

Example of HIA analysis: "City of Los Angeles Living Wage Ordinance"

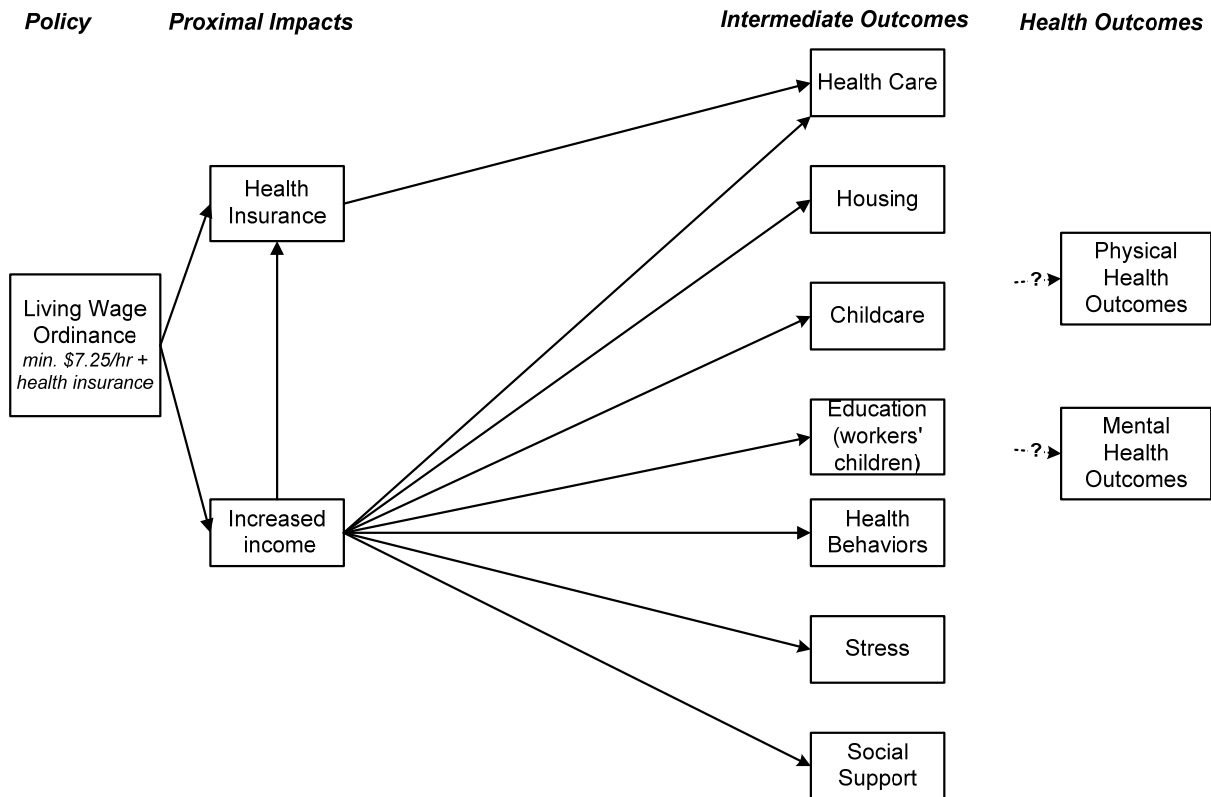
Policy to assess: Los Angeles Living Wage Ordinance

The Facts:

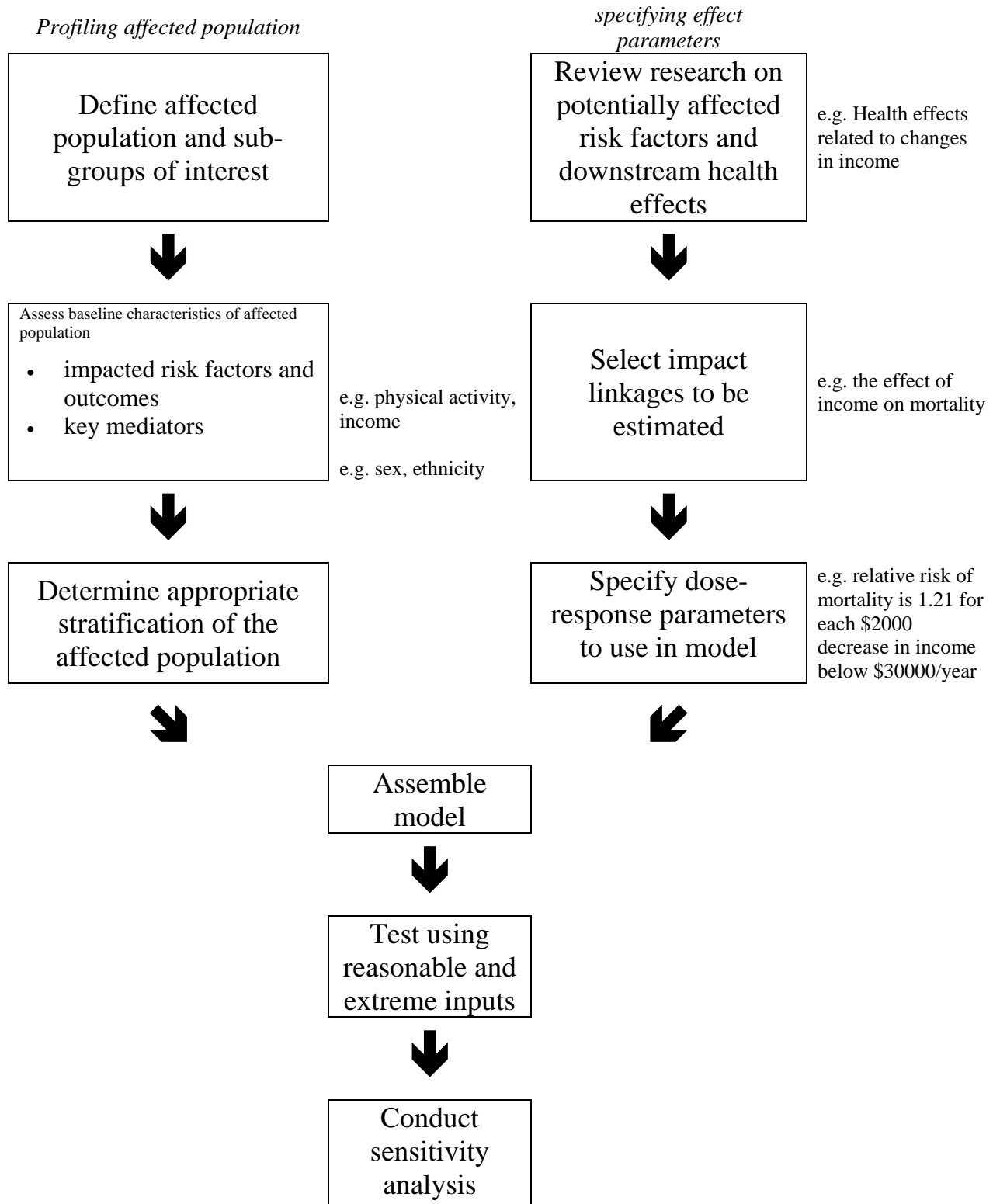
- Employees working on city contracts must be:
 - paid at least \$7.99/hour
 - provided health insurance or an additional \$1.25/hour
- Covers approximately 10,000 workers
- Applicability: many living wage ordinances throughout the United States

Logic Framework

Logic Framework for the Living Wage HIA



Steps in constructing a quantitative model to estimate health impacts



City of Los Angeles Living Wage

Current distribution wages and health insurance

No. workers subject to LA
Living Wage ordinance

Wages	\$6.75/hr	5,800
	7.75	2,500
	8.75	1,700
Health Insurance	Yes	4,000
	No	6,000
Total		10,000

A note on stratification in HIA Analysis

What is stratification?

Conducting separate, parallel analyses for different sub-groups of the affected population, e.g. males/females, rich/middle-class/poor, area residents/workers

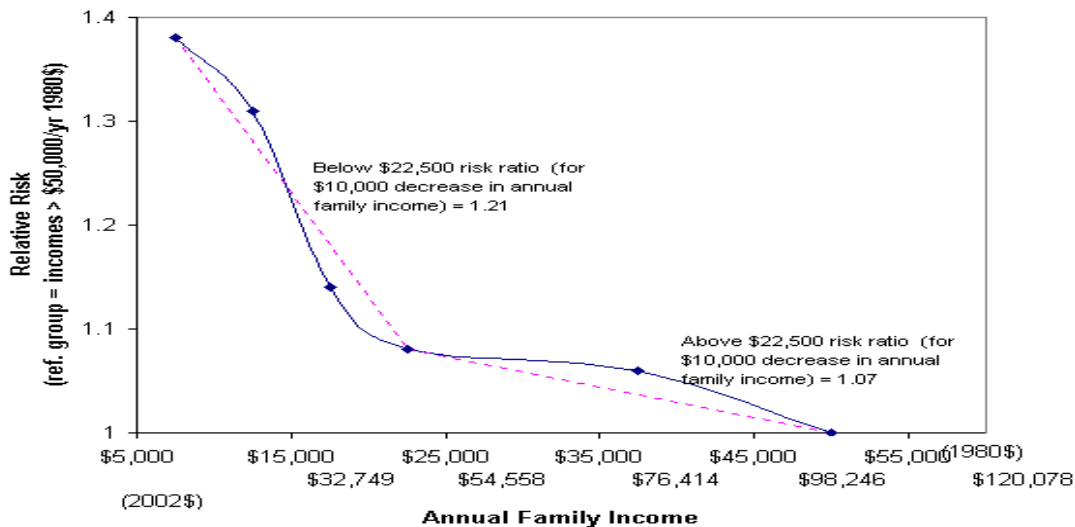
Why stratify?

1. *Political concern about disparities and equity*: Potential outcomes or risk factors among a specific group may be of particular concern to policy-makers or stakeholders (e.g. fresh fruit and vegetable consumption of the poor);
2. *Differential exposure*: Proximate effects (i.e. exposures) of a proposed policy or project may differ between groups (e.g. exposure to airborne particulates from an adjacent freeway will probably be higher for school children than for adults in a similar location);
3. *Sensitive populations*: Impacts may differ, even when exposures are similar, due to existing conditions and concurrent exposures (e.g. effect of a marginal increase in annual household income of \$1000 in poor vs. rich families, effect of air pollution on people with asthma).

How to stratify in HIA analysis

1. Review research and consult experts on the relationship of relevant exposures and health effects, including the effects on key mediators (e.g. “What is the relationship between income/monetary wealth and health?”)
2. Specify the effect parameters (i.e. dose-response relationship) (e.g. “By how much does the risk of mortality decrease for each additional \$1000 in annual household income?”)
3. Obtain data on the demographic profile of the population of interest
4. Obtain data on exposure among demographic groups (*Watch out! Categorization of groups may differ in research data and data on the population focused on in the HIA*)
5. Stratify as feasible and needed.

Modeling the effect of income on mortality (Backlund et al, 1999)



Since the effect of additional income appears to be much greater for individuals with an annual household income of less than \$22,500, the analysis should at least stratify on annual household income (below vs. above \$22,500). Additional stratification may be necessary depending on other exposures (e.g. health insurance) and differential proximate effects (marginal increase in income – lower wage workers receive wage larger increases than higher wage workers)

The table in Appendix 8 shows the final stratification scheme for the analysis of the living wage ordinance.

Results:

Potential Benefits of Modifying the Living Wage Ordinance

- Health insurance coverage is more than four times more cost effective in reducing excess mortality than an equivalent amount in the form of wages.
- Mandating health insurance coverage (disallowing opt out) would prevent on average, five deaths/year with no additional cost to the City.

Appendix 8: Spreadsheet for estimating deaths prevented by a Living Wage Ordinance

Stratified analysis of Los Angeles Living Wage Ordinance impacting 10,000 low-income workers, 40% of whom are uninsured. The ordinance would increase wages to \$7.99/hour and require employers to provide health insurance or pay an additional \$1.25/hour. Assume health insurance coverage costs \$1.59/hour.

SCENARIO:

New wage = \$7.99 \$ in lieu of H.I. per hr = \$1.25 % uninsured to be insured = 100%

Previous hourly wage	Previous insurance status	Change in hourly compensation	Total income change (including out-of-pocket H.I. premium costs incurred as a result of ordinance)	Insurance change	# in category	RR	Previous (baseline) mortality rate	New mortality rate	Change in # deaths/year
\$6.75	Uninsured	No change	No change	No change	0	1	0.0056	0.0056	0.00
		No change	-\$0.34	To be insured	0	0.774	0.0056	0.0043	0.00
		\$2.49	\$2.49	No change	0	0.957	0.0056	0.0053	0.00
		\$1.24	\$0.90	To be insured	3480	0.757	0.0056	0.0042	4.70
\$6.75	Insured	No change	No change	No change	0	1	0.0043	0.0043	0.00
		\$1.24	\$1.24	No change	2320	0.979	0.0043	0.0042	0.21
\$7.75	Uninsured	No change	No change	No change	0	1	0.0055	0.0055	0.00
		No change	-\$0.34	To be insured	0	0.774	0.0055	0.0042	0.00
		\$1.49	\$1.49	No change	0	0.974	0.0055	0.0053	0.00
		\$0.24	-\$0.10	To be insured	1500	0.771	0.0055	0.0042	1.88
\$7.75	Insured	No change	No change	No change	0	1	0.0042	0.0042	0.00
		\$0.24	\$0.24	No change	1000	0.996	0.0042	0.0042	0.02
\$8.75	Uninsured	No change	No change	No change	0	1	0.0054	0.0054	0.00
		No change	-\$0.34	To be insured	1020	0.774	0.0054	0.0042	1.24
		\$1.25	\$1.25	No change	0	0.978	0.0054	0.0053	0.00
		\$0.00	-\$0.34	To be insured	0	0.774	0.0054	0.0042	0.00
\$8.75	Insured	No change	No change	No change	680	1	0.0041	0.0041	0.00
		\$0.00	\$0.00	No change	0	1	0.0041	0.0041	0.00
Total								8.05	

