	Yellowstone County	Yellowstone County Growth Policy	RiverStone Health	Built Environment	County	Government Agency	Complete	An HIA was conducted to inform the 2008 Growth Policy for the City of Billings, Montana. It outlined both the positive and negative consequences of the growth strategy, focusing on health effects like stress, injury, and diabetes.
New Hampshire		New Hampshire State Budget	New Hampshire Center for Public Policy Studies	Economic Policy	State	Non-profit Organization	In Progress	An HIA that will inform lawmakers on how funding changes in parts of the state budget might affect the health of residents.
New Jersey	Trenton	Trenton Farmer's Market	UCLA Health Impact Assessment Group	Agriculture and Food	Local	Educational Institution	Complete	An HIA that considered three alternative scenarios for proposed changes to a farmer's market in Trenton, New Jersey. The HIA explored the impacts that each scenario would have on nutrition, physical activity, the economy, social capital and public health services.
New Mexico	Bernalillo County	Mountain View Material Recovery Facility	Bernalillo County Place Matters Team	Natural Resources and Energy	County	Undetermined	Complete	A rapid HIA to inform the permitting process for a material recovery facility examined the potential impacts of the proposed development on air and noise pollution, employment and economic development, and traffic congestion.

New Mexico	Cuba	Highway 550	University of New Mexico Prevention Research Center	Transportation	Local	Educational Institution	Complete	A rapid HIA that looked at the impacts of proposed highway improvements on community walkability, pedestrian safety, social cohesion and economic development for a five-lane, federal highway running through downtown Cuba, New Mexico.
New York	Rochester	Rochester Waterfront Revitalization Plan	University of Rochester	Built Environment	Local	Educational Institution	In Progress	An HIA to help inform a waterfront revitalization plan in Rochester, New York.
New York	Wampsville	Madison County Coordinated Transportation Plan HIA	Madison County Department of Health	Transportation	County	Government Agency	Complete	An HIA on a coordinated transportation plan
North Carolina	Aberdeen	Aberdeen Pedestrian Transportation Plan HIA		Transportation	Local	Educational Institution	Complete	This HIA evaluates the potential impacts of the Aberdeen Pedestrian Transportation Plan on child health and health disparities in Aberdeen.
Ohio	Cleveland	Urban Agriculture Overlay District Health Impact Assessment	Cleveland Planning Commission, partnering with Cuyahoga County Board of Health, Saint Lukes Foundation, Cleveland Department of Public Health	Agriculture and Food	Local	Government Agency	In Progress	The HIA will inform a proposed piece of legislation that will introduce intense farm uses in an urban environment.
Ohio	Cuyahoga County	Cuyahoga County Transportation for Livable Communities Initiative	Cuyahoga County Board of Health	Built Environment	County	Government Agency	In Progress	An HIA on the Transportation for Livable Communities Initiative (TLCI) planning project for the key intersections of the four mile stretch of Euclid Avenue in Euclid, MO.

Ohio	Columbus	Ohio Housing Inspections	Ohio Housing Finance Agency	Housing	State	Government Agency	In Progress	An HIA to inform decisions on proposed modifications to housing inspection programs in Ohio that would reduce the number of inspections on affordable housing units by improving interagency coordination.
Ohio	Cincinnati	Interstate 75 Focus Area Study	Cincinnati Health Department	Built Environment	Local	Government Agency	Complete	An HIA reviewing the final recommendations of a plan for infrastructure improvements a major transportation corridor
Ohio	City of Columbus and Franklin County	Columbus North East Area Plan HIA	Undetermined	Built Environment	Regional	Undetermined	Complete	An HIA that addressed a proposed land-use plan for northeast Columbus and explored the impacts on air pollution, mental health, social capital and environmental justice.
Oregon	Portland	HIA of Portland City Council's Rental Housing Inspections Program	Oregon Public Health Institute	Housing	Local	Non-profit Organization	In Progress	An HIA to inform the Portland City Council's June 2012 decision on whether to fund the Rental Housing Inspections Program at a level sufficient to continue, and potentially expand, the Enhanced Inspections pilot program.
Oregon		Wind Energy	Oregon Department of Human Services, Public Health Division	Natural Resources and Energy	Undetermined	Government Agency	In Progress	A strategic HIA to provide a general assessment of the ways that wind energy developments in Oregon might affect the health of individuals and communities where they are built and maintained.
Oregon	Crook County	Master Plan	Oregon Department of Human Services, Public Health Division	Built Environment	Undetermined	Government Agency	In Progress	
Oregon	Hood River	Farmland Rezone	Oregon Department of Human Services, Public Health	Agriculture and Food	Undetermined	Government Agency	In Progress	

			Division					
Oregon	North Wasco County	North Central Oregon Public Health District	North Wasco County School District, City of The Dalles Community Development Department	Education	Local	Educational Institution	In Progress	An HIA on pedestrian safety and school wellness policies.
Oregon		Commute Options of Central Oregon	Central Oregon Intergovernmental Council, Warm Springs Tribe	Transportation	Regional	Undetermined	In Progress	An HIA on Central Oregon's regional transit system.
Oregon	Corvallis	Benton County Agricultural Zoning	Benton County Health Department	Agriculture and Food	Local	Government Agency	In Progress	
Oregon	Benton County	Benton Accessory Dwelling Units	Benton County Health Department	Housing	County	Government Agency	Complete	An HIA that evaluated a series of policy options to amend an existing county code for Accessory Dwelling Units (ADUs) in Benton County, Oregon. ADUs are small, self-contained, residential units that are built on the same lot" and are secondary" an existing single-family home.
Oregon	Portland	I-5 Columbia River Crossing	Multnomah County Health Department	Transportation	State	Government Agency	Complete	An HIA that examined the health impacts of proposed alternatives for a renovation and expansion of the interstate 5 Columbia River crossing between Oregon and Washington. It aimed to inform a larger environmental impact statement (EIS) process for the bridge expansion.
Oregon	Portland	Intertwine	Metro Regional Government	Transportation	Regional	Government Agency	In Progress	

Oregon		Oregon Farm to School Legislation	Upstream Public Health	Agriculture and Food	State	Non-profit Organization	Complete	An HIA of proposed legislation in Oregon that would provide state funds to purchase locally-grown foods for schools and set up school teaching gardens.
Oregon		Oregon Vehicle Miles Traveled Legislation	Upstream Public Health, Northwest Health Foundation	Transportation	State	Non-profit Organization	Complete	An HIA that targeted proposed state legislation designed to reduce car use and ultimately meet greenhouse gas emission targets to help curb global warming.
Oregon		Oregon Wind Energy	Oregon Health Authority, Office of Environmental Health	Natural Resources and Energy	State	Government Agency	In Progress	An HIA by the Oregon Health Authority that will examine the potential health impacts of siting wind energy facilities in Eastern Oregon.
Oregon	Portland	Portland to Lake Oswego Transit Project	Oregon Public Health Institute, U.S. Centers for Disease Control and Prevention, National Network of Public Health Institutes	Transportation	Regional	Non-profit Organization	Complete	An HIA was done in conjunction with an environmental impact statement examining transit alternatives (e.g., light rail, enhanced bus service or no transportation improvements) for a new proposed public transit corridor in Portland, Oregon.
Oregon		School Biomass Boilers	Oregon Health Authority, Office of Environmental Health	Natural Resources and Energy	State	Government Agency	Complete	An HIA that addressed the implementation of a new Oregon policy that allows school districts around the state to convert their heating systems to boilers that burn wood chips or pellets.
Oregon	Portland	SE 122nd Ave Pilot Project/East Portland	Oregon Public Health Institute; National Network of Public Health Institutes/CDC; Northwest Health Foundation;	Built Environment	Local	Non-profit Organization	In Progress	This HIA is being done by the Oregon Public Health Institute to inform the City of Portland Bureau of Planning and Sustainability's area plan for a neighborhood or Portland. The HIA will address how the plan would

			Portland Bureau of Planning and Sustainability					affect opportunities for physical activity, access to healthful foods, traffic safety, air quality, and community cohesion.
Oregon	Portland	Sellwood Bridge HIA	Multnomah County Health Department	Built Environment	Regional	Government Agency	Complete	An HIA by the Multnomah County Health Department addressing the proposed Sellwood Bridge Replacement project.
Oregon	Eugene	Transportation Policy Recommendations in the Eugene Climate and Energy Action Plan	Upstream Public Health; City of Eugene; Lane County Health Department; Oregon Public Health Institute	Climate Change	Local	Non-profit Organization	Complete	An HIA that explores seven transportation recommendations made in the Eugene Climate and Energy Action Plan (CEAP) and looks at the health impacts of each policy as it relates to physical activity, air pollution and collisions.
Oregon	Tumalo	Tumalo Community Plan	Deschutes County Health Department	Built Environment	County	Government Agency	Complete	An HIA that explored the health implications of policies proposed within a community plan update for Tumalo, Oregon. The Tumalo Community Plan (TCP) was one small part of a larger, comprehensive 20-year plan update for Deschutes County.
Pennsylvania	Philadelphia	SugarHouse Casino	Center for Health Equity, Drexel University School of Public Health	Gambling	Local	Educational Institution	Complete	An HIA that was conducted on the potential health impacts of a slot-machine casino under construction in a residential area of Philadelphia.
South Carolina	Spartanburg	Daniel Morgan Avenue Road Diet	South Carolina Department of Health & Environmental Control, South Carolina Public Health Institute, Spartanburg Area	Built Environment	Local	Government Agency	In Progress	This HIA will inform decisions on a proposed road diet and restriping of sections of a downtown road.

			Transportation Study, Partners for Active Living					
Tennessee	Knox County	Knox County Health Department Community Garden	Knox County Health Department; Healthy Kids Healthy Communities Coalition	Built Environment	County	Government Agency	Complete	An HIA related to the placement and maintenance of community gardens
Tennessee	Nashville	Nashville Northwest Corridor Transit	Nashville Area Metropolitan Planning Organization	Transportation	Regional	Government Agency	Complete	An HIA focused on the planning and design of the transit-oriented development in Madison, Tennessee.
Texas	Galveston	Replacing Public Housing Units Destroyed by Hurricane Ike	The Georgia Health Policy Center and Department of Sociology at Georgia State University	Housing	Local	Educational Institution	In Progress	An HIA to provide recommendations on the siting and upgrading of public housing to replace units that were destroyed by Hurricane Ike. (Supported by funding from The Kresge Foundation.)
Texas	San Antonio	Southern Edwards Plateau Habitat Conservation Plan	San Antonio Metropolitan Health District	Natural Resources and Energy	County	Government Agency	In Progress	To inform the implementation of a habitat conservation plan.
Texas	Houston	Houston Transit Oriented Development	Texas Southern University, Houston Tomorrow, Baylor College of Medicine	Built Environment	Local	Educational Institution	In Progress	An HIA to examine the health impacts of possible development patterns that could occur in the neighborhood near a planned station on a 30-mile, five-corridor light rail expansion.

Texas	Austin	School Siting Policies	University of Texas at Austin Southwest Region University Transportation Center, and CDC Division of Nutrition and Physical Activity	Education	Local	Educational Institution	In Progress	An HIA that will address the health implications of choices regarding where to site and build schools, with a focus on how school siting affects whether children walk, bike, or use motorized transportation to get to school.
Virginia	Richmond	HIA of a Poultry Litter-Fired Power Plant	Virginia Commonwealth University Center on Human Needs Organization	Natural Resources and Energy	Local	Educational Institution	In Progress	An HIA to inform the zoning and permitting decisions associated with a proposal to build a poultry litter-fired power plant as part of Virginia's federally-mandated plan to reduce water pollution in the Chesapeake Bay watershed.
Washington	Seattle	Lower Duwamish Waterway Superfund Site HIA	University of Washington School of Public Health; Duwamish River Cleanup Coalition/Technical Advisory Group; Just Health Action	Natural Resources and Energy	Federal	Educational Institution	In Progress	An HIA to inform decisions related to the proposed cleanup of the Lower Duwamish Waterway Superfund site.
Washington	Spokane	Division Street Gateway	Spokane Regional Health District	Built Environment	Local	Government Agency	In Progress	An HIA on a redevelopment plan of Division Street, an area along the I-90 freeway that runs through the heart of downtown Spokane.
Washington	Vancouver	Vancouver Comprehensive Plan Revision	Clark County Public Health	Built Environment	Local	Government Agency	Complete	An HIA on the potential impacts of proposed revisions to the Vancouver, Washington Comprehensive Plan.
Washington	Clark County	Clark County Bicycle and Pedestrian Master Plan	Clark County Public Health	Built Environment	County	Government Agency	Complete	An HIA that addressed the health implications of the Clark County Bicycle and Pedestrian Master Plan.

Washington	Clark County	Clark County Highway 99 Sub-Area Plan	Clark County Public Health	Transportation	County	Government Agency	Complete	An HIA that addressed the health implications of the Sub-Area Plan to revitalize neighborhoods along Highway 99 in Clark County, Washington.
Washington	Seattle and King County	State Route 520 Bridge	Public Health - Seattle & King County, Puget Sound Clean Air Agency	Transportation	County	Government Agency	Complete	The Seattle & King County Public Health Department and the Puget Sound Clean Air Agency worked together to evaluate the health impacts of the SR 520 Replacement Bridge and HOV Project. Some of the pathways and health issues explored included air quality, carbon emissions, traffic injury and opportunities for physical activity.
Wisconsin	LaCrosse County	LaCrosse County Open Air Burning	Wisconsin Department of Health Services	Natural Resources and Energy	Undetermined	Government Agency	In Progress	
Wisconsin	Madison County	Marathon County Alcohol Density	Wisconsin Department of Health Services	Built Environment	Undetermined	Government Agency	In Progress	
Wisconsin	Rock County	Rock County CAFO	Wisconsin Department of Health Services	Agriculture and Food	Undetermined	Government Agency	In Progress	

Appendix C.1: TAC Questionnaire 1

About This Questionnaire

You have received this questionnaire because you are a member of the Technical Advisory Committee (TAC) for the Florida Department of Health's Study on Health Impact Assessment (HIA) in Florida. On behalf of the Florida Department of Health and the Department of Urban and Regional Planning at the University of Florida, we request your participation in the following questionnaire. This questionnaire will be used to inform the study of best practices in HIA, and its use in Florida. The questions will review your experience within the field of study touching on concepts such as health, Health Impact Assessment, sustainability, levels of HIA, steps or phases in the HIA process, transparency, and quality of life. Your responses will contribute to our understanding of various aspects of the use of HIA.

The questionnaire will be distributed through Survey Monkey and should take no more than 15 minutes. The project team members will be the only individuals with access to your survey, which will be kept locked in our research office. If at any point the questions being asked make you uncomfortable, you may choose to pass on the question or discontinue your participation in the questionnaire at any time. Your responses will be kept confidential to the extent provided by law.

If you have any questions about this research study, please contact me, Ruth Steiner by email at rsteiner@dcp.ufl.edu or by phone at 3523920997 x 431. To learn more about your rights in this study, please contact the UF Institutional Review Board Office at 3523920433.

Definitions used in HIA

1. In your opinion, which of the following definitions of HIA is most appropriate for Florida?

- 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. (National Research Council [NRC] 2011, 5).
- a combination of procedures, methods, and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program, or project on the health of a population & the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects. Adapted by the international association of impact assessment from the world health organization (Bhatia 2011, 1).
- a systematic process through which health hazards, risks and opportunities can be identified and addressed upstream in the development planning process, to avoid the transfer of these hidden costs and to promote multi-sectoral responsibility for health and wellbeing. Whereas, "costs" is defined in the form of an increased burden of disease and reduced wellbeing. (Quigley et al. 2006, 1)
- Other

If you answered "Other," please specify:

Participation in HIA Process

2. In your opinion, who should be represented among the stakeholders involved in the HIA process? (Check all that apply.)

- Public health
- Planning
- Environmental management
- Policy analysis
- Affected community
- Other (please specify)

3. How should public participation be incorporated into the HIA process?

4. Who should conduct HIA? (Check all that apply.)

- Local/county public health officials
- Urban planning professionals
- Regional health planning councils
- Public health advocates
- Nongovernmental organizations
- Educational institutions
- Local government agencies
- County government agencies
- State government agencies
- Federal government agencies
- Anybody who wants to
- Other (please specify)

Transparency in HIA Process

5. Transparency refers to the ability to easily identify, comprehend, and evaluate steps performed in an HIA. Some of the literature suggests that there is a lack of transparency in reporting the results of each step of the HIA. In your opinion, should we develop a standard for reporting each HIA step and process to ensure transparency?

- Yes
- No

6. Should each step in the process have standard criteria to report (e.g., health indicators to assess, contaminants identified and considered, benefits and risk identified, etc)?

- Yes
- No

Transparency in HIA Process

7. If yes, please list criteria to report for each step that will make the process more transparent.
Screening: (Check all that apply)

- Description of proposed policy, program, plan or project
- Timeline for decision and political and policy context
- Preliminary opinion on importance of proposal and opportunities for HIA to inform the decision
- State why the proposal was selected for screening
- Outlines of expected resource requirements to conduct HIA
- Provided recommendations on whether HIA is warranted

8. (Cont.) If yes, please list criteria to report for each step that will make the process more transparent:
Scoping: (Check all that apply)

- Identify pathways to be addressed
- Identify health effects to be addressed
- Identify affected populations
- Identify vulnerable groups
- Describe research questions
- Describe data sources
- Describe the analytic plan
- Identify data gaps
- Identify alternatives to the proposed action to be assessed
- Identify stakeholders and area of expertise
- Identify the role of stakeholders
- Formulate stakeholders' plan of engagement
- Summarize stakeholder engagement
- Identify issues raised by stakeholders
- Identify and describe responses to issues raised by stakeholders
- Identify who will be responsible to communicate findings and recommendations to decision makers
- Identify who will be responsible to communicate findings and recommendations to the public
- Identify who will be responsible to communicate findings and recommendations to the stakeholders

Transparency in HIA Process

9. (Cont.) If yes, please list criteria to report for each step that will make the process more transparent:
Assessment: (Check all that apply)

- Describe the baseline health status of affected populations
- Analyze and characterize beneficial and adverse health effects of the proposal
- Analyze and characterize beneficial and adverse health effects of each proposal alternative
- Describe data sources used
- Describe analytic methods used
- Document stakeholder engagement
- Integrate stakeholder engagement input into analyses
- Identify clearly the limitations and uncertainties of the analysis

10. (Cont.) If yes, please list criteria to report for each step that will make the process more transparent:
Recommendations: (Check all that apply)

- Identify alternatives to proposal or actions that could be taken to avoid, minimize, or mitigate adverse effects and to optimize ones
- Propose a health management plan to identify stakeholders who could implement recommendations, indicators for monitoring, and systems for verifications

11. (Cont.) If yes, please list criteria to report for each step that will make the process more transparent:
Reporting: (Check all that apply)

- Provide clear documentation of the proposal analyzed
- Provide clear documentation of the population affected
- Provide clear documentation of stakeholder engagement
- Provide clear documentation of data sources
- Provide clear documentation of analytic methods used
- Provide clear documentation of findings
- Provide clear documentation of recommendations
- Communicate findings and recommendations to decision-makers
- Communicate findings and recommendations to the public
- Communicate findings and recommendations to other stakeholders
- Communicate findings and recommendations in a form that can be integrated with other decision-making factors (technical, social, political, and economic)

12. (Cont.) If yes, please list criteria to report for each step that will make the process more transparent:
Monitoring and Evaluation: (Check all that apply)

- Document and track changes in health indicators
- Document and track changes in implementation of HIA recommendations
- Process Evaluation: Evaluate whether the HIA was conducted according to its plan and applicable standards
- Impact Evaluation: Document and evaluate impact evaluations, whether the HIA influence the decision-making process (impact evaluations)
- Outcome Evaluation: When practicable, document and evaluate whether implementation of the proposal changed health indicators.

Quality of Life and HIA

13. Should a Quality of Life (QoL) component be included in the HIA process?

- Yes
- No

14. If we were to use a QoL component, which of the following would you prefer as a measure or indicator of Quality of life:

- County Health Rankings
- QoL defined by affected population (may use social determinants of health for guidance)
- Other

If you answered "Other," please specify:

Quality of Life and HIA

15. What are the advantages of using County Health Rankings as a measure or indicator of Quality of Life?

16. What are the disadvantages using County Health Rankings as a measure or indicator of Quality of Life

Quality of Life and HIA

17. What are the advantages of allowing the affected population determine their own definition of Quality of Life?

18. What are the disadvantages of allowing the affected population determine their own definition of Quality of Life?

Quality of Life and HIA

19. (Optional) Do you have any general comments regarding the questions in this questionnaire or any additional questions of concern not addressed?

Appendix C. 2: TAC Questionnaire 2a

Florida TAC Members

You have received this questionnaire because you are a member of the Technical Advisory Committee (TAC) for the Florida Department of Health's Study on Health Impact Assessment (HIA) in Florida. On behalf of the Florida Department of Health and the Department of Urban and Regional Planning at the University of Florida we request your participation in the following questionnaire. This questionnaire will be used to gain insight of your organization's technical capacity and the ability to implement HIA in your organization's service territory. The questions will probe your perceptions regarding your affiliated organization technical capacity and the implementation of HIA and the HIA process.

The questionnaire will be distributed through Microsoft Word via email and should take no more than 15 minutes. The project team members will be the only individuals with access to your responses, which will be stored on a password protected computer. If at any point the questions being asked make you uncomfortable you may choose to pass on the question or discontinue your participation in the questionnaire at any time. Your responses will be kept confidential to the extent provided by law.

If you have any questions about this research study, please contact me, Ruth Steiner by email at rsteiner@dcp.ufl.edu or by phone at 352-392-0997 x 431. To learn more about your rights in this study, please contact the UF Institutional Review Board Office at 352-392-0433.

We want to thank you for participating in the May 24 TAC meeting. We feel the meeting went really well and there were a lot of good points brought up in the discussion. After taking into consideration all comments and discussion, we want to follow up and ask you some questions related to our discussion that we were not able to address due to time constrain. These questions probe your perceptions of how HIA fits into public health and planning practice in Florida.

1. How do you visualize HIA being implemented in your county/region?
2. Considering your institutional capacity, including funding, budgeting, staff, and other resources who are the key partners needed to perform HIA in your area?
3. Who should perform the HIA process within the service territory of your organization?
4. How much time can your agency commit to implement HIA?
5. What current funding sources do you have for HIA implementation?
6. What potential funding sources could your organization use (e.g., HUD Sustainable Communities Regional Planning Grant, TIGER grant, PEW/RWJF/ National Network of Public Health Institutes grants, etc) for HIA implementation?
7. How, if at all, would you expect the HIA process to differ because it is based on a plan, projects, policy, program, or project development?

8. What are some barriers for those who wish to implement HIA at the local or regional level?
9. How can existing assessment tools (e.g., PACE-EH, MAPP, ACHIEVE, CHANGE, EPHPS, PPHR) be integrated into the HIA process?
10. When considering the involvement of affected communities in the HIA process and the type of HIA conducted, projects and program seem to generate more community interest because of the perceived direct impacts to their community. Policy and plans appear to be less likely to generate public interest because their conceptual nature suggests that public participation may not play as much of prominent role in the HIA process for plans and policies as it would for programs and projects.
 - a) Should your organization use different methods of community engagement for different types of HIAs? If yes, how would the methods of community engagement differ between projects, plans, programs and policies? If no, explain.
 - b) Should your organization seek creative methods of community engagement before engaging communities in the HIA process?
 - c) How can your organization improve the affected community's enthusiasm to facilitate public participation during the following types of proposals?
 - i. Plans
 - ii. Policies
 - iii. Projects
 - iv. Programs

Appendix C.3: TAC Questionnaire 2b

National TAC Members

You have received this questionnaire because you are a member of the Technical Advisory Committee (TAC) for the Florida Department of Health's Study on Health Impact Assessment (HIA) in Florida. On behalf of the Florida Department of Health and the Department of Urban and Regional Planning at the University of Florida we request your participation in the following questionnaire. This questionnaire will be used to gain insight concerning best practices of implementing HIA and the HIA process. The questions will probe your perceptions of concepts such as the successful implementation of HIA, barriers to implementation, and degree of institutional capacity necessary to conduct HIA.

The questionnaire will be distributed through Microsoft Word via email and should take no more than 15 minutes. The project team members will be the only individuals with access to your responses, which will be on a password protected computer. If at any point the questions being asked make you uncomfortable you may choose to pass on the question or discontinue your participation in the questionnaire at any time. Your responses will be kept confidential to the extent provided by law.

If you have any questions about this research study, please contact me, Ruth Steiner by email at rsteiner@dcp.ufl.edu or by phone at 352-392-0997 x 431. To learn more about your rights in this study, please contact the UF Institutional Review Board Office at 352-392-0433.

We want to thank you for participating in the May 24 TAC meeting. We feel the meeting went really well and there were a lot of good points brought up in the discussion. After taking into consideration all comments and discussion, we want to follow up and ask you some questions related to our discussion that we were not able to address due to time constraints. These questions will probe your perceptions of how HIA fit into public health and planning practices.

1. What are some of the most successful ways of implementing the HIA process at various levels of government? If possible, please provide specific examples.
2. Is there an optimal size of region that works best for implementing the HIA process? When is a region too large that regional coordination is no longer effective? When is a region too small to have enough institutional capacity?
3. In areas that have successfully utilized the HIA process, what key partners (e.g., public health agencies, planning agencies, non-profit organizations, and education institutions) are involved?
4. Who has provided the most leadership when advocating the HIA process (e.g., citizen activists, planners, public health professionals, local, county, or state levels, or others)?
5. Traditionally, what has been the time commitments associated with training for HIA?
6. What type of training is recommended before a team can conduct an HIA?
7. What are the most common barriers to implementing HIA? How do these barriers vary according to governmental level—local, county, regional, state?

8. Can existing assessment tools be incorporated into the HIA process? If so, how could Florida do this?

9. When considering the affected communities' involvement in the HIA process and the type of HIA to conduct, projects and program seem to generate more community interest because of the perceived direct impacts to their community. Policy and plans are less likely to generate public interest because of their conceptual nature. This suggests that public participation may not play as prominent a role in the HIA process for plans and policies as it would for programs and projects.
 - a) What are the most successful forms of community engagement that you have seen for the HIA process? How have these methods differed between projects, plans, programs and policies?

 - b) Should organizations seek creative methods of community engagement before engaging communities in the HIA process?