Health Impact Assessment: A Tool to Identify and Address Health Inequities

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Our Environments Affect Our Health
What do “health supports” look like?

- Housing programs, policies
  - Affordable units
  - Safety for renters
- Land use plans
  - “Health promoting” retail
  - Desirable destinations
  - Incentives for supermarket locations
  - Parks, greenspace access, safety
- Transportation plans, policies
  - Safe streets, sidewalks
  - Mass transit access
  - Lighting
  - Limit air pollution
- Education policies
  - Physical education opportunities
  - Dual language immersion programs
- Housing location
Our Environments Affect Our Health
What do “health harms” look like?

- Housing programs, policies may not adequately address:
  - Dilapidation
  - # of Affordable units

- Land use policies may not address:
  - No connections, sidewalks – can’t safely, easily, walk or bike places
  - No parks, greenspaces

- Transportation polices and plans may not address:
  - Lack of infrastructure to protect walkers, bicyclists
  - Transit access

- Education policies may not address:
  - Climates that reduce bullying
  - University campus impact on affordable housing
Not Everyone Lives in a Healthy Place
Even Healthy Places Can Have Harms

Flickr user hectorhannibal
Policies, Proposals and Projects Affect the Environments Where We Live, Work, Play

Source: Adapted from Health Impact Project image of Dahlgren and Whitehead, 1991
Figure 1. Rates of hospitalization for ambulatory care sensitive conditions were 32 to 87 percent higher among patients from the poorest communities, 2006*

*Poorest communities” included ZIP Codes with median income level less than $38,000; “other communities” included ZIP Codes with median income level greater than or equal to $38,000.

Note: A small portion of stays, less than 4 percent, were covered by other insurance programs (such as TRICARE/CHAMPUS and Title V) and are not included in this figure.
Equity Defined

- The goal of equity is to create conditions that allow ALL people to reach their full potential.
- Work to addressing disparities in health outcomes by
  - Race, ethnicity
  - Income
  - Ability
  - Geography
  - Age
  - Gender
  - Sexual orientation

Adapted from Promoting Equity through the Practice of Health Impact Assessment, 2013, PolicyLink
What is Equity?

Source: This image was adapted by City of Portland Office of Equity & Human Rights from the original graphic:
Source: Prentice, B., Bay Area Regional Health Inequities Initiative (BARHII) 2009, Confronting the Social Determinants of Health Inequities: Rethinking Public Health
Recognize Historic Systematic Distribution of Resources ...

- Until 1926: Oregon’s racial exclusion in constitution - unlawful for Blacks to reside, own property, work, vote in OR
- Until 1970s - Residential Security Mapping (“Redlining”) - locations where banks would not invest - denying loans or insurance for homes, businesses by race & ethnicity
- Today: OR Black ownership rate 18% below national homeownership rates for Blacks

Recognize Historic Systematic Distribution of Resources...

Figure 7.13 – Number of asthma hospital discharges per 10,000 Oregonians by racial and ethnic groups (age-standardized), 2011

The Burden of Asthma in Oregon: 2013, Oregon Health Authority

50% of Black children in OR live in poverty (US Census)
We All Benefit When Our Most Vulnerable Members of Society’s Needs Are Met
To Support Population Health for All, We Need to Consider Health in Different Sector’s Decisions

- Land Use
- Food Policy
- Justice System
- Immigration
- Transportation
- Education
Health Impact Assessment

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, 2011
Key Goals of Health Impact Assessment

- Improve population health
- Make health a key factor in decision making
- Create decisions based on scientific evidence
- Demonstrate the value for impacted groups
Context for HIA in Public Health

HIA Activities

## Values of HIA

<table>
<thead>
<tr>
<th>HIA Value</th>
<th>In Practice</th>
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</thead>
<tbody>
<tr>
<td>Democracy</td>
<td>Involve and engage the public; Inform and involve decision makers</td>
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<tr>
<td>Equity</td>
<td>Consider distribution of impacts; support leadership involvement and engagement of those affected by the decision, especially vulnerable populations</td>
</tr>
<tr>
<td>Sustainable Development</td>
<td>Judge short and long-term impacts of proposal</td>
</tr>
<tr>
<td>Ethical Use of Evidence</td>
<td>Use multiple sources of best available evidence to judge impacts and develop recommendations; be rigorous and transparent</td>
</tr>
<tr>
<td>Comprehensive Approach to Health</td>
<td>Be guided by an expanded definition of health that includes social, economic, and physical determinants</td>
</tr>
</tbody>
</table>

Sources: Gothenburg Consensus, WHO, 1999 | PolicyLink Webinar:
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>National Environmental Policy Act (NEPA) requires study of environmental &amp; health effects <em>(however, health impacts have not been consistently addressed in EIA)</em></td>
</tr>
<tr>
<td>1980s</td>
<td>World Health Organization encourages Health Promotion/Healthy Public Policy in 1986 Ottawa Charter</td>
</tr>
</tbody>
</table>
| 1990s | England, Acheson Report recommends analysis of impacts of policy on health inequities  
WHO publishes *Gothenburg Consensus Paper on HIA*  
First HIA in US (SFDPH, Living Wage) |
| 2000s | World Bank requires HIA of all large projects  
HIA on proposed Alaska North Slope Oil Lease (first integrated HIA into federal EIA)  
Large industry increasingly adopts internal standards for HIA as good business practice |
| 2010s | HIA used around the world and, recently, across the U.S.  
North American HIA Practice Standards Released |

Source: Human Impact Partners
HIAs in Oregon (including Clark County) 
Completed or In Progress

- 4 Statewide HIAs
- 15+ Local & Regional HIAs
- 2 National HIAs
How HIAs Address Equity

- Identify existing health inequities
- Identify WHO will be impacted by a proposal
- Identify and judge evidence about HOW they will be impacted by proposal
- Engage those affected where possible
- Recommend strategies to MINIMIZE harm and MAXIMIZE benefits
HIAs and Equity – Identify WHO is impacted

- What groups of people are affected by this proposal?
- Are any of these groups vulnerable?
- What about the conditions where these groups live, work, play, pray, etc. will change?
- Which of these potential impacts are most important to those affected?
- Bring voices to the table who might not be included to examine proposal’s health impacts
Identify WHO is Affected

How does the proposed project, plan, policy affect

- Children
- Elderly
- Pre-existing conditions
- People of color
- Disabled
- LBGTQ
- Different neighborhoods
- Low-income
- Women
- Men
- Rural
- Urban
- In close proximity
- Far away

and potentially lead to predicted health outcomes?

Thanks to Human Impact Partners for design
Example: Identify WHO is impacted

Potential impacts of the USC Specific Plan on Housing

USC Specific Plan + Gentrification

- In affordable housing & housing vacancy rate

↑ demand for housing

↑ Other barriers to accessing housing (discrimination)

↑ displacement (including evictions)

↑ housing costs (rent, home costs)

↑ in poverty and inability to afford basic needs
  - Healthy food
  - Transportation
  - Healthcare
  - Child care
  - Employment

↓ in stability
  - School
  - Jobs
  - Access to goods & services

↓ in living conditions
  - Overcrowding
  - Mold/mildew
  - Sewage
  - Vectors

↓ in homelessness

↓ in infectious disease

↓ in chronic disease

↑ in stress

A Rapid Health Impact Assessment of the City of Los Angeles’ Proposed University of Southern California Specific Plan, 2012

- Health impacts of stress include: poor mental health, increased inflammatory response, decreased immune response
- Health impacts of chronic disease include: heart disease, diabetes, hypertension
- Health impacts on child development and education include: premature mortality, chronic disease, communicable disease
- Health impacts of changes in social cohesion include: buffering stressful situations, mental health, disease transmission, overall health status
Example: Identify WHO is impacted

Rapid Health Impact Assessment
Crook County/City of Prineville
Bicycle and Pedestrian Safety Plan, 2011
Since Assessing WHO is Impacted – ENGAGE THEM!

Engaging local leaders and those most affected:

- Builds ownership in the process
- Honors the wisdom and experiences of everyone involved
- Creates collective thinking and can produce innovative, effective, sustainable solutions
- Supports identifying both direct and indirect impacts
- Provides opportunities for those impacted to become aware of and take action for improving their quality of life

Source: Promoting Equity through the Practice of Health Impact Assessment, 2013, PolicyLink
ENGAGE the Public, Vulnerable Populations, Decision Makers

HIA: Oregon Farm to School and School Garden Policy, HB 2800, Advisory Committee
30+ Expert Advisors
Two Community Forums
Communication Workshop
Identify HOW Affected: HIAs Address Determinants of Health

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

and potentially lead to predicted health outcomes among different people?

Thanks to Human Impact Partners for design
HIAs and Equity – Identify HOW affected?

- Multiple data sources: disaggregated, local
- Positive? Negative?
- Short and long term?
- Direct and indirect?
- Magnitude?
- Severity?
- When reporting/communicating about who/how affected – talk in language that resonates with your audience
### Health Impact Assessment on HB 2800: Oregon Farm to School and School Garden Policy

#### Summary of Health Outcomes and Impacts

<table>
<thead>
<tr>
<th>Health Outcome or Health Determinant</th>
<th>Magnitude of Impact w/ HIA Recs.</th>
<th>Distribution</th>
<th>Quality of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; life expectancy</td>
<td>★★★★★</td>
<td>Farm sector and related jobs</td>
<td>****</td>
</tr>
<tr>
<td>Job creation</td>
<td>★★★</td>
<td>~270 new jobs</td>
<td>****</td>
</tr>
<tr>
<td>Oregon product demand</td>
<td>★★★★★</td>
<td>100—197 School Districts⁴</td>
<td>****</td>
</tr>
<tr>
<td>Workers’ ability to pay bills</td>
<td>★★★</td>
<td>~270 new jobs</td>
<td>****</td>
</tr>
<tr>
<td>Economic activity</td>
<td>★★★★★</td>
<td>3.16 economic multiplier</td>
<td>****</td>
</tr>
<tr>
<td><strong>Impacts on Child Diet and Nutrition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meal program participation</td>
<td>★★★</td>
<td>561,698 public school children¹</td>
<td>**</td>
</tr>
<tr>
<td>Child learning &amp; academic attainment</td>
<td>★★★</td>
<td>561,698 public school children¹</td>
<td>****</td>
</tr>
<tr>
<td>Household food security</td>
<td>★★</td>
<td>210,446 households²</td>
<td>***</td>
</tr>
<tr>
<td>School meal nutrition</td>
<td>★★+</td>
<td>561,698 public school children¹</td>
<td>*</td>
</tr>
<tr>
<td>Child overweight &amp; obesity</td>
<td>★★+</td>
<td>1 in 4 children</td>
<td>**</td>
</tr>
<tr>
<td><strong>Farm to School and School Garden Education Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardening education</td>
<td>★★★★★</td>
<td>~15,000 new children³</td>
<td>****</td>
</tr>
<tr>
<td>Child fruit &amp; vegetable consumption</td>
<td>★★★+</td>
<td>561,698 school children¹</td>
<td>****</td>
</tr>
<tr>
<td>Agriculture &amp; nutrition education</td>
<td>★★★+</td>
<td>~15,000 new children³</td>
<td>***</td>
</tr>
<tr>
<td>Child nutrition knowledge</td>
<td>★★★+</td>
<td>~15,000 new children³</td>
<td>***</td>
</tr>
<tr>
<td>Nutrition staff knowledge</td>
<td>★★</td>
<td>100—197 School Districts</td>
<td>**</td>
</tr>
</tbody>
</table>

3. Data from USDA Child Nutrition Programs, 2010.
### A Healthy T for a Healthy Region: A Health Impact Assessment of Proposed MBTA Service Cuts and Fare Increases, Metropolitan Area Planning Council, 2012

**Projected 2012 MBTA Deficit:** $161 Million

**Yearly Health Cost:** $272.1 Million / $386.9 Million

#### Proposed Fare Increase and Service Reduction Scenarios:

**Scenario One:**
- **Cost of Additional Time in Traffic:** $137.5 Million
- **Cost of Additional Mortality and Hospitalizations Due to Air Pollution:** $1.5 Million
- **Cost of Additional Carbon Emissions:** $1.7 Million
- **Fares Would Increase by 43% and Service Reductions Would Affect Between 38-48 Million Trips Per Year:**
  - **COST OF LIVES LOST DUE TO DECREASED PHYSICAL ACTIVITY:** $74.9 Million
  - **Cost of Additional Car Crashes, Including Crashes With Bicycles and Pedestrians:**
    - **$33.6 Million**

**Scenario Two:**
- **Cost of Additional Fuel Burned:** $22.7 Million
- **Fares Would Increase by 35% and Service Reductions Would Affect Between 53-64 Million Trips Per Year:**
  - **$48.8 Million**
  - **$116.5 Million**

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*For asthma, chronic lung disease, heart attacks, heart disease, and major cardiovascular events*
HIAs & Equity – Identify and Recommend How to Minimize Harm, Maximize Benefits

- Identify how the results connect to recommendations
- Work with stakeholders to prioritize recommendations, make that prioritization process clear to others
- Recommend practical ways to minimize harm
- Recommend practical methods to maximize benefits
To maximize child nutrition, food security, and student learning benefits:

- Rec #2 – For education grant recipients – prioritize schools serving:
  - Low income
  - Ethnically/culturally diverse student populations
  - Food insecure areas

- Oregon Legislature chose to include 1/3 of this recommendation in final policy.

**Employment:** The facility would result in an increase in the number of jobs available for its facility operations and production of phosphorus fertilizer. A committee of local residents and stakeholders should be created to provide input on strategies to increase local hiring. This group should include representatives from the local Chamber of Commerce and Shenandoah Valley Partnership....
Recommendations to Minimize Harm Example

Jack London Gateway Senior Housing in CA

HIA recommended new standards to improve ventilation, and a change in location of HVAC in the new development with the developer.

Standards Were Used.
# Next Frontier in HIA & Equity: Monitoring Health Impact Changes

## Table 12: Summary Assessment of Expected Effects of Sleep Protections on Health

<table>
<thead>
<tr>
<th>Health Outcome</th>
<th>Likelihood</th>
<th>Intensity / Severity</th>
<th>Who Impacted</th>
<th>Magnitude</th>
<th>Uncertainties related to limited evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>▲▲▲</td>
<td>High</td>
<td>+</td>
<td>Small</td>
<td>Studies on health effects of sleep not specific to domestic work population</td>
</tr>
<tr>
<td>Chronic Disease &amp; Obesity</td>
<td>▲▲</td>
<td>Mod</td>
<td>+</td>
<td>Small to Moderate</td>
<td>Limited information on current sleep patterns in affected population</td>
</tr>
<tr>
<td>Stress &amp; Mental Health</td>
<td>▲▲</td>
<td>Mod</td>
<td>+</td>
<td>Small to Moderate</td>
<td>Baseline health status in affected domestic work population</td>
</tr>
<tr>
<td>Cognitive &amp; Motor Performance</td>
<td>▲▲▲</td>
<td>Mod</td>
<td>+ +</td>
<td>Moderate</td>
<td>Data on utilization of protections</td>
</tr>
<tr>
<td>Work Errors &amp; Injuries</td>
<td>▲▲▲</td>
<td>High</td>
<td>+ +</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Traffic Accidents</td>
<td>▲▲▲</td>
<td>High</td>
<td>+ + +</td>
<td>Uncertain</td>
<td></td>
</tr>
</tbody>
</table>

### Explanations:
- Likelihood refers to strength of research/evidence showing causal relationship between sleep and the health outcome: ▲ = limited evidence, ▲▲ = limited but consistent evidence, ▲▲▲ = causal relationship established. A causal effect means that the effect is likely to occur, irrespective of the magnitude or severity.
- Intensity/Severity reflects the nature of the effect it affects on function, life-expectancy and its permanence (High = very severe/intense, Mod = Moderate).
- Who impacted refers to which populations are impacted by the health outcomes associated with proposed sleep requirements. DW = Domestic Workers, CR = Care Recipient, GP = General Population.
- Magnitude reflects a qualitative judgment of the size of the anticipated change in the health effect (e.g. the increase in the number of cases of disease, injury, adverse events).

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“Drug Court Saved My Life” – HIA Led to Increased $ For Treatment Alternatives and Diversion (TAD)

### $75 Million for Wisconsin TAD Programs

<table>
<thead>
<tr>
<th>Impact</th>
<th>TAD Program Effect</th>
<th>Projected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REDUCE COST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce prison admissions</td>
<td>3,100 (nearly 40%) of the 8,000 prison admissions each year will be eligible for TAD programs</td>
<td></td>
</tr>
<tr>
<td>Reduce jail admissions</td>
<td>21,000 (nearly 10%) of the 227,000 jail admissions each year will be eligible for TAD programs</td>
<td></td>
</tr>
<tr>
<td>Reduce re-incarceration</td>
<td>Recidivism would be 12% - 16% lower for non-violent offenders in TAD programs</td>
<td></td>
</tr>
<tr>
<td><strong>REDUCE CRIME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce recidivism</td>
<td>20% fewer crimes would be committed by participants in TAD programs (1,100 fewer crimes over 5 years)</td>
<td></td>
</tr>
<tr>
<td><strong>INCREASE RECOVERY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve access to treatment</td>
<td>All eligible offenders would have access to drug court treatment programs</td>
<td></td>
</tr>
<tr>
<td>Improve efficacy of treatment</td>
<td>Drug court participants would have double the rate of recovery than those in minimal treatment</td>
<td></td>
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<tr>
<td><strong>STRENGTHEN FAMILIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase number of families that remain intact</td>
<td>Between 1,150 – 1,619 parents could stay out of prison and receive treatment</td>
<td></td>
</tr>
<tr>
<td><strong>IMPROVE ECONOMIC OPPORTUNITY</strong></td>
<td>Increase likelihood of employment</td>
<td>13% more non-violent offenders with substance abuse issues would be employed</td>
</tr>
</tbody>
</table>

Healthier Lives, Stronger Families, Safer Communities

How Increasing Funding for Alternatives to Prison Will Save Lives and Money in Wisconsin, 2012
“Public health agencies alone cannot assure the nation’s health”

Institute of Medicine, 2002. The Future of the Public’s Health in the 21st Century
“Any serious effort to reduce health inequities will involve changing the distribution of power within society and global regions, Empowering individuals and groups to represent strongly and effectively their needs and interests and, in so doing, to challenge and change the unfair and steeply graded distribution of social resources (the conditions for health) to which all, as citizens, have claims and rights.”

World Health Organization on the Social Determinants of Health
Closing the Gap in a Generation, 2008
Challenges: Promoting Equity in HIA Requires Leadership

- Lack of capacity
- Institutional barriers
- Data gaps
- Power inequalities
- Distrust and perception bias

Success is Possible!
Local Case Studies

- Decision Background
- How each HIA worked at including an equity perspective in their HIAs
For more on Health Inequity see online course
http://www.rootsofhealthinequity.org/

Health Impact Assessment Websites:
- Health Impact Project http://www.healthimpactproject.org/
- Society for Practitioners of HIA - http://www.hiasociety.org/
- UCLA HIA Clearinghouse Learning and Information Center - http://www.hiaguide.org/

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