

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
- **Housing location**
- **Transportation plans, policies**
 - Safe streets, sidewalks
 - Mass transit access
 - Lighting
 - Limit air pollution
- **Education policies**
 - Physical education opportunities
 - Dual language immersion programs

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



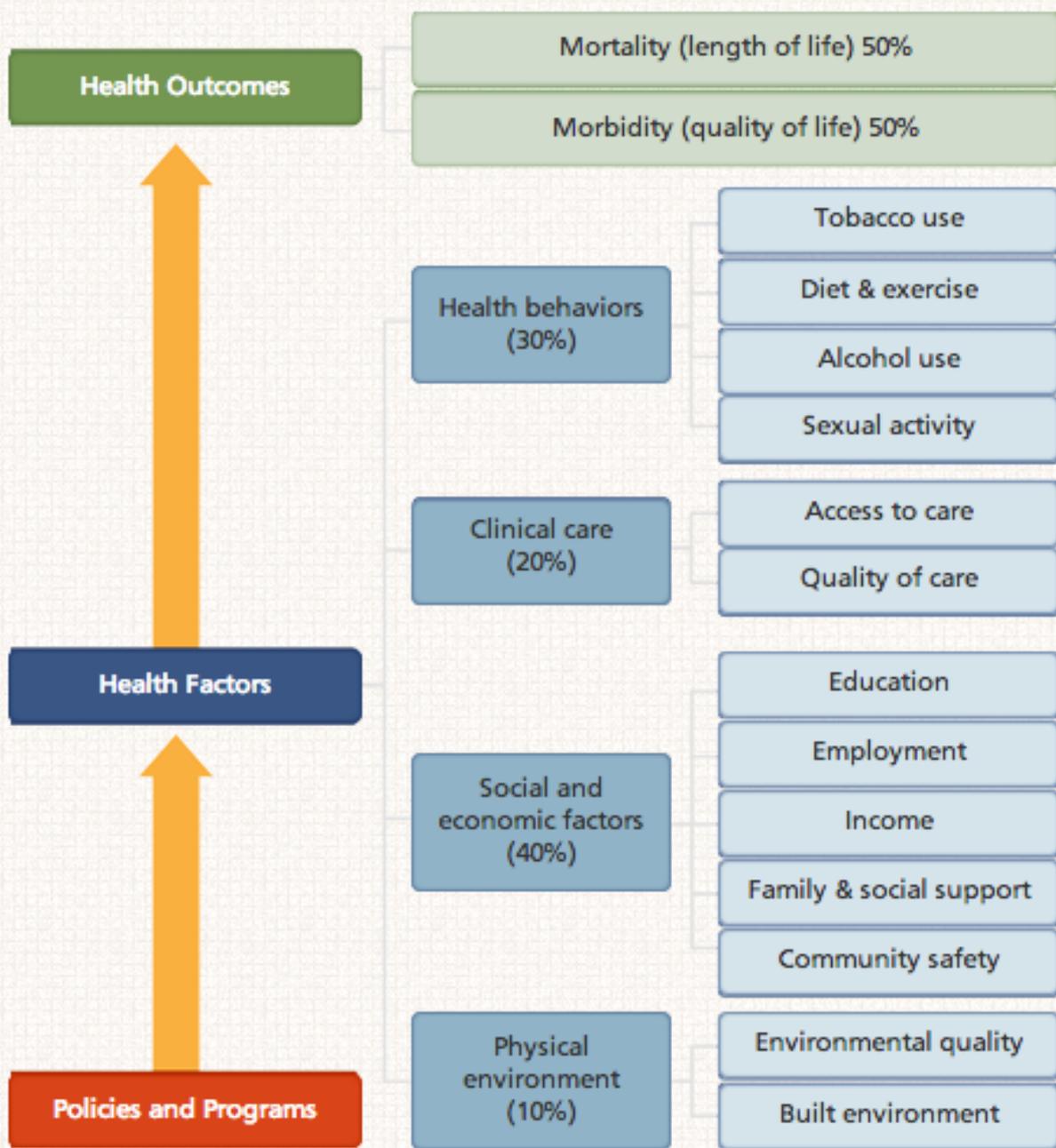
Even Healthy Places Can Have Harms



Flickr user hectorhannibal

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

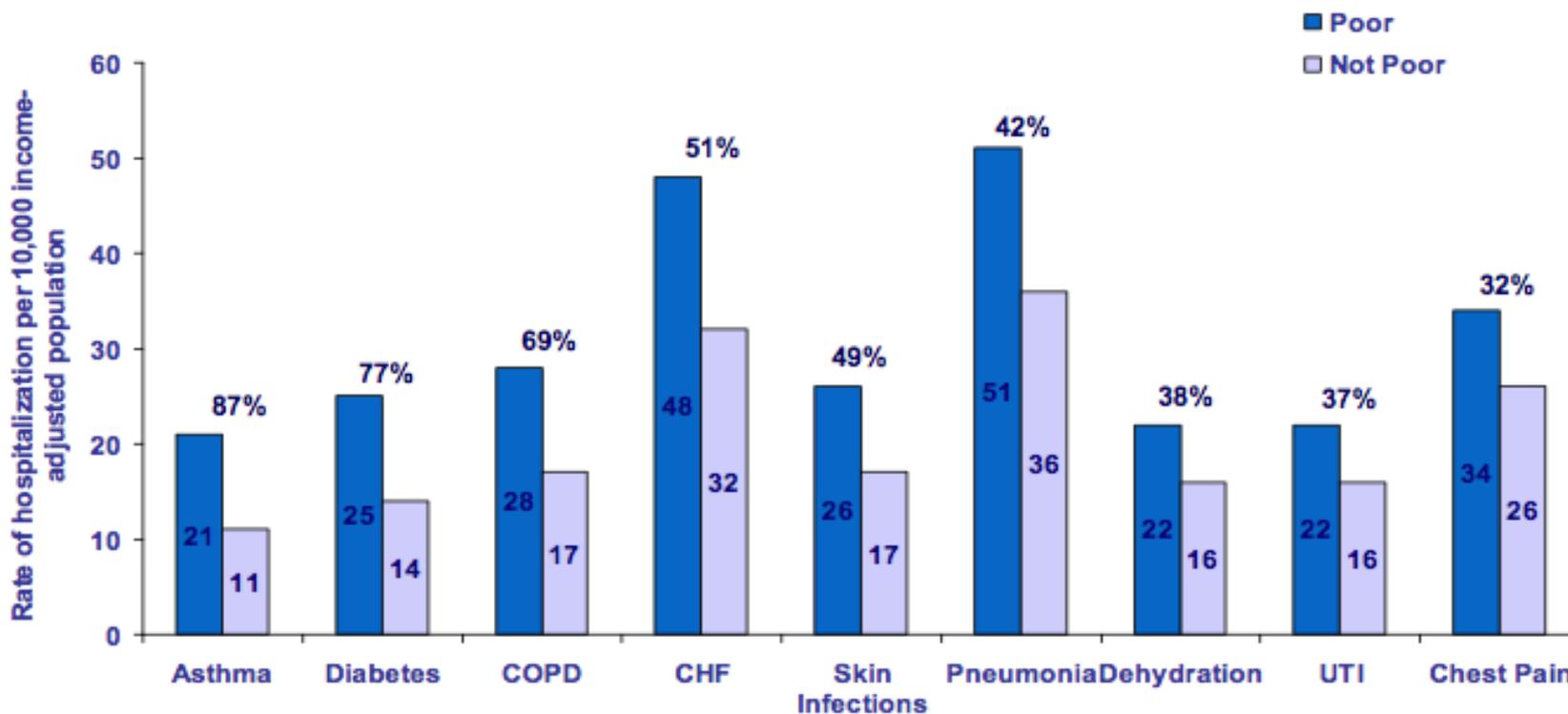




Living in Unhealthy Places Affects Health Outcomes



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



Source: This image was adapted by City of Portland Office of Equity & Human Rights from the original graphic:

<http://indianfunnypicture.com/img/2013/01/Equality-Doesnt-Means-Justice-Facebook-Pics.jpg>

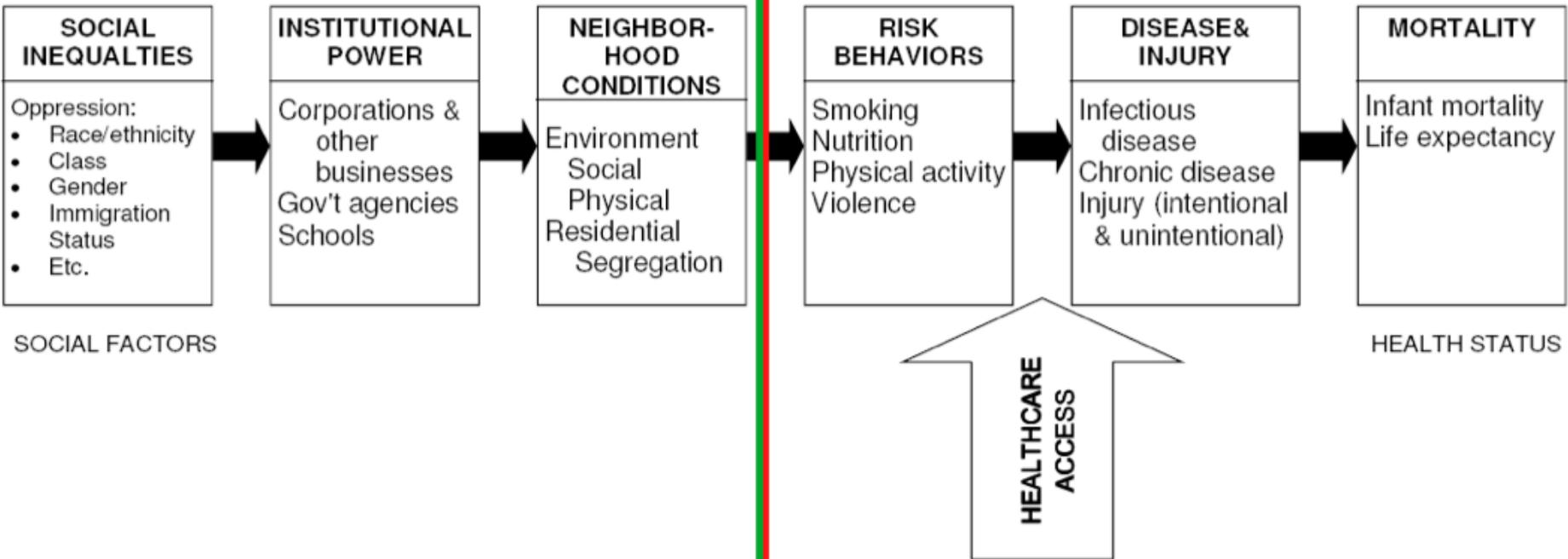
Socio-Ecological

A Framework for Health Equity

Medical Model

UPSTREAM

DOWNSTREAM



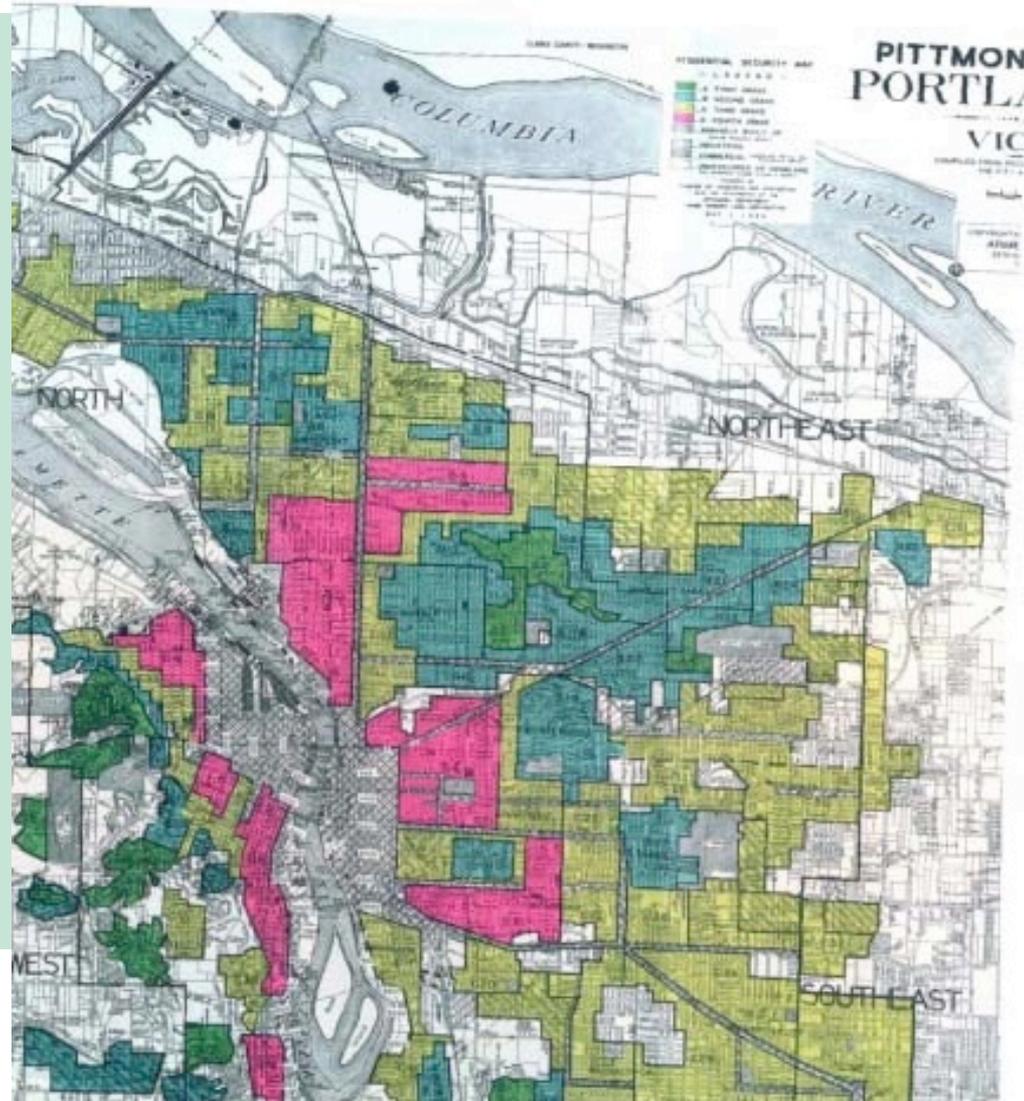
Source: Prentice, B., Bay Area Regional Health Inequities Initiative (BARHII) 2009, *Confronting the Social Determinants of Health Inequities: Rethinking Public Health*

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

http://www.upa.pdx.edu/IMS/currentprojects/TAHv3/PDX_Places_GIS.html

HUD, The State of African American Homeownership in Oregon, 2000, Oregon Progress Board, 2008 Benchmark Report



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

Oregon Hospital Discharge Dataset



50% of Black children in OR live in poverty (US Census)

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

We All Benefit When Our Most Vulnerable Members of Society's Needs Are Met



Image Source: Richard Drdul Wikimedia Commons

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

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

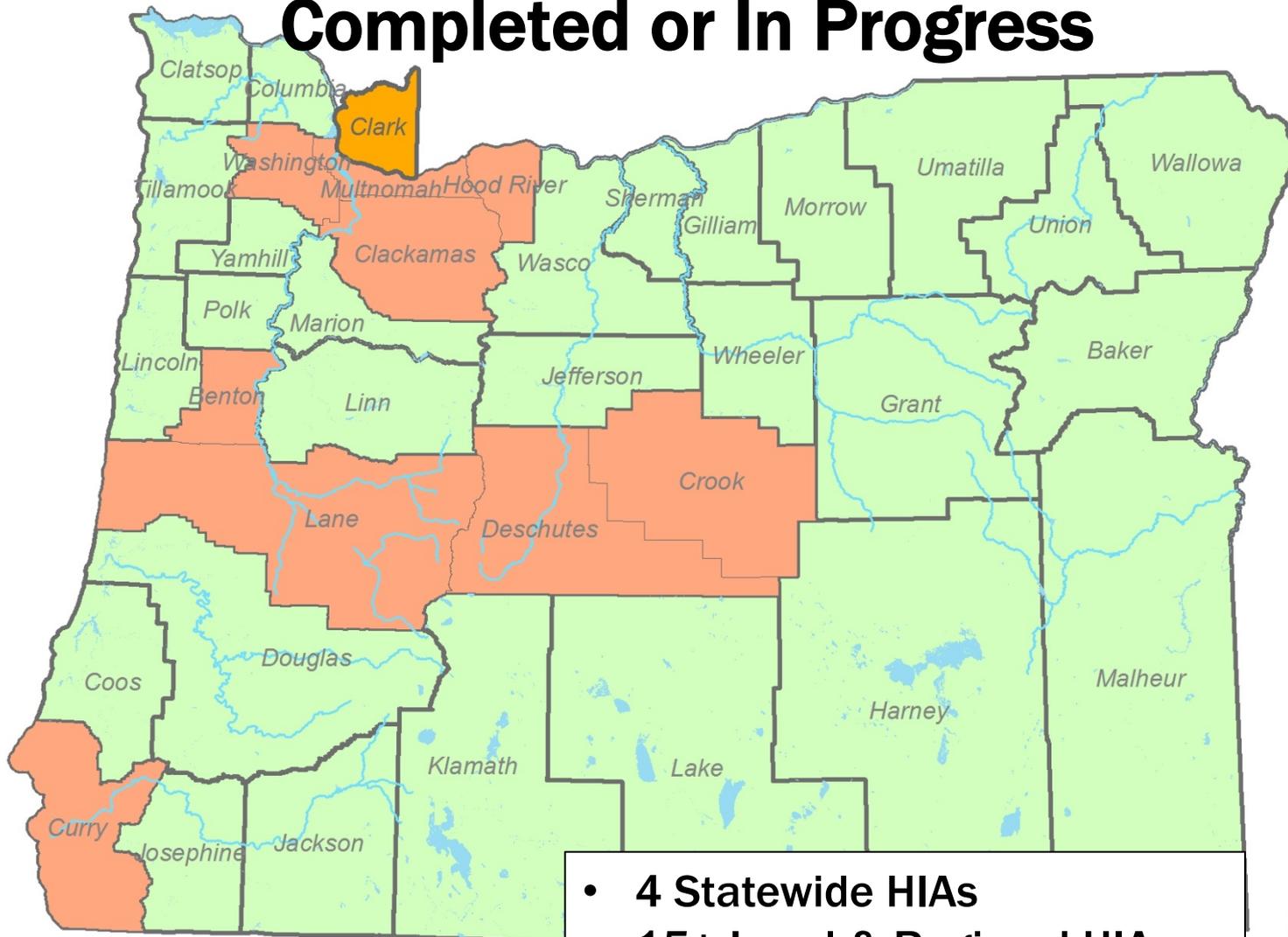
Sources: Gothenburg Consensus, WHO, 1999

PolicyLink Webinar:

Brief History of HIA in the U.S.

1969	National Environmental Policy Act (NEPA) requires study of environmental & health effects (<i>however, health impacts have not been consistently addressed in EIA</i>)
1980s	World Health Organization encourages Health Promotion/Healthy Public Policy in 1986 Ottawa Charter
1990s	England, Acheson Report recommends analysis of impacts of policy on health inequities WHO publishes <i>Gothenburg Consensus Paper on HIA</i> 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

HIA in Oregon (including Clark County) Completed or In Progress



- 4 Statewide HIAs
- 15+ Local & Regional HIAs
- 2 National HIAs



How HIAs Address Equity

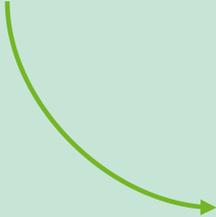
- Identify existing health inequities
- Identify WHO will be impacted by a proposal
- Identify and judge evidence about HOW they will be impacted by proposal
- Engage those affected where possible
- Recommend strategies to MINIMIZE harm and MAXIMIZE benefits

HIAs and Equity – Identify WHO is impacted

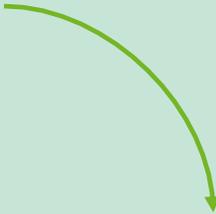
- What groups of people are affected by this proposal?
- Are any of these groups vulnerable?
- What about the conditions where these groups live, work, play, pray, etc. will change?
- Which of these potential impacts are most important to those affected?
- Bring voices to the table who might not be included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

Identify WHO is Affected

How does the proposed project, plan, policy



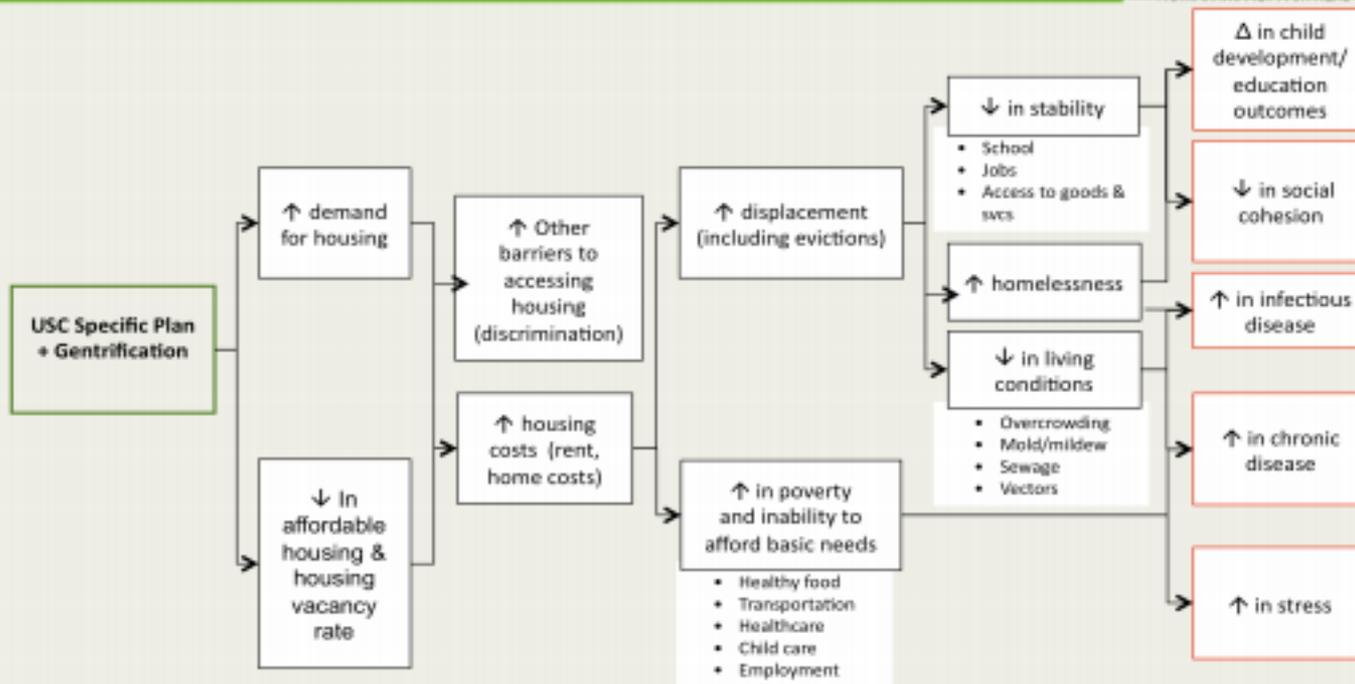
affect
Children
Elderly
Pre-existing conditions
People of color
Disabled
LBGTQ
Different neighborhoods
Low-income
Women
Men
Rural
Urban
In close proximity
Far away



and potentially lead to predicted health outcomes?

Example: Identify WHO is impacted

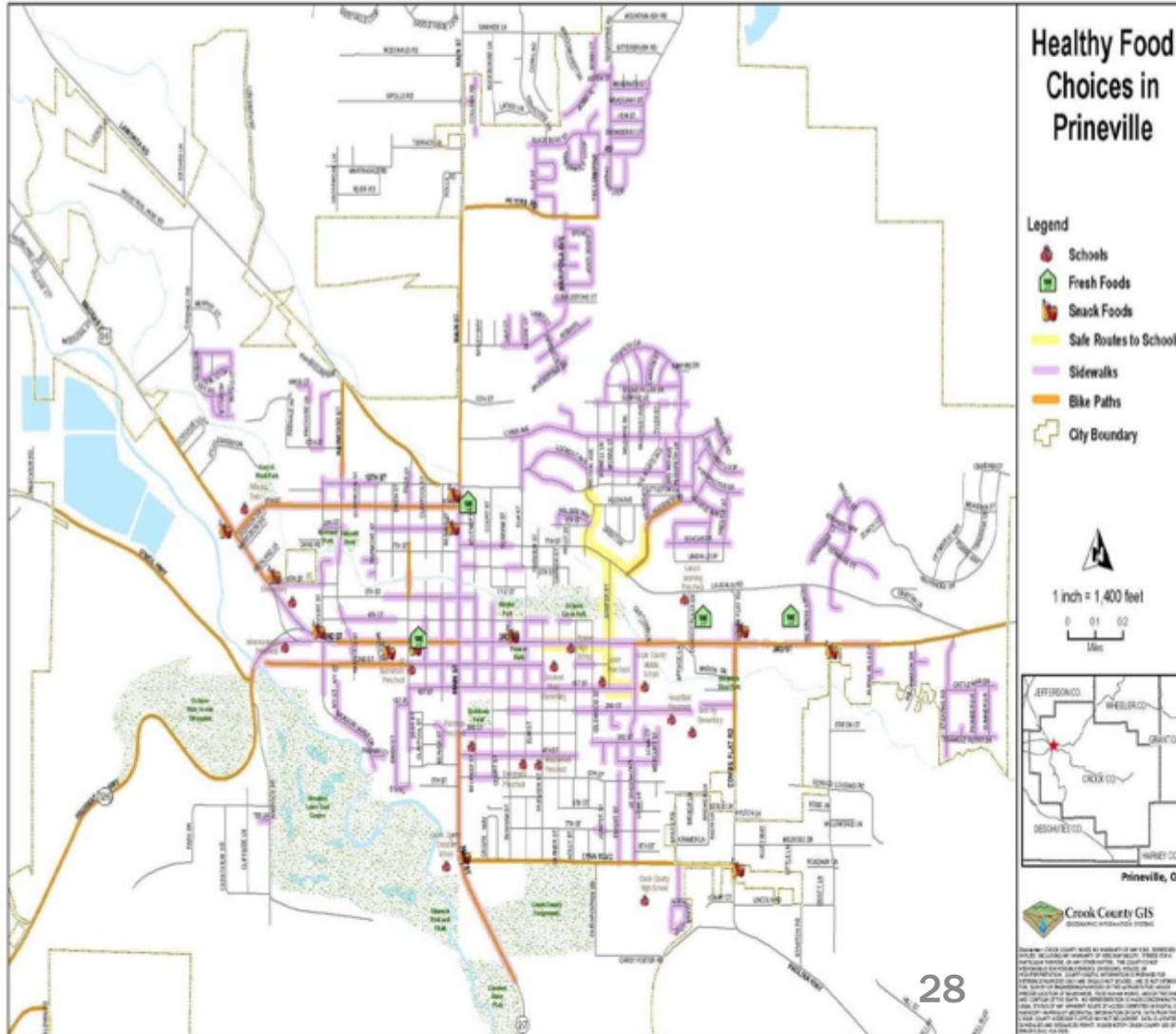
Potential impacts of the USC Specific Plan on Housing



- 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

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

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**

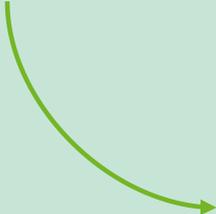
30+ Expert Advisors

Two Community Forums

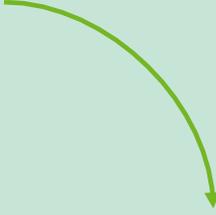
Communication Workshops

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



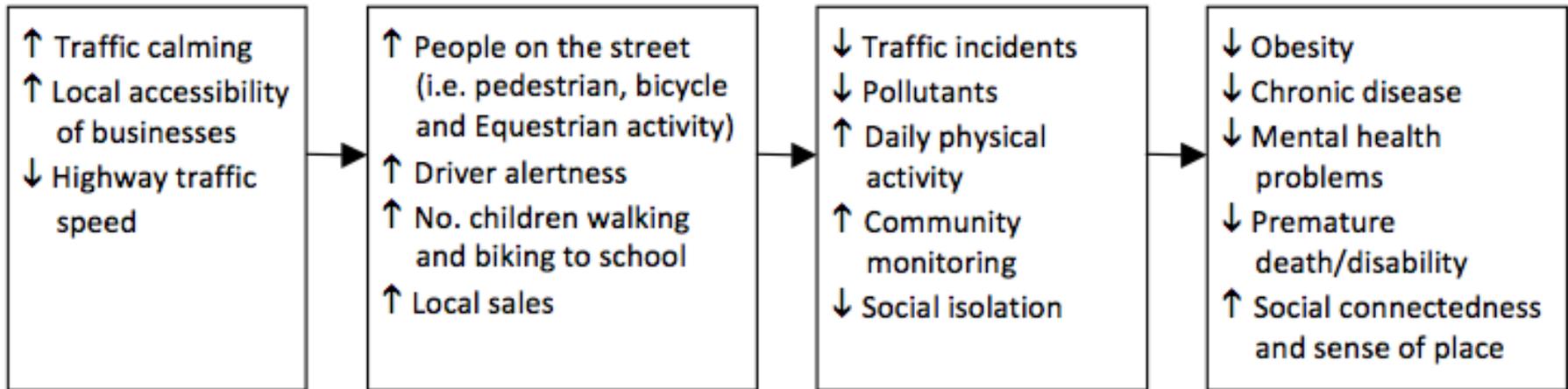
*and potentially
lead to predicted
health outcomes
among different
people?*

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

HOW Affected Examples

Figure 10. Pathway Between Improving Safety and Accessibility of U.S. 20 and Community Health



Healthy Tumalo Community Plan: A Health Impact Assessment on the Tuamlo Community Plan A chapter of the 20-Year Deschutes County Comprehensive Plan Update, 2009

HOW Affected Examples

Health Impact Assessment on HB 2800: OREGON FARM TO SCHOOL AND SCHOOL GARDEN POLICY

SUMMARY OF HEALTH OUTCOMES AND IMPACTS HIGHLIGHTS ON HB 2800 (\$23 MILLION)

LEGEND

- ▲▲▲▲ Strong impact on many
- ▲▲▲ Strong impact for few or small impact on many
- ▲▲ Moderate impact on medium number or strong impact on few
- ▲ Small impact on few
- None** No effect
- **** 10+ strong studies
- *** 5 -10 strong studies or data analysis
- ** 5 or more studies of weak and moderate quality; or studies have mixed results
- * <5 studies and claim consistent with public health principles

¹ Enrolled children in Oregon public school system, Oregon Department of Education, 2009-10.

² Household Food Security in the United States, 2009, US Dept. of Agriculture, Economic Research Service.

Health Outcome or Health Determinant	Magnitude of Impact w/ HIA Recs.	Distribution	Quality of Evidence
Employment Impacts			
Health & life expectancy	▲▲▲▲	Farm sector and related jobs	****
Job creation	▲▲▲	~270 new jobs	****
Oregon product demand	▲▲▲▲	100—197 School Districts ⁴	****
Workers' ability to pay bills	▲▲▲	~270 new jobs	****
Economic activity	▲▲▲▲	3.16 economic multiplier	****
Impacts on Child Diet and Nutrition			
Meal program participation	▲▲▲	561,698 public school children ¹	**
Child learning & academic attainment	▲▲▲	561,698 public school children ¹	****
Household food security	▲▲	210,446 households ²	***
School meal nutrition	▲▲+	561,698 public school children ¹	*
Child overweight & obesity	▲▲+	1 in 4 children	**
Farm to School and School Garden Education Impacts			
Gardening education	▲▲▲▲	~15,000 new children ³	****
Child fruit & vegetable consumption	▲▲▲+	561,698 school children ¹	****
Agriculture & nutrition education	▲▲+	~15,000 new children ³	***
Child nutrition knowledge	▲▲+	~15,000 new children ³	***
Nutrition staff knowledge	▲▲	100—197 School Districts	**

HOW Affected Examples

DEPORTATION POLICY CREATES A CLIMATE OF FEAR AND PARALYSIS IN COMMUNITIES.



People are afraid to drive,



afraid to use parks
and exercise outdoors,



afraid to use public
services like clinics



and afraid to get involved
in their communities.

Family Unity, Family Health: How Family-Focused Immigration Reform Will Mean Better Health for Children and Families, Human Impact Partners, Oakland, CA, 2013

HOW Affected Examples

PROJECTED 2012 MBTA DEFECIT: \$161 MILLION
YEARLY HEALTH COST: \$272.1 MILLION / \$386.9 MILLION

  COST OF ADDITIONAL TIME IN TRAFFIC
\$137.5 MILLION
\$186.0 MILLION

 COST OF ADDITIONAL MORTALITY AND HOSPITALIZATIONS DUE TO AIR POLLUTION*
\$1.5 MILLION
\$2.1 MILLION

 COST OF ADDITIONAL FUEL BURNED
\$22.7 MILLION
\$31.8 MILLION

PROPOSED FARE INCREASE AND SERVICE REDUCTION SCENARIOS:
SCENARIO ONE

FARES WOULD INCREASE BY 43% AND SERVICE REDUCTIONS WOULD AFFECT BETWEEN 38-48 MILLION TRIPS PER YEAR

SCENARIO TWO
 FARES WOULD INCREASE BY 35% AND SERVICE REDUCTIONS WOULD AFFECT BETWEEN 53-64 MILLION TRIPS PER YEAR

  COST OF LIVES LOST DUE TO DECREASED PHYSICAL ACTIVITY
\$74.9 MILLION
\$116.5 MILLION

 COST OF ADDITIONAL CAR CRASHES, INCLUDING CRASHES WITH BICYCLES AND PEDESTRIANS
\$33.6 MILLION
\$48.8 MILLION

 COST OF CARBON EMISSIONS
\$1.9 MILLION
\$1.7 MILLION

A Healthy T for a Healthy Region: A Health Impact Assessment of Proposed MBTA Service Cuts and Fare Increases, Metropolitan Area Planning Council, 2012

*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

Recommendation to Maximize Health Benefits Example

Health Impact Assessment on HB 2800: OREGON FARM TO SCHOOL AND SCHOOL GARDEN POLICY, 2011, Upstream Public Health

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.

Recommendation to Maximize Health Determinant Benefits

The Potential Health Impact of a Poultry Litter-to-Energy Facility in the Shenandoah Valley, Virginia, VCU Center on Human Needs, 2013

- **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



Figure 1: A map of the Jack London Gateway site (from Google Maps).

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

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

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 its 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).

A HIA of CA Assembly Bill 889: The California Domestic Work Employee Equality, Fairness, and Dignity Act of 2011, SF Department of Public Health, 2011

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

\$75 MILLION FOR WISCONSIN TAD PROGRAMS

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

Healthier Lives, Stronger Families, Safer Communities
How Increasing Funding for Alternatives to Prison Will Save Lives and Money in Wisconsin, 2012

Cross-Sector Collaboration is Crucial to Improving Population Health – and HIA

“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

Without Engagement Transforming Inequities is Challenging

“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**

Resources Questions?

- [For more on Health Inequity see online course](http://www.rootsofhealthinequity.org/)
<http://www.rootsofhealthinequity.org/>
- Health Impact Assessment Websites:
 - Health Impact Project <http://www.healthimpactproject.org/>
 - World Health Organization HIA - <http://www.who.int/hia/en/>
 - Society for Practitioners of HIA - <http://www.hiasociety.org/>
 - Gateway- http://www.apho.org.uk/default.aspx?QN=P_HIA
 - UCLA HIA Clearinghouse Learning and Information Center - <http://www.hiaguide.org/>

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