Exploring How Health Impact Assessments Monetize Health Benefits of Transportation Plans and Projects

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Moving Active Transportation to Higher Ground: Opportunities for Accelerating the Assessment of Health Impacts
<table>
<thead>
<tr>
<th>Health Impact Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding</strong></td>
</tr>
<tr>
<td>(~100 HIAs to date)</td>
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</tbody>
</table>
America Is Not Getting Good Value for Its Health Dollar

The U.S. spends more money per person on health than any other country, but our lives are shorter—by nearly four years—than expected based on health expenditures.

Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Sources: OECD Health Data 2007.

Does not include countries with populations smaller than 500,000. Data are for 2003.

*Per capita health expenditures in 2003 U.S. dollars, purchasing power parity

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Social Determinants of Health
HIA Addresses Social Determinants of Health

How might the proposed project, plan, policy affect:
- Housing
- Air quality
- Noise
- Safety
- Social networks
- Nutrition
- Parks and natural space
- Private goods and services
- Public services
- Transportation
- Livelihood
- Water quality
- Education
- Inequities

and potentially lead to predicted health outcomes?

Slide courtesy of Human Impact Partners (www.humanimpact.org)
“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.”

Source: “Improving Health in the United States: The Role of Health Impact Assessments” by the National Research Council, September 2011
Steps of HIA

- Screening
- Scoping
- Assessment
- Recommendations
- Reporting
- Monitoring and Evaluation
Completed and In Progress HIAs
2014 (N = 334+)

Maps created through a partnership between Health Impact Project and the Centers for Disease Control and Prevention’s Healthy Community Design Initiative
HIA can be applied to a range of sectors

- Built Environment: 34%
- Transportation: 21%
- Natural Resources & Energy: 14%
- Agriculture & Food: 9%
- Housing: 7%
- Education: 5%
- Labor & Employment: 4%
- Other: 6%
What have we learned so far about value of HIA?

HIAs can:

1) bring health information to non-health decision-making;
2) bring community voice to a decision-making process;
3) build consensus between decision-makers and stakeholders, and facilitate cross-sector collaboration.
Decision makers reported that HIAs have shaped their decision-making
Example: “Cost savings or economic data was useful.”

Common characteristics that increased likelihood of success
• Including health and economic benefits of various options was helpful when engaging decision makers and stakeholders.
• Including findings and recommendations related to economic benefits of a particular policy.

Exploring How HIAs have Incorporated Economic Analysis
Transportation HIAs by Sub-Topic

- Neighborhood, commercial, and housing redevelopment, 25
- Transit projects, TOD, or station area planning, 20
- Road and bridge project, 13
- Comprehensive, master, and regional plans, 11
- Trail and greenway planning, 11
- Corridor planning, 9
- Bicycle and pedestrian, or active transportation plans, 6
- Transportation plans, 5
- Airport, port, or railway, 5
- Transportation funding, 3
- Zoning changes, 3
- Climate change, 2
- Traffic speed, 2
- Climate change, 2
Key Words

- Economic, economy, economist
- Finance, financial
- Fiscal
- Money
- Monetary
- Save, savings
- Expense
- Cost
Total Use of Key Terms Across Reports

- Economic, economy, economist: 1981
- Cost: 1797
- Financial, finance: 273
- Expense: 147
- Money: 146
- Save, savings: 117
- Fiscal: 30
- Monetary: 25

Terms with counts in parentheses.
Average and Median Use of Key Terms in HIA Reports

- Economic, economy, economist
- Cost
- Financial, finance
- Expense
- Money
- Save, savings
- Fiscal
- Monetary

Average and Median
Examples of Assessment Methods

*Using Literature*

- Drawing on evidence base to make connections between health and economic impacts.

  e.g. active transportation and economic development
Examples of Assessment Methods

Mapping Economic Data

- Communicating economic information spatially.

  e.g. cost burden (housing costs relative to household income)
Examples of Assessment Methods

Estimating savings based on existing data

### Table A.6: Potential Annual Benefits of Increased Walking in Davidson

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>25% increase from current levels</th>
<th>50% increase from current levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Walk Commute Mode Share</strong></td>
<td>6.1%</td>
<td>7.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Annual VMT Reduced</td>
<td>463,000</td>
<td>580,000</td>
<td>690,000</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2 Emissions Reduced (pounds)</td>
<td>377,000</td>
<td>470,000</td>
<td>570,000</td>
</tr>
<tr>
<td>Other Vehicle Emissions Reduced (pounds)</td>
<td>15,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Total Vehicle Emissions Costs Reduced</td>
<td>$11,000</td>
<td>$10,000</td>
<td>$20,000</td>
</tr>
<tr>
<td><strong>Social Benefits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced Traffic Congestion Costs</td>
<td>$23,000</td>
<td>$29,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Reduced Vehicle Crash Costs</td>
<td>$167,000</td>
<td>$210,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Reduced Road Maintenance Costs</td>
<td>$70,000</td>
<td>$90,000</td>
<td>$110,000</td>
</tr>
<tr>
<td><strong>Individual Benefits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Vehicle Operation Cost Savings</td>
<td>$262,000</td>
<td>$330,000</td>
<td>$390,000</td>
</tr>
<tr>
<td>Healthcare Cost Savings from Physical Activity</td>
<td>$47,000</td>
<td>$60,000</td>
<td>$70,000</td>
</tr>
<tr>
<td><strong>Total Monetized Benefits</strong></td>
<td>$579,000</td>
<td>$730,000</td>
<td>$880,000</td>
</tr>
</tbody>
</table>

**Note:** Estimates reflect conceptual benefits that would be generated at given mode shares as if they existed in Davidson today. Values are rounded for readability. Values are not discounted and do not reflect future demographic growth, cost changes or other multiplier changes.
Examples of Assessment Methods

*Using Health Economic Assessment Tool (HEAT)*

San Francisco Road Pricing

Blue Ridge Corridor
Discussion and Next Steps

• Current practice: challenges and opportunities

• Conclusions and implications for future work
Resources

• Explore the interactive map: www.healthimpactproject.org.

• Attend the National HIA Meeting in Washington, DC, June 16-17, 2015: www.nationalhiameeting.com.

• Visit the Society of Practitioners of HIA (SOPHIA) website to learn more: www.hiasociety.org.
Thank you!

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