



Independent Centre for Analysis and Research of Economies

FOR SUSTAINABLE AND PROSPEROUS SOCIETY



**What should we strive for in urban development – increasing
Average Health Status or decreasing Health Inequalities:
the role of Health Impact Assessment**

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Winners & Losers from a policy, project, or program

Urban development is interventions on populations with **winners** – people who benefit from it, and **losers** – people who benefit less or nothing at all, or are worse off.

When people benefit less from a certain policy, but they are not worse-off compared to their situation before the change, they are **relative losers**. People are **absolute losers**, if as a result from the change, they are worse-off compared to their previous situation (1).

There are always opposing interests – who will benefit more. So, what should we strive for when allocating limited resources: increasing Average Health Status, or decreasing Health Inequalities?

Winners & Losers from a policy, project, or program

For any intervention on populations **the distribution of the benefit is the most important factor influencing the outcomes**, no matter whether the primary objective is improving health of whole populations (in public health), or the primary objective is different than health (i.e. in other sectors: transport, education, agriculture, etc.), however with impact on health of populations (1,9).

The Role of HIA

HIA is concerned with the distribution of potential and/or unintended effects from policy, project or program within the population (2), i.e. currently the scope of HIA is limited to the interventions with primary objective different than health.

However, no matter what the concrete causal pathways are, these effects are always a **consequence** from **the distribution of the benefit among the population** from the primary objective of a policy, project or program!

Therefore a proper HIA should be based on analysis of **the distribution of the benefit among the population!**

The Role of HIA

Can HIA be used for interventions with primary objective improving health of whole populations?

May be.

HIA has the potential to be used also for interventions where the primary objective is improving health of whole populations, but only should HIA evolves to include a proper analysis of **the distribution of the benefit among the population.**

Is HIA up to the task?

Well, apparently not quite.

The Role of Theory

"unless public health programs are based on sound theoretical bases, they will fail" (3)

Accumulation of empirical evidence is of limited value unless accompanied by general principles which might inform wider application (4)

Only theoretical framework based on critical realism (if **A** then always **B**) can provide universal explanations and predictions (5,6)

The Role of Theory

**There is nothing so practical as
a good theory**

Kurt Lewin

Panayotov Matrix (1)

Outcome from new policy, program, or intervention										
Better off		Worse off		A H S			H Ineq			Case see Graph 2
Previous Winners	Previous Losers	Previous Winners	Previous Losers	↑	↓	—	↑	↓	—	
YES	NO	NO	NO	X			X			1
NO	YES	NO	NO	X				X		2
NO	NO	NO	YES		X		X			3
NO	NO	YES	NO		X			X		4
YES	NO	NO	YES	x*	x*	x*	X			1, 3, 5
NO	YES	YES	NO	x*	x*	x*		X		2, 4, 6
YES	YES	NO	NO	X			x^	x^	x^	1, 2, 7
NO	NO	YES	YES		X		x^	x^	x^	3, 4, 8
NO	NO	NO	NO			X			X	9

* Whether AHS increases, decrease or remains the same depends on the balance of the gain/loss between recipients (can be positive, negative, or neutral).
 ^ Whether HInEq increase, decrease or remain the same depends on the balance of the gain/loss between recipients (can be positive, negative, or neutral).

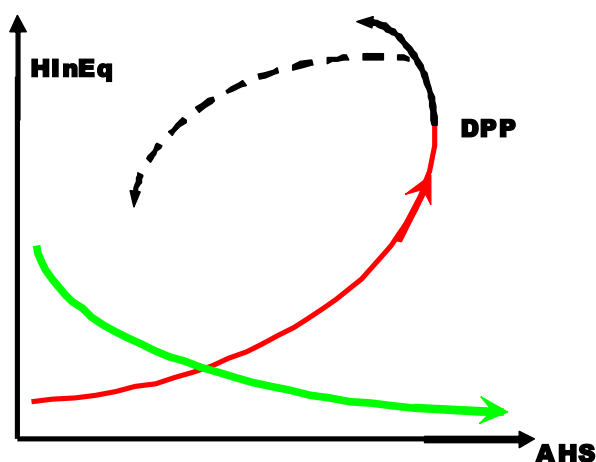
WHO HIA Conference,
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Average Health Status - Health Inequalities Matrix

Panayotov Matrix (1,7,8)



AHS – Average Health Status
 HInEq – Health Inequalities
 DPP – Dead Performance Point

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Panayotov Matrix is:
applying *who-gets-what* approach,
or in other words
the **distribution** of the benefit
at **local** level
in dynamics, i.e. *past-present-future* (8)

Panayotov Matrix analyses
the distribution of the benefit from an intervention
within the population. Being based on critical realism,
i.e. “if **A** then always **B**”, the model **provides**
universal explanations and predictions.

Panayotov Matrix explains
the generative mechanisms which
create, widen or diminish health inequalities.

Evidence in HIA

There is consensus that decisions for allocating limited resources should be evidence-based.

I have established that

evidence for interventions on populations is relative and depends on the distribution of the benefit among the population (1,9)

Identical policies, programs or interventions achieve very different outcomes, when applied to different populations, because of the differences in the distribution of the benefit in a specific case. In other words, ... due to the differences in previous and new *winners* and *losers* among these populations.

Replicability of Evidence in HIA

While for interventions applied to individuals *replicability* is copying of an intervention in order to achieve the same outcome for an individual,

replicability of the evidence

in relation to interventions applied to populations means **replication of certain combination of distribution of the benefit**, which in turn will lead to replication of the result in terms of impact on average health status and health inequalities (9).

Implications for HIA

Methodology

The appraisal of any intervention on populations should be based on analysis of distribution of the benefit among population at local level.

Panayotov Matrix is a tool for such analysis, which facilitates maximizing health of whole population while reducing health inequalities.

Screening

When finding that nobody is worse off from the proposed intervention, a HIA would stop at 1st step by determining that HIA is not warranted/required.

Panayotov Matrix shows that even when nobody is worse off, an intervention could create and/or widen health inequalities.

Implications for HIA

Methodology cont.

Even if HIA proceeds, **without Panayotov Matrix** there will be problems at all other steps and the result could be creating and/or widening health inequalities.

Scoping

Indirect and/or distant impacts might be omitted.

Assessment

Assessment might be incomplete and/or incorrect.

Evidence might be incorrect and/or inapplicable.

Baseline profile might be incomplete and/or incorrect,
if not taking into account **who-gets-what**.

Policy analysis might be incomplete and/or incorrect,
if not taking into account **who-gets-what**.

Implications for HIA

Methodology cont.

Recommendations

Trade-offs might be incomplete and/or incorrect, or even misleading.
Recommendations might be weak, ambiguous, unconvincing or inapplicable due to problems with evidence.

Monitoring and Evaluation

Monitoring might be incomplete.
Evaluation might be incomplete and/or incorrect.

Health inequalities might be created and/or widen

due to above mentioned problems.

Implications for HIA

Distribution of the benefit should not be confused with distribution of the population, which is normal distribution with bell-shape.

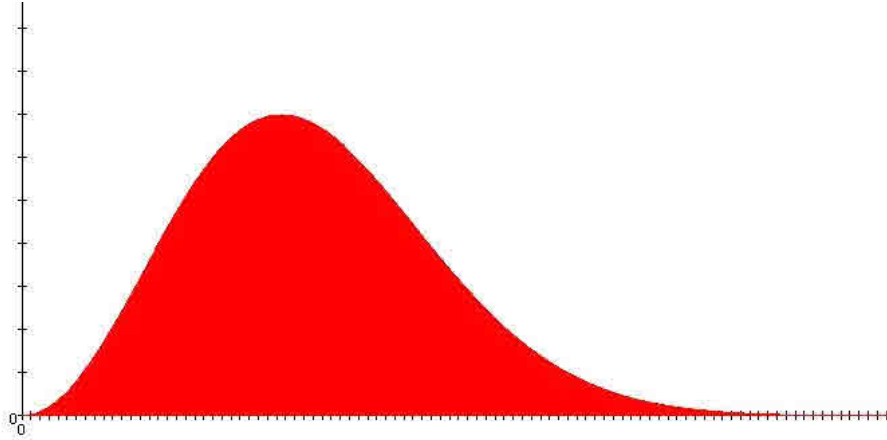
The former impacts the shape of the later, which is defined by two parameters: the *mean (average)* μ and *standard deviation* σ .

The larger is the standard deviation,
the more spread out is the distribution,
i.e. the more flattened is the bell.

The goals of WHO and new public health require interventions with such distribution of the benefit among the population, which will lead to reducing the standard deviation while improving the mean.
i.e. **the goal is to get the bell narrower, while mean moves to right** (9)

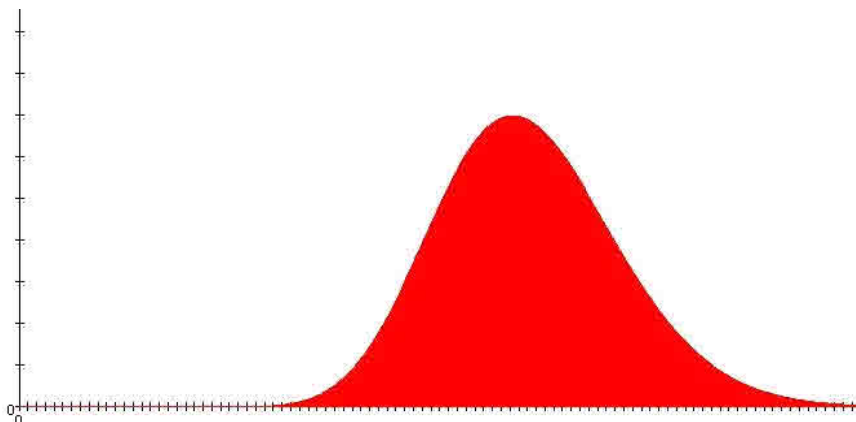
Example 1

Baseline Profile



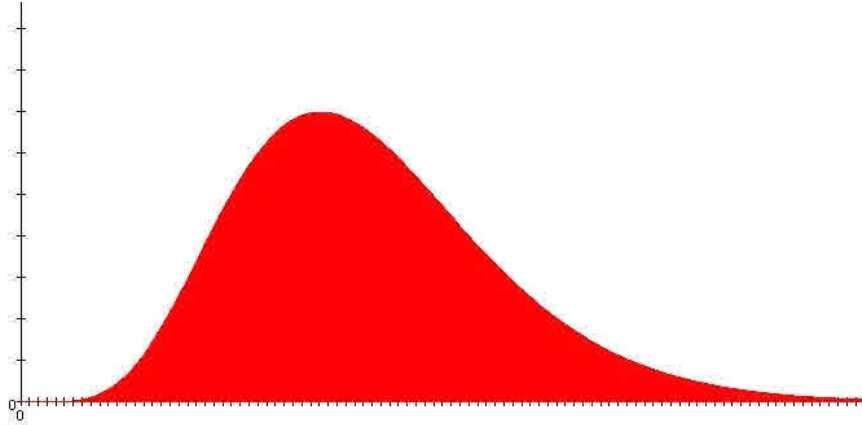
Example 1

Improved mean and reduced σ



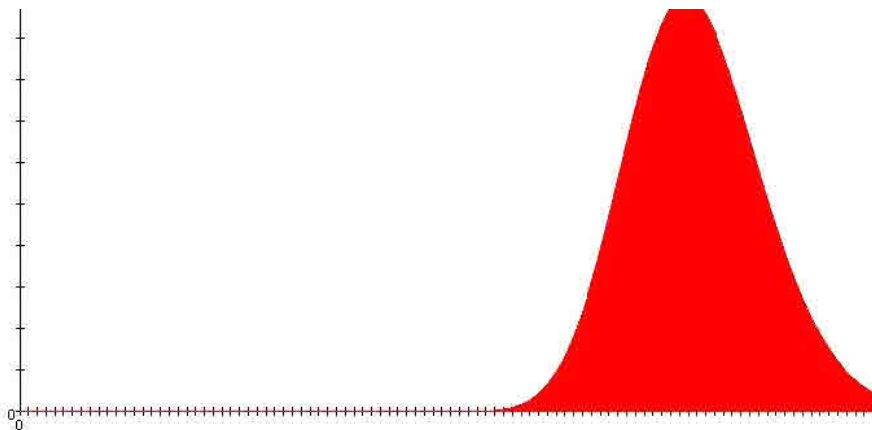
Example 2

Baseline Profile



Example 2

Improved mean and reduced σ



References:

1. **Panayotov J.**, Public Health and Average Health Status: Do Health Inequalities Matter? ICARE, Health Economics, 8 August 2008.
available at: <http://independent.academia.edu/JordanPanayotov/Papers#137039>
and at: <http://www.icare.biz/articles.html>
(last accessed 3 April 2010)
2. **World Health Organization** 1999 *Health impact assessment: main concepts and suggested approach* European Centre for Health Policy, Copenhagen: WHO Regional Office for Europe.
3. **Heller R.** et al., UK health inequalities: the class system is alive and well, MJA 2004; 181 (3): 128
4. **Green J.**, The role of theory in evidence-based health promotion practice, Editorial, Health Education Research, Vol. 15, No. 2, 125-129, Oxford University Press 2000
5. **Connelly J.**, Critical realism and health promotion: effective practice needs an effective theory, Editorial, Health Edu Research, Vol.16, No2, 115-120, Oxford University Press 2001
6. **Connelly J.**, More public health theory please – but make it adequate, Editorial, Journal of Public Health, Vol.27, No.4, p. 315, 2005

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References cont.:

7. **Panayotov J.**, Equity – A Premise for Efficiency in Public Health, Presentation at 11th World Congress on Public Health, Rio de Janeiro, Brazil, 24 August 2006
available at <http://independent.academia.edu/JordanPanayotov/Talks>
(last accessed 3 April 2010)
8. **Panayotov J.**, HIA: Is Sustainable Wellbeing Possible Without Health Equity?, Presentation at 9th International HIA Conference, Liverpool, UK, 9 October 2008
available at <http://independent.academia.edu/JordanPanayotov/Talks>
(last accessed 3 April 2010)
9. **Panayotov J.**, Evidence in Public Health and Health Impact Assessment, ICARE, Health Economics, 1 February 2009.
available at: <http://independent.academia.edu/JordanPanayotov/Papers#137040>
and at: <http://www.icare.biz/articles.html>
(last accessed 3 April 2010)

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