

Health Impact Assessment Training

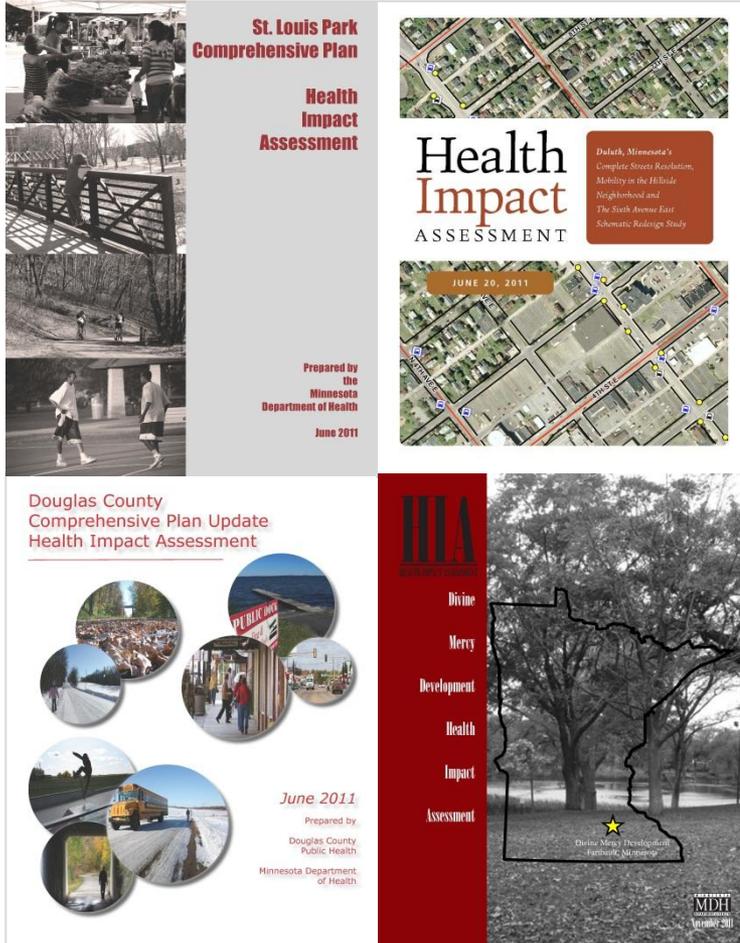
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February 19th, 2013
Grass Dale Center at Fort DuPont, Delaware



MDH HIA Experience



- Provided HIA trainings
- Provided mini grants & technical assistance for St. Louis County 6th Ave Redesign and Douglas County Comprehensive Plan Update
- Serve on technical team/advisory committee: Healthy Corridor for All and Bottineau HIA
- Completed HIAs: St. Louis Park Comprehensive Plan and Divine Mercy Development EAW
- Funded by 2009 ASTHO grant & 2010 CDC grant & 2012 ASTHO grant

<http://www.health.state.mn.us/divs/hia/>

Agenda

9:00 –10:00 AM	Introduction of trainers Review of Agenda Learning Objectives
	Introduction to HIA Overview of the Six Steps Step 1: Screening
10:00 – 10:10 AM	Break
10:10–11:10 AM	Step 2: Scoping Scoping Exercise
11:10 – 11:20 AM	Break
11:20 – 12:20 PM	Step 3: Assessment Step 4: Recommendations Step 5: Reporting Step 6: Monitoring and Evaluation
12:20 – 12:30 PM	Training evaluation

Agenda

1:00 – 2:00 PM	Introduction of trainers Review of Agenda Learning Objectives
	Introduction to HIA Overview of the Six Steps Step 1: Screening
2:00 – 2:10 PM	Break
2:10–3:10 PM	Step 2: Scoping Scoping Exercise
3:10 – 3:20 PM	Break
3:20 – 4:20 PM	Step 3: Assessment Step 4: Recommendations Step 5: Reporting Step 6: Monitoring and Evaluation
4:20PM – 4:30 PM	Training evaluation

Learning Objectives

- The purpose of an HIA: to provide health information to decision-makers before important decisions are made, so they can make a more informed decision
- Six HIA steps and HIA process

What is health?



➔ Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Source: World Health Organization (WHO)

This definition has not been amended since 1948

Health Determinants



Health status is determined by: 30% by genetics; only 10% by health care; but **60% by social & environmental conditions, and behavior**

Source: N Engl J Med 2007;357:1221-8.

Health Impact Assessment (HIA)

- Definition: 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, Improving Health in the United States: The Role of Health Impact Assessment, 2011.*

Values of Health Impact Assessment

- HIA aims to advance the values of
 - democracy
 - equity
 - sustainable development
 - the ethical use of evidence
 - a comprehensive approach to health
- North American HIA Practice Standards Working Group (Bhatia R, Branscomb J, Farhang L, Lee M, Orenstein M, Richardson M). Minimum Elements and Practice Standards for Health Impact Assessment, Version 2. North American HIA Practice Standards Working Group. Oakland, CA: November 2010.

Why Conduct HIA?

- Identify harms and benefits before decisions are made
- Identify evidence-based strategies and recommendations to promote health and prevent disease
- Increase transparency in the policy decision-making process
- Support inclusive and democratic decision-making
- Support community engagement in the decision-making process
- Advance equity and justice
- Shift decision-making from an *economic* to a *quality of life* framework
- Inform a discussion of trade-offs involved with a project or policy
- Facilitate decisions and their implementation

HIA in the U.S.



Source: Health Impact Project

<http://www.healthimpactproject.org/>

Policy HIA Example

HIA of Los Angeles' Living Wage Ordinance

- Quantitative estimate of potential mortality reduction from proposed ordinance to raise minimum wage for city contract workers or provide them with health insurance
- Findings: Employers are more likely to increase wages than to offer health insurance, thereby losing much of health benefit intended by ordinance
- Funded by Robert Wood Johnson Foundation

Community Design HIA Example

HIA of Housing Redevelopment Projects San Francisco

- Assessment of health impacts in two housing redevelopment projects and one area plan
- Qualitative review of Environmental Impact Report, community engagement, secondary data analysis
- Findings: Impacts on housing affordability, vehicle commutes, displacement of residents, segregation, and public infrastructure
- HIA analyses led to improvements in project plans
- Funded & conducted by city public health department

HIA at the National Level

- Two *major* national funders
 - Centers for Disease Control & Prevention (CDC) (6 grantees| ASTHO-grantees, training, TA)
 - Health Impact Project (PEW and RWJF)
 - Other (Local/state public health departments, non-profits, private foundations, NACCHO, Alaska)
- SOPHIA (Society of Practitioners of HIA)
- Two conferences:
 - HIA of the Americas Workshop (March 11 & 12- Oakland)
 - National Health Impact Assessment Meeting (September 24 & 25, WDC)

Types of HIAs

Upstream Public Health, Portland, OR
 Modified from Harris et al, 2007, Health impact assessment: A practical guide, Centre for Health Equity, Training, Research and Evaluation (CHETRE), Part of the UNSW Research Centre for Primary Health Care and Equity, UNSW
http://www.hiaconnect.edu.au/hia_a_practical_guide.htm

Type	Desk Based	Rapid	Intermediate	Comprehensive
Time & Staff	2-6 weeks, 1 full time person	6-12 weeks, 1 full time person	12 weeks – 6 mo's, 1 full time person +	6 – 12 mo's, 1 full time person +
Health Impacts Review	Broad overview	More detailed overview	Thorough assessment of select pathways	Comprehensive assessment
Use	Time & resources limited	Time & resources limited	Requires significant time & resources	Requires significant time & resources
Methods	Collect & analyze accessible data	Collect & analyze existing data with limited expert input	Collect & analyze existing data, gather qualitative data from stakeholders	Collect & analyze data from multiple sources (qualitative and quantitative)
Fewer impacts ----->				More impacts

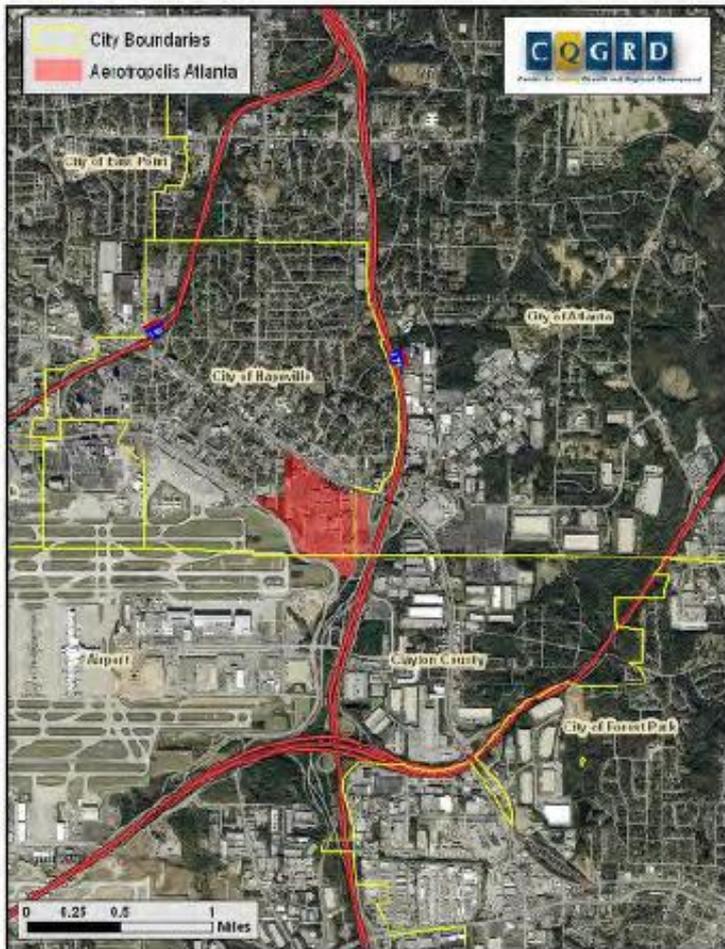
The HIA Process

➔ The six steps of HIA

Six Steps of HIA

1. **Screening** - to determine if an HIA is useful for a specific project or policy
2. **Scoping** - identify which health effects to consider
3. **Assessment** - determine which people may be affected and how they may be affected
4. **Recommendations** - suggest changes to proposal to promote positive or mitigate adverse health effects
5. **Reporting** - present the results to decision-makers
6. **Monitoring and evaluating** - determine the affect of the HIA on the decision process

Example project: Aerotropolis



- Ford Motor Company's first post-war modern assembly plant: 1947 –2006
- Opportunity for “smart growth”: redevelop the brownfield site into a mixed-use property containing office, retail, entertainment, and hotel components.
- Aerotropolis concept – “an aviation-intensive, amenity-laden business district that includes corporate headquarters, general office, restaurants and retail space, hotels and airport parking” — hopes to serve as a catalyst for attracting global companies to the Hapeville area

Getting Started with the HIA Process

Taking your first step.....

the Screening Process

Step 1: Screening

What is HIA Screening?

The Screening process helps determine if:

- ... the HIA is feasible
 - Is there sufficient information about the decision?
 - Is there available resources/data to conduct the HIA?
- ... the HIA can be done in a timely manner
 - Can the HIA fit within the decision-making time frame?
- ... the HIA would add value to the decision making process
 - Is health already at the table?
 - Will the proposed project benefit from an HIA and promote health and influence positive change to the community?

Screening: When not to do an HIA

- No added value
 - Chula Vista Plan to Improve Walkability
 - Plan was already considering health
 - Health advocates involved in design
 - Resources better focused elsewhere

- No influence on decision
 - Milwaukee Zoo Interchange Project
 - Time: insufficient time to complete HIA for drafts
 - Stakeholders: DOT was not open to considering health (recommendations seen as another obstacle or more red tape)

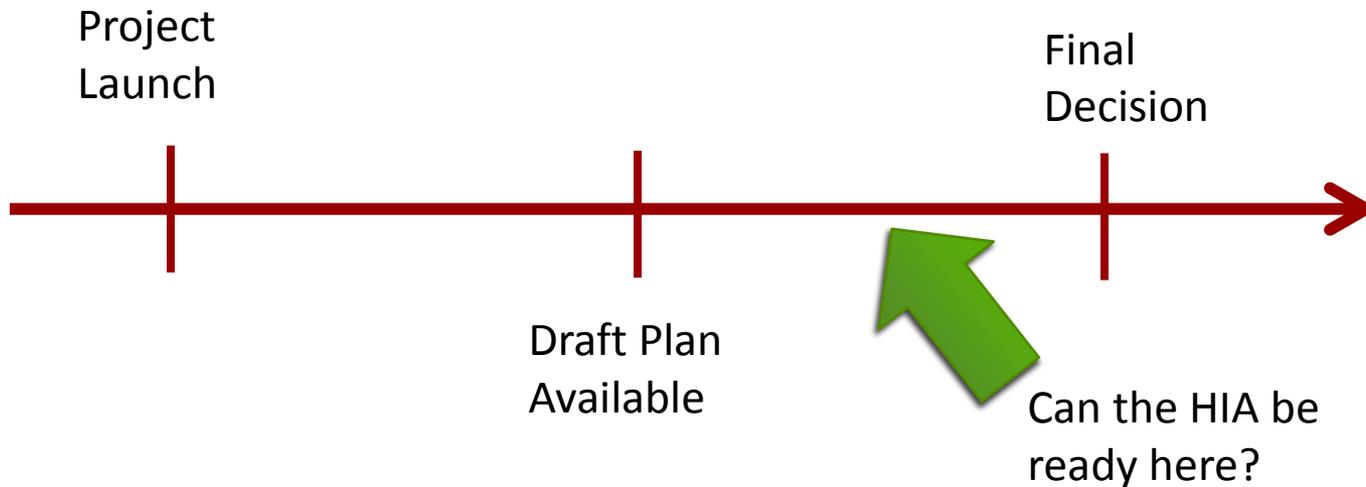
Concerns about HIA

Concern	Response
HIA is costly	Not as costly as treatment of health impacts in the long run
HIA is time-consuming and will slow decision-making process	Conducting the HIA early will bring issues to the front of the decision-making process, potentially speeding approval processes, and preventing costly litigation that delays projects
HIA will stop economic development	The role of HIA is to identify mitigations and recommendations, not to say “don’t do that”
HIA is not scientific	Role of HIA is to pull together disparate pieces of the best available evidence to make a broad statement about impacts

HIA Screening: Getting Started

How to start the screening process:

1. Define the decision
 - What is being proposed?
 - What is the timeline for the decision?



HIA Screening: Engaging Stakeholders

2. Decide who will be involved in the screening process

- Identify the stakeholders (i.e., residents, business owners, regional agencies, local organizations, elected officials)

3. Determine if potential partners are ready to work on the HIA

- Do they have the resources available to conduct an HIA?



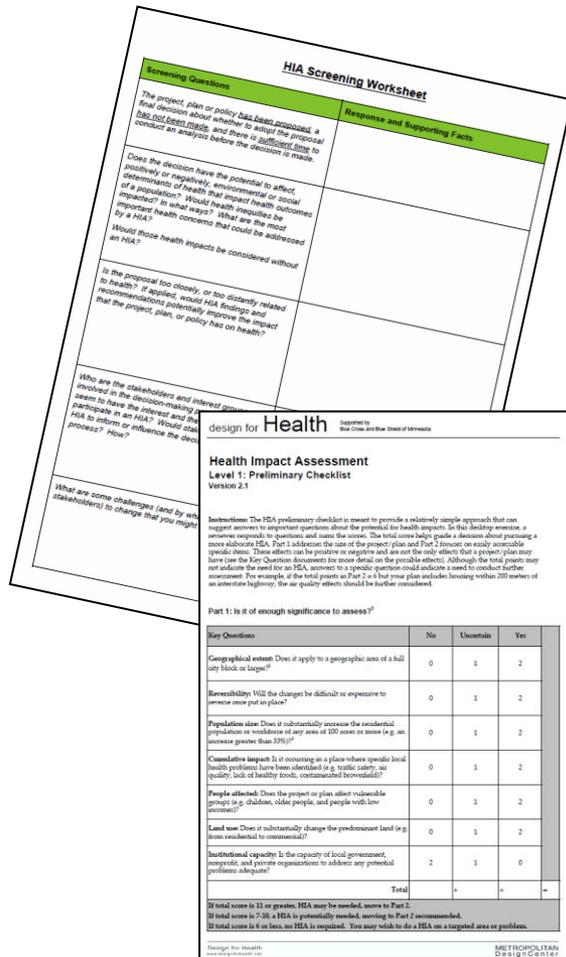
HIA Screening: Screening Criteria

4. Evaluate the program, plan, or policy based on screening criteria (including will the program have a significant impact on health or potential for unequally distributed impacts?)

Utilize a Screening Worksheet or a Checklist

➔ There are a number of worksheets to choose from

➔ Use the worksheet that best meets your needs



** Example screening worksheet is included in your handouts*

HIA Screening: Example

AEROTROPOLIS



- 122-acre site: 3 million square feet of office, hotel, shopping and airport parking facilities; solar energy component
- Brownfield site that had undergone remediation for potential contaminants
- Potential health impacts from: active living, injury, air quality, social capital, crime, access, noise and gentrification.
- Sufficient time, expertise and stakeholder interest/capacity

HIA Screening

The Final & Essential Screening Task

1. Define the decision and its alternatives
2. Decide who will be involved in the screening process
3. Determine if potential partners are ready to work on the HIA
4. Evaluate the project plan, or policy based on screening criteria

5. Notify stakeholders of your decision

➔ Will you be conducting an HIA?

Step 2: Scoping



Two Main Goals:

1. Create the plan for the HIA
2. Determine health indicators to be assessed

**Health issues that
will be assessed**

Scoping: Create the Plan for the HIA



Determine:

- ➔ Team responsible for conducting the HIA
- ➔ Group who will oversee the HIA process

Scoping: Create the Plan for the HIA



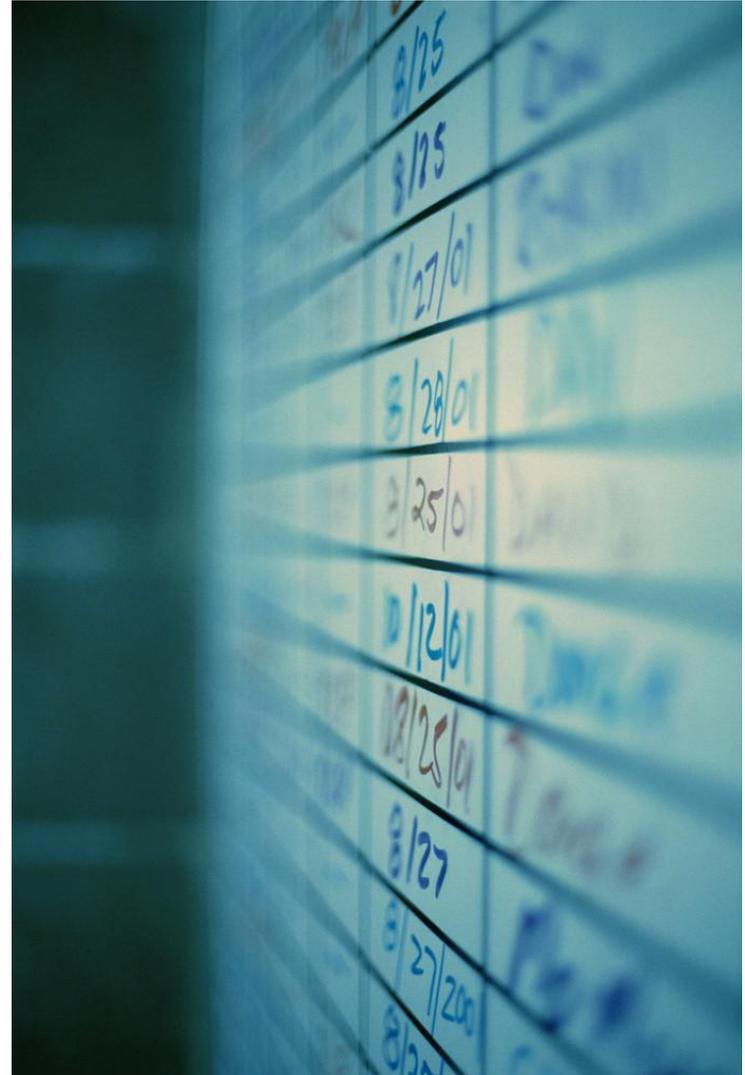
How should stakeholders and the affected communities be involved?

- Advisory Committee
- Steering Committee
- Technical Committee
- Public meetings
- Small group discussions

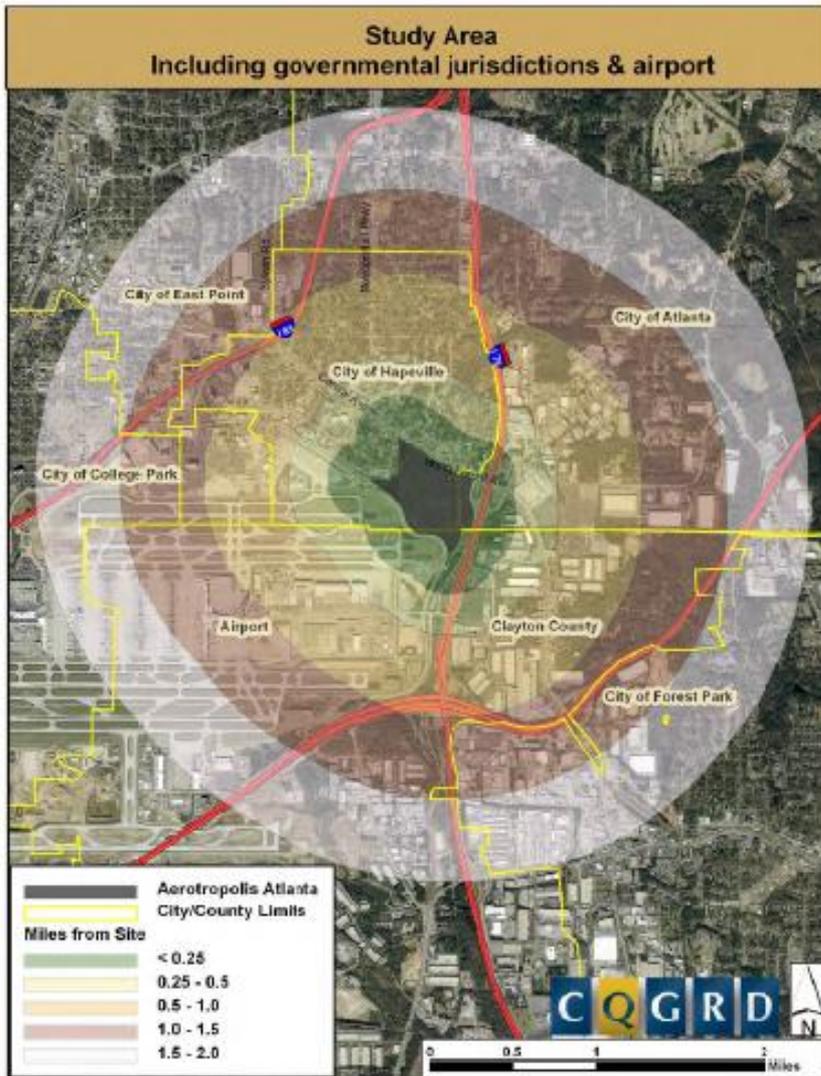
Scoping: Create the Plan for the HIA

First meeting(s):

- Discuss HIA plan, timeline and the decision and alternatives
- Ground rules
- Goals of HIA & screening
- Communications plan—is everyone at the table?
- Geographic area
- Population(s) and subpopulations to be studied



Example Scoping: Aerotropolis



Scoping

- Determined HIA study area:
 - The two mile area measured by air line, or “as the crow flies” from the boundaries of the Aerotropolis Atlanta Redevelopment Project.
- Determined study population:
 - Health and demographic data, which was only obtained at the Census tract level and includes all Census tracts that fall partly or entirely within the two mile buffer

Scoping continued . . .



Health issues that
will be assessed

Scoping* next meetings:

- Examine the range of possible health issues
- Discuss pathways
- Come to agreement on priority health issues
- Determine research questions, data sources & methods⁺

*scoping flows into assessment

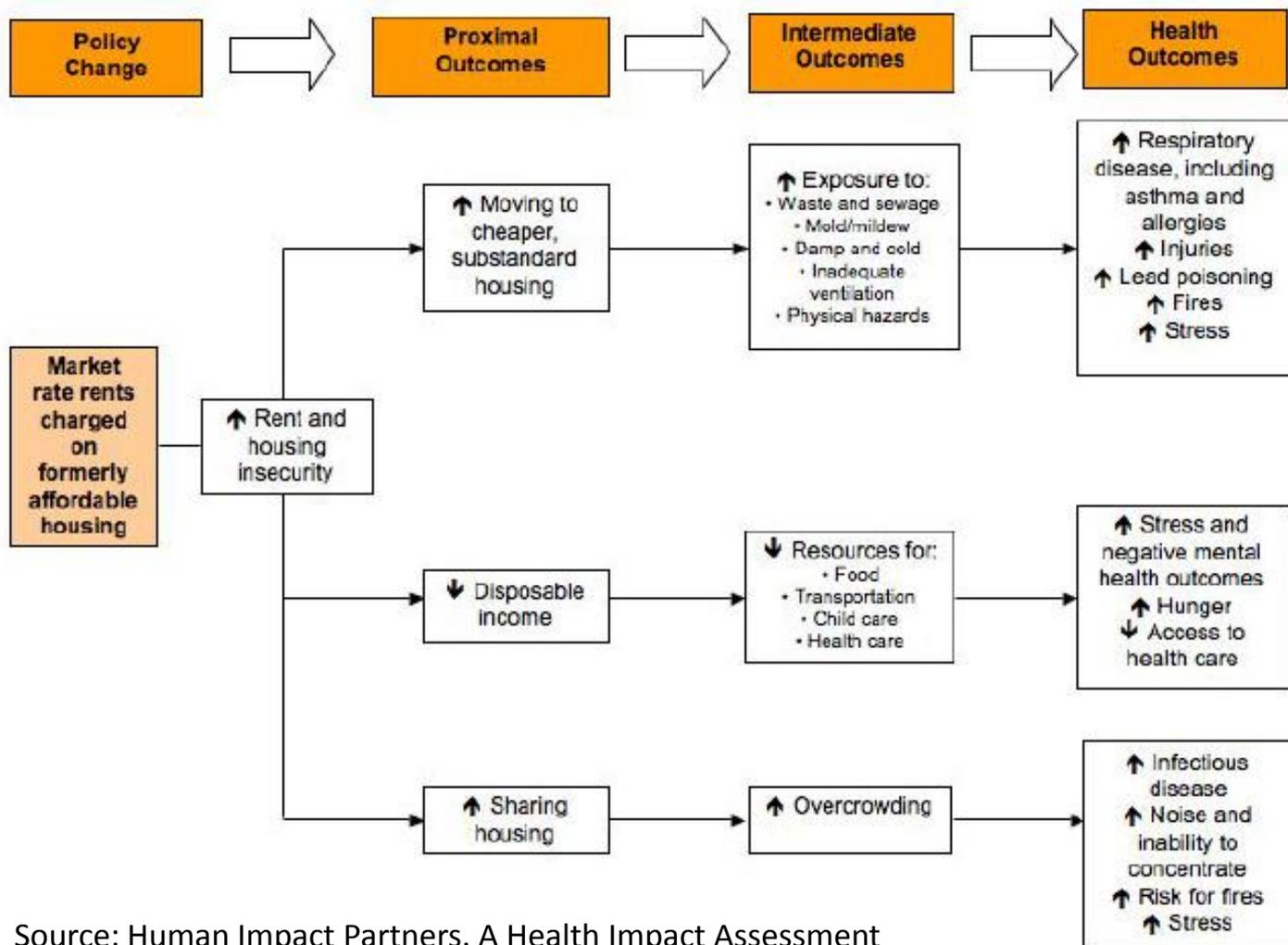
⁺data sources & methods-discussed in assessment

Example: Aerotropolis Scoping

Table 3: Dot Ranking of Potential Impacts by Advisory Committee

Impact Sub-category	Impact Category	Votes
Property Values	Social and Environmental Sustainability	12
Access to Goods and Services	Equity and Access	10
City Services	Added by Committee	9
Unintentional Injury - Traffic & Transportation	Injury	8
Connectivity	Equity and Access	8
Employment & Income	Equity and Access	7
Crime/Security	Injury	6
Accessibility	Equity and Access	6
Physical Activity	Physical Activity	5
Community Character	Social and Environmental Sustainability	5
Noise/Airport	Environment	3
Emotional Wellbeing	Equity and Access	3
Education	Added by Committee	3
Air Quality	Environment	2
Water/Stormwater	Environment	2
Waste Water	Added by Committee	2
Brownfield Redevelopment	Environment	1
Community Interaction	Social and Environmental Sustainability	1
Healthy Food	Added by Committee	1
Microclimate	Added by Committee	0

Scoping – Pathways: Housing Policy Change



Source: Human Impact Partners. A Health Impact Assessment Toolkit: A Handbook to Conducting HIA, 3rd Edition. February 2011.

Scoping: Housing Policy Change

Determining research questions/health indicators and data sources

Ex: Housing policy change

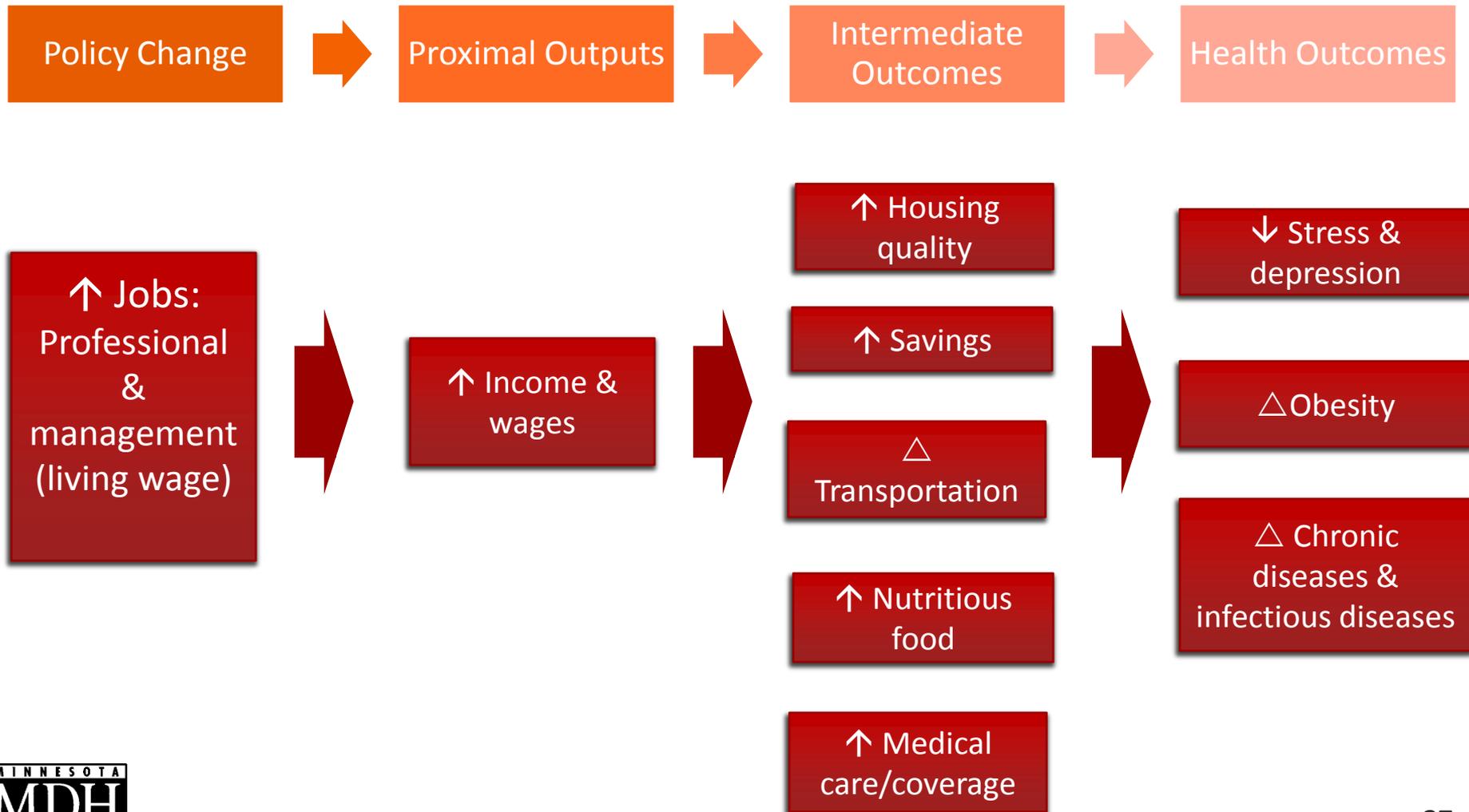
➤ Research question:

- Does the current housing stock provide for the housing needs of current residents?

➤ Health indicators:

- Percentage of affordable units?
- Percentage of people living below the poverty line?
- Percentage of residents that are paying more than 30% of their income on housing?

Scoping - Pathway: Increase in Jobs



Scoping: Increase in Jobs

Determining research questions and health indicators

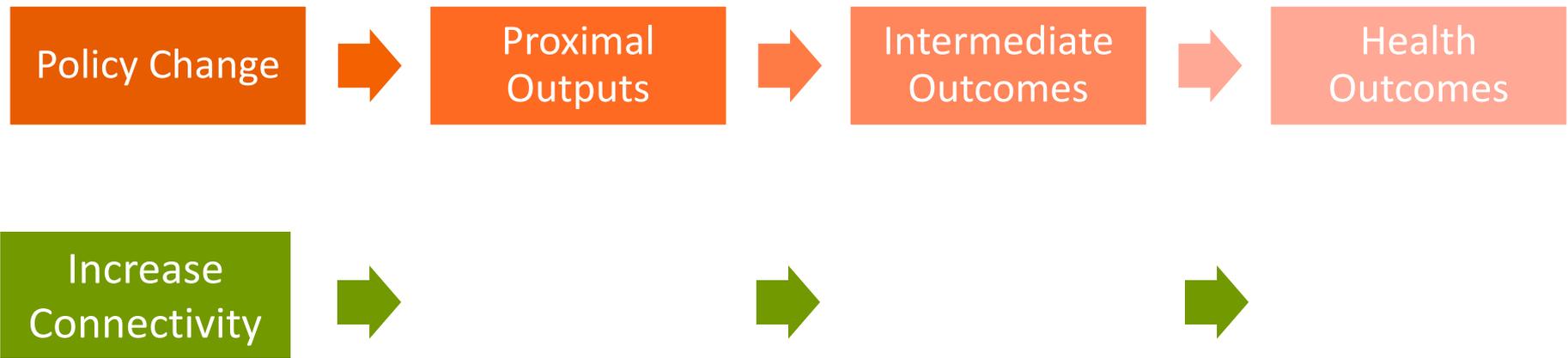
Example: Increase in Jobs

- Research question:
 - What are the possible wages and terms of jobs to be created [by Aerotropolis], relative to the area median income, education and local cost of living?

- Methods or data sources to answer research question:
 - Projected number of positions and salaries offered (from Development of Regional Impact report)
 - Compare baseline existing conditions with projections
 - Housing availability based on price (low-cost, moderately-priced and higher-priced) for the current and projected worker population

Scoping Exercise: Connectivity

- Pathway diagram: demonstrates the links between health determinants and outcomes



Scoping Exercise: Connectivity

Determining research questions and health indicators

Example: Connectivity

- Research question:
 - How might levels of physical activity be influenced by the directness and convenience of walking and cycling routes to and within Aerotropolis, and to nearby destinations?

- Methods or data sources to answer research question:
 - Block size
 - Intersection density
 - Presence of cul-de-sacs
 - Pedestrian infrastructure
 - Presence of barriers, such as Interstate highways and active railroads

Scoping

- Prioritize
 - Which health concerns will be included in the scope of the HIA?
- Prioritization Criteria
 - Health impacts with the greatest potential significance, magnitude, severity, certainty, permanence
 - Stakeholder/community priorities
 - Equity
 - Available resources: time, existing data/research, ability to collect new data for gaps in data/research

Aerotropolis—Scoping

- Multimodal transportation environments
 - Livable streets, distance to destinations, bicycle infrastructure
- Economic opportunities and services
 - Access to jobs, property values and tax revenue
- Community preservation and revitalization
 - Social connections, housing balance, public safety
- Environmental exposures
 - Transportation emissions, noise, brownfields

Step 3: Assessment



➔ Main goals:

1. Profile existing/
baseline conditions of
affected populations
2. Assess anticipated
health effects of
decisions

Where to begin? Gathering baseline data

- Existing population demographic data and health statistics (e.g., census data, BRFSS, etc.) (See handout)
- Literature review: research studies in peer-reviewed journals, grey literature (agency reports/studies), systematic reviews (the Community Guide), other HIA reports on similar topic
- Qualitative research (e.g., focus groups, key informant interviews)
- Maps (e.g., population characteristics, brownfields, schools, grocery stores, green spaces, etc.)

Assessment

- Key to Assess Both:
 - Overall population health
 - Inequalities in health outcomes among subpopulations or places

- *Aerotropolis study area v. state of Georgia:*
 - Lower educational levels
 - Higher percentage of black and Hispanic residents
 - Higher disability rates
 - Higher poverty rates

Example: Baseline Data

Percent of Deaths by Cause, Obstructive Heart Diseases (Heart Attack) by Census Tract, Clayton County, Fulton County, 1998-2007



Aerotropolis



Map Created: Sep 27, 2011

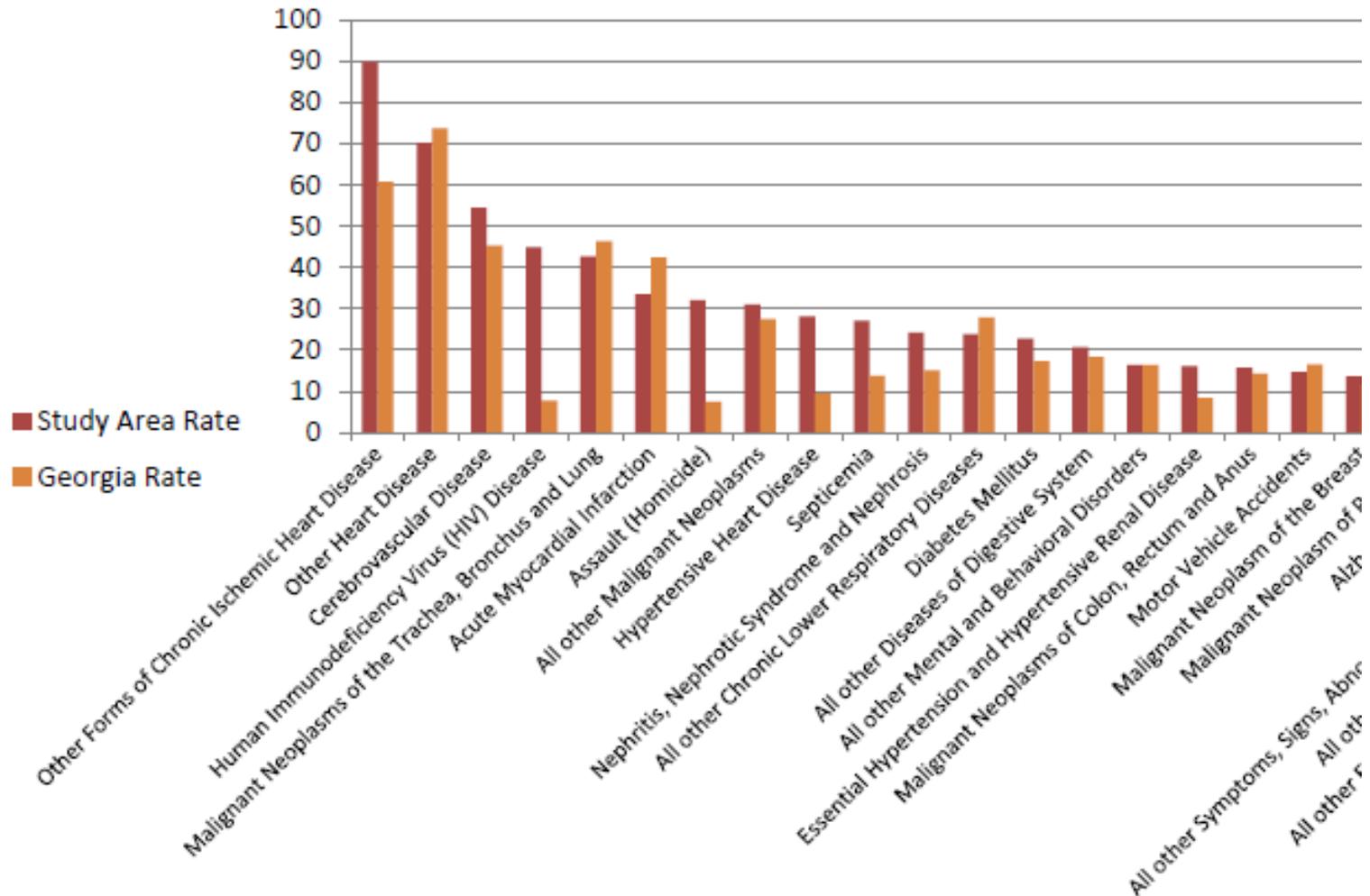
Note: This is a color map.

Data Classification Method: Quantiles.

OASIS Mapping Tool <http://oasis.state.ga.us>
Georgia Department of Public Health
Office of Health Indicators for Planning (OHIP)

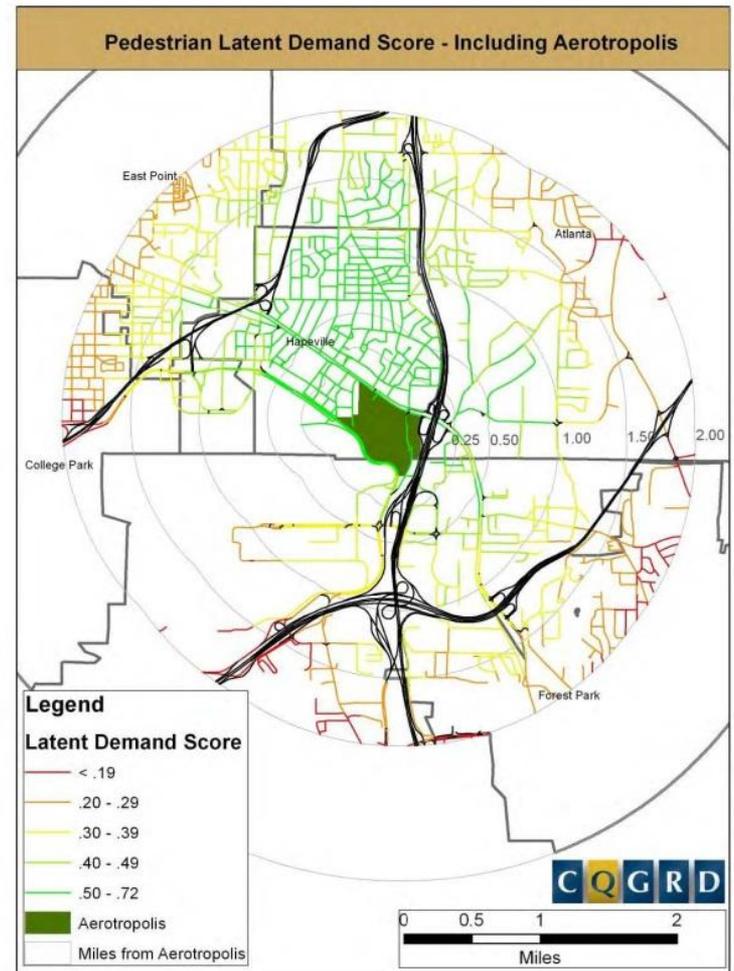
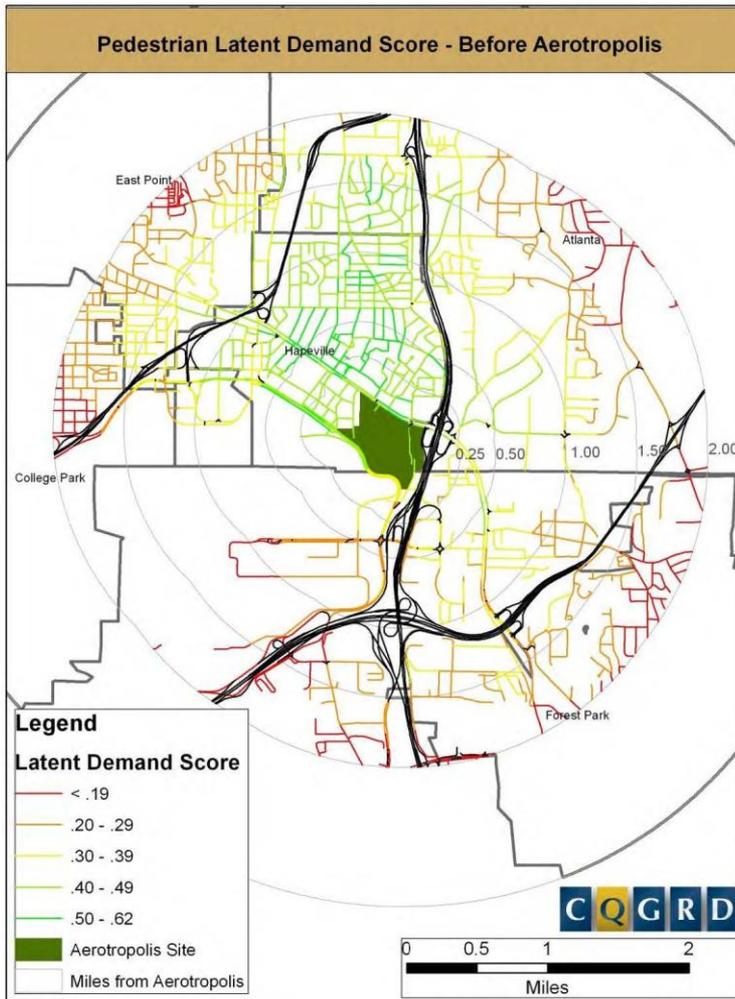
Example: Baseline Data

Death Rate/100,000 by Cause, Study Area vs. Georgia, 1998-2007



Assess anticipated health effects

Example: Pedestrian Latent Demand Score



Assessment: Mixing it all together



- Review baseline data
- Review scientific studies and literature
- Review causal pathways
- Review testimony and community input
- Review expert opinion, etc.

Assessment

- Analysis of health outcomes includes:
 - Direction of impact on health
 - Magnitude
 - Severity (may include permanence)
 - Likelihood
 - Distribution
 - Quality of evidence

Assessment: Example

Health Outcome/ Determinant	Impact (Direction and Extent)	Likelihood	Distribution	Quality of Evidence
Safe, Active, Multimodal Transportation Environments				
<ul style="list-style-type: none"> Physical activity 	▲▲▲▲	Very likely	Residents using non-auto mode share impacted more	***
<ul style="list-style-type: none"> Obesity 	▼▼▼	Likely	Residents of livable, walkable neighborhood impacted more	***
<ul style="list-style-type: none"> Cardiovascular diseases, diabetes and other chronic diseases 	▼▼	Possible	Residents of livable, walkable neighborhood impacted more	**
<ul style="list-style-type: none"> Mental health 	▲▲	Possible		**

Disclaimer: This summary was developed by MDH and does not represent the thoughts of the Aerotropolis HIA authors

Assessment



Summary of Potential Health Impacts

Health Outcome/ Determinant	Direction	Likelihood of Impact	Distribution of Impact	Quality of Evidence
Hazardous Gas and Particulate Emissions	▼	Possible	Dairy workers and residents living closest to site and manure application will be impacted the most	**
Nuisance Odors	▼	Likely	Residents living closest to site and manure application will be impacted the most	***
Groundwater Quality	▼	Possible	Residents near site with poorly constructed or shallow wells	*
Surface water Quality	▼▲	Possible	Recreational users of waterways, fish, wildlife	*
Economic Impact	▼▲	Likely	Local economy, property owners, local businesses and farmers	**
Traffic	▼	Likely	Motorists near intersection of HWY 14 and Scharine Rd.	***
Noise	▼	Likely	Residents in close proximity to site	***
Visual Impact	▼▲	Likely	Motorists on HWY 14 and Scharine Rd area residents	*
Insect Borne Disease	▼	Possible	Residents in close proximity to site	***



▼ = Negative impact

▲ = Positive impact

▼▲ = Both positive and negative impacts are possible

Literature Association – strength of studies associating health impact to large animal operations.

*** Many strong studies

** Few good studies

* No clear studies, but consistent with public health principles

Assessment: in theory

Assessment process in THEORY:

- Identify health issues/determinants
 - Describe the populations' current health
 - Assess how the proposal will affect health issues/determinants
 - Estimate change in populations' health

Assessment: in practice

Assessment process in PRACTICE

- Difficulty predicting changes to populations' health status
- Multiple interacting factors that could affect health
- Lack of data or empirical evidence

Assessment: Available resources

How will available resources impact the scope of assessment?

Least Resources



Most Resources

Review of available reports

Literature review

Analysis and mapping of existing data from the Census, public agencies, etc.

Expert opinion

Application of quantitative forecasting methods using existing studies

Interviews or focus groups

New quantitative data collection and analysis

Assessment: Key points

- You don't have to predict everything with absolute certainty
- Look at all the evidence available and make an informed judgment based on
 - analysis of data
 - expertise
 - experience
- There will not always be consensus on the predicted health effects of the project or policy
- There may not be consensus on how “strong” the evidence is

Validity of the Judgment

Validity of the Judgment

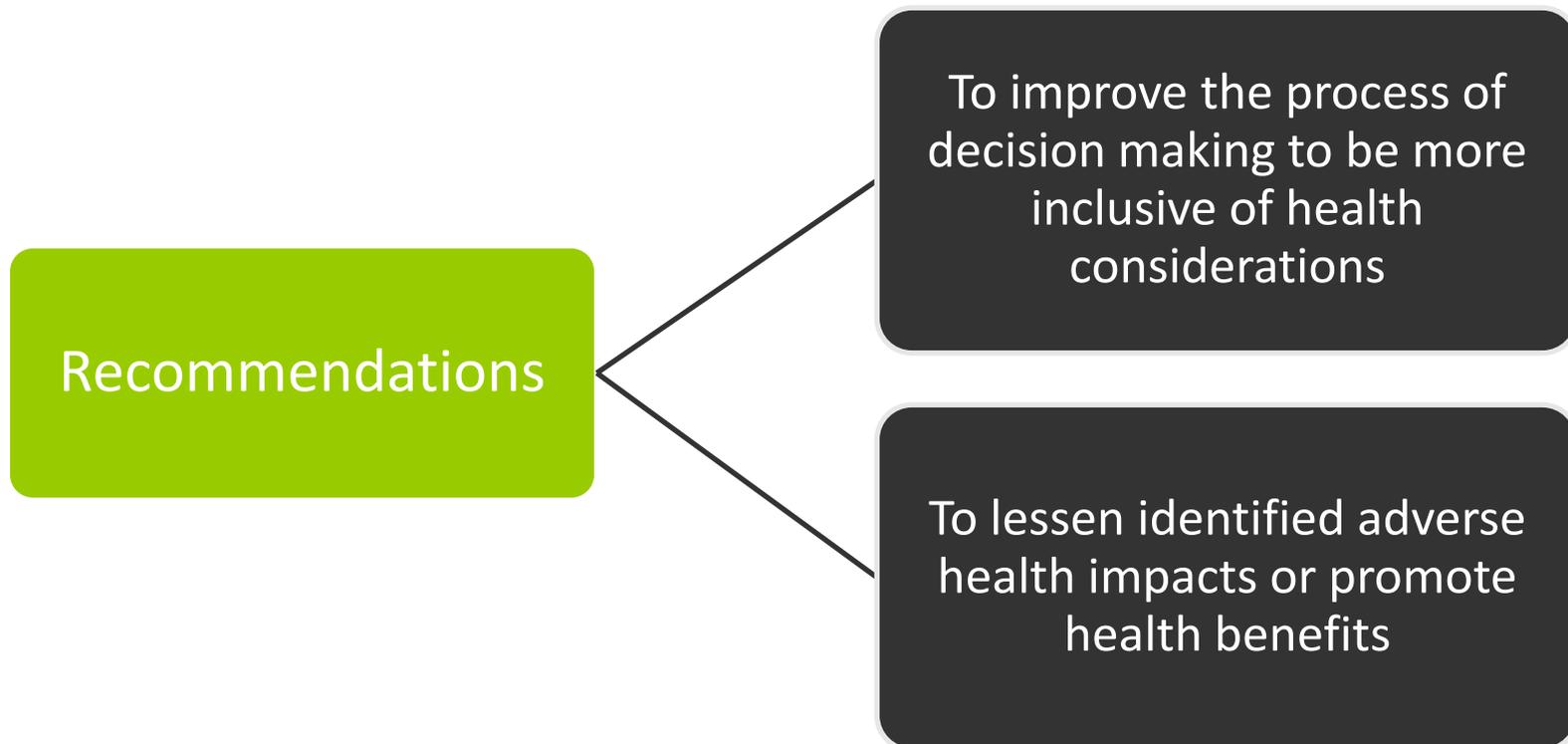
- **Key: Transparency**
- Explain the evidence
- Acknowledge assumptions and limitations
- Try not to make generalizations

Step 4: Recommendations

- Use results from assessment to develop recommendations and mitigations to address any negative health impacts and maximize health benefits
- Recommendations -- alternative ways to design a project, plan, or policy including its location or timing to benefit health
- Mitigations -- management strategies to lessen anticipated adverse health effects of a decision

Recommendations

- Recommendations can focus on Process and/or Outcomes

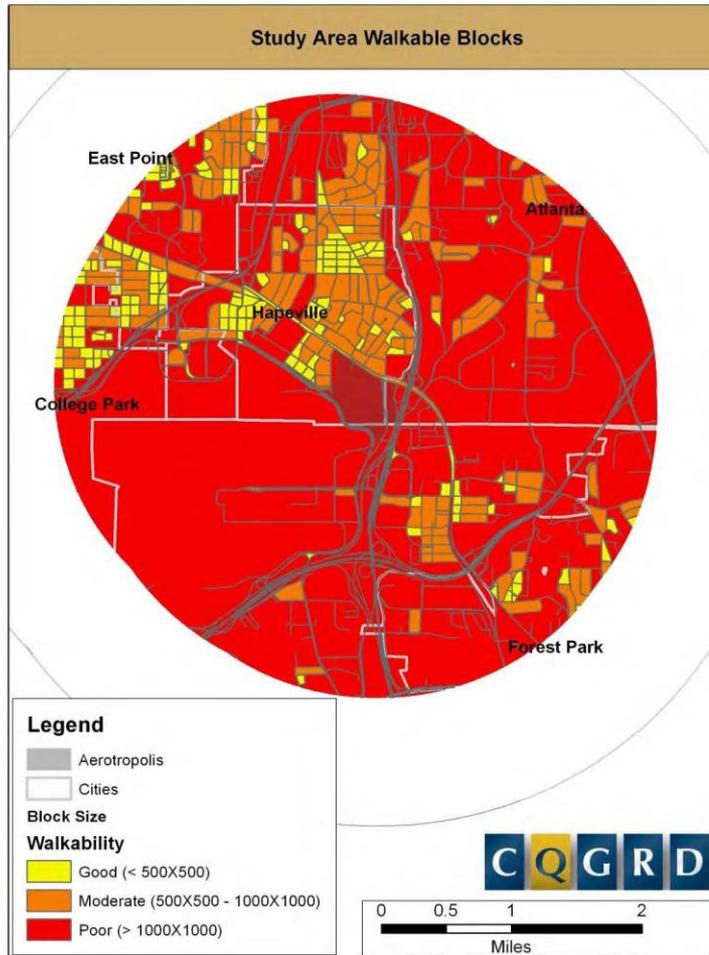


Source: Wisconsin Department of Health Services, *Health Impact Assessment: A Tool to Increase Health Equity in Decision-Making*, Great Lakes Intertribal Council, April 23, 2012

Recommendations

- Recommendations and mitigations should be:
 - Responsive to predicted impacts
 - Specific and actionable
 - Best practices or evidence-based
 - Experience-based and effective
 - Technically feasible
 - Politically feasible
 - Economically efficient

Recommendations: Example



- Encouraging walking & biking:
 - Connect Aerotropolis to downtown Hapeville and surrounding neighborhoods, and commercial and residential areas to the north, via continuous, safe, and pleasant walking routes
 - Pedestrian accommodations should be guided by an assessment of existing and future conditions in order to prioritize investments and match the appropriate facilities to land use and travel patterns
 - Provide guidelines for “furniture and planting zones”
 - A “Frontage zone” is recommended between sidewalk and adjacent structures
 - Sidewalks must be 5’ minimum. In mixed used areas-10’.

Recommendations: Example

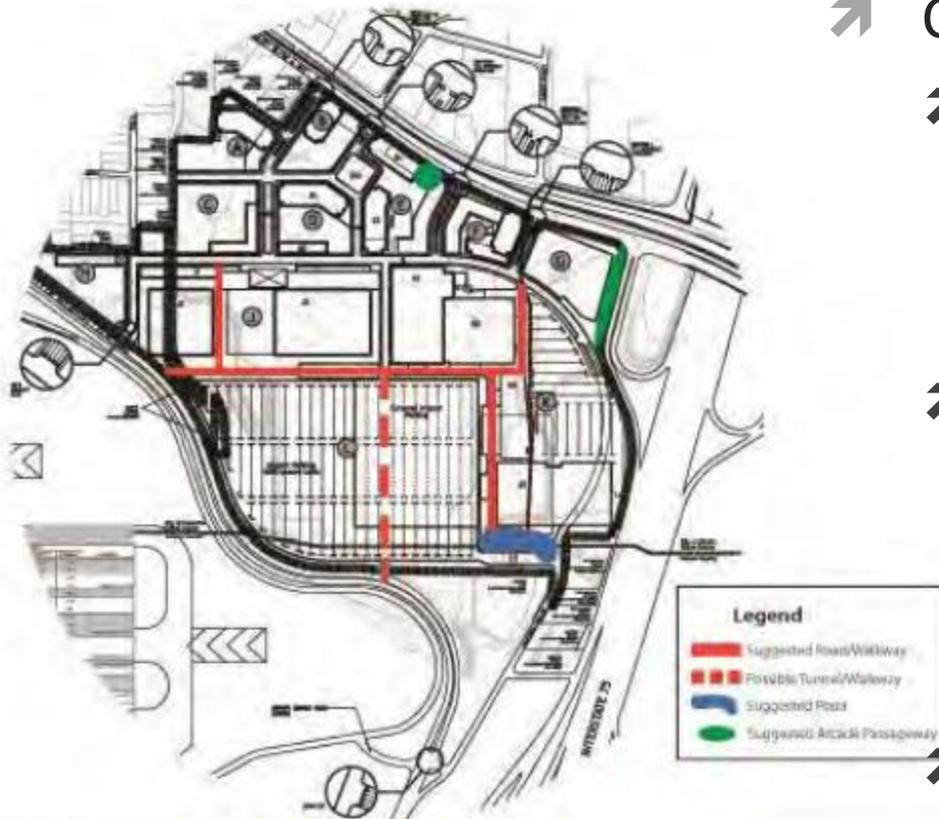


Figure 37. Study area recommended pedestrian connections

- Connectivity:
 - Pursue a block length of 200 to 600 feet in site platting and along the site perimeter (excluding along I-75).
 - To improve pedestrian connections, divide blocks or create attractive arcades, passageways, alleys, or courtyards to shorten blocks
 - Ensure street crossings are frequent and convenient

Step 5: Reporting

- Two main products:
 - Develop full HIA report and communicate findings and recommendations
 - Develop a succinct summary for effective communication

- Essential Tasks:
 - Determine format and structure
 - Write the report
 - Offer opportunity for meaningful feedback on report
 - Update report or address substantive criticism through a formal written response
 - Implement communications plan

Step 6: Monitoring & Evaluation

- Monitoring & Evaluation Objectives:
 - To track the impacts of the HIA on the decision-making process and the decision (e.g., did the policy-makers change/modify project/plan/policy as suggested by the HIA recommendations?)
 - To track the implementation of the recommendations (e.g., were the recommendations implemented? and what were the impacts of the recommendations on health outcomes?)
 - To evaluate the *process* of conducting the HIA

Monitoring Plan

- Develop a monitoring plan
- The monitoring plan should include:
 1. goals for short- and long-term monitoring;
 2. outcomes and indicators for monitoring;
 3. lead individuals or organizations to conduct monitoring;
 4. a mechanism to report monitoring outcomes to decision-makers and HIA stakeholders;
 5. triggers or thresholds that may lead to review and adaptation in decision implementation; and
 6. identified resources to conduct, complete, and report the monitoring.

Evaluation

- Process evaluation of the HIA:
 - What were the successes?
 - What were the challenges?
 - What worked?
 - Who should we include next time?
 - What data sources will you need in the future?
 - Did the HIA meet the HIA minimum standards?
- Report on evaluation so that new HIA practitioners can learn from your successes and challenges

Review: HIA Steps

1. **Screening** - to determine if an HIA is useful for a specific project or policy
2. **Scoping** - identify which health effects to consider
3. **Assessment** - determine which people may be affected and how they may be affected
4. **Recommendations** - suggest changes to proposal to promote positive or mitigate adverse health effects
5. **Reporting** - present the results to decision-makers
6. **Monitoring & Evaluating** - determine the affect of the HIA on the decision process

Health Impact Assessment Training

Special thanks to:

- ASTHO/CDC for funding
- Human Impact Partners
 - <http://www.humanimpact.org/>
- Health Impact Project
 - <http://www.healthimpactproject.org/>
- Wisconsin Department of Health Services
 - <http://www.dhs.wisconsin.gov/hia/>

Final Thoughts

➔ Questions?

Thank you

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<http://www.health.state.mn.us/divs/climatechange/>