A participatory process for promoting equity in urban health in Turin
Which are the policies with the highest potential to equally improve health in an urban setting?

Giuseppe Costa,
Osservatorio epidemiologico Regione Piemonte, Università di Torino
Working team: Roberto Dimonaco, Nicolás Zengarini, Morena Stroscia, Silvia Pilutti, Annalisa Magone,
A case study
The Turin case-studies (H2020 Mindmap and EuroHealthy) aim to engage and involve policy makers of the city in developing an exercise of “priority setting” in order to select policies and actions that are more promising in reducing health inequalities.

Rationale
Using health inequalities as a guide to identify achievable health potential benefits in the city of Turin: if somebody has done better… it can be done!
What message and what evidence?
The last 40 years of the history of the Turin social and health profiles have been compared in a recently published review of health inequalities.

Based on data from the Turin longitudinal study (an epidemiological surveillance system which allows to associate social and health carriers of individuals and families linking administrative data at individual level)
Socioeconomic information

- Population census 1971
- Population census 1981
- Population census 1991
- Population census 2001
- Population census 2011

Health outcomes

- causes of death (1971-2014)
- hospital admissions (1995-2014)
- cancer registries (1986-2010)
- diabetes registries (2002-2011)
- outpatient visits (2000-2012)
- drug prescriptions (1997-2012)

TLS records for 2,391,833 persons who were resident in Turin since 1971 to August 2014.

Individual record linkage between:

- Turin: about 900,000 inhabitants, North-West of Italy
- Turin Longitudinal Study (TLS)
- TLS records for 2,391,833 persons who were resident in Turin since 1971 to August 2014.
### Stakeholders directly and indirectly engaged

<table>
<thead>
<tr>
<th>Area</th>
<th>Participants</th>
<th>Receiving information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public administration</td>
<td>18</td>
<td>48</td>
</tr>
<tr>
<td>- Region, Municipality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- social and welfare, education, environment, ICT, employment, household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- local health authority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Innovation and smart city</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>- lenders and donors (banks and foundations), start up, Church, migrants health network</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University and research centers</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Labour unions</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>No profit</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Mass media</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>
What message and what evidences?

1. **HEALTH PROFILE**
   - Trend
   - Social determinants
   - Compared to other European cities

2. **WHERE YOU LIVE**
   - Geographical inequalities
   - Segregation
   - Environment
   - Vulnerability
   - Violence and accidents

3. **WHO YOU ARE**
   - Family
   - Household
   - Employment
   - Income
   - Education
   - Healthcare
   - Immigrants
   - Life course

4. **WHAT NEXT**
   - Crisis
   - Future perspectives
22 November 2016

Knowledge transfer and dissemination

- General presentation of scientific data and evidences
- To understand health status of Turin population and inequalities.
- Presentation of MINDMAP and EUROHEALTHY activities
Income distribution in the 2010s in Turin

Life expectancy at birth in Turin in the 2010s

- Income distribution: 77.8, 78.3, 79.5, 81.2
- Life expectancy: 77.8, 78.3, 79.5, 81.2
Inequalities in life expectancy through time

A successful story

Improvements in life expectancy in 40 years

1970s

2010s
Diseases more associated with housing deprivation

- Unhealthy lifestyles
- Barriers to prevention and care
- Safety and security
- Poverty and overcrowding

The process

14 December 2016

a. Understanding the causal pathways
   Stakeholders were offered deepened presentations of thematic areas

   1. Life course approach (early life, migrants, elderly, education)
   2. Access to health (employment, health care, income, education)
   3. Structures (household, environment)

b. Concrete experience from the territory.
   Analysis and voices from the stakeholders
   **Interdisciplinary work groups** sharing experiences & best practices,

   *Identifying problems, strength and opportunities, challenges and weakness*
Explanatory framework (mechanisms)

Who you are?

Social position

- Control over life
  - material resources
  - status
  - support

Risk factors

- Exposure to
  - psicosocial
  - behavioural
  - environmental
  - barriers to care

Health

- Health outcomes
  - mortality
  - morbidity
  - trauma
  - functional

Social consequences

Control over life

Social vulnerability

Where you live?

(Modified from Diderichsen 2001)
Who you are?

- DEMAND
- CONTROL
- REWARD
- SUPPORT

Who you are?
Job strain among the male workforce in Torino

D’Errico et al., 2011 Elaborazioni su campione di occupati iscritti alla CGIL in Provincia di Torino
Smokers in Italy
Males 2015

Overweight in Italy
Females 2015

LIFESTYLES

RISK FACTORS

SOCIAL POSITION = LIFE CONTROL
SOCIAL POSITION = LIFE CONTROL

RISK FACTORS

ENVIRONMENT

Centralina Grassi

Centralina Consolata

PM10

*Figura 2 - PM_{10} numero superamenti del valore limite di 24 ore per la protezione della salute umana*

*Fonte: Arpa Piemonte*
Acute coronary disease
In Torino, 2009

Coronary revascularization
In Torino, 2009

RISK FACTORS
BARRIERS TO CARE

SOCIAL POSITION
= LIFE CONTROL

Elaborazioni su dati dello Studio Longitudinale Torinese – Servizio Sovrazionale di Epidemiologia ASL TO3
RISK FACTORS

STRESS
LYFESTILES
ENVIRONMENT
BARRIERS TO CARE

SOCIAL POSITION = LIFE CONTROL

DISEASE

Educational inequalities in mortality by neighbourhood in Torino (1972-2012)

Where you live?

Tassi di mortalità x 100.000

Low education
Middle education
High education
Axes of wellbeing (SDH) in Turin by neighbourhood
The process

12 January 2017

Aimed at developing a common **policy framework** to orient decisions and concrete actions towards measurable health outcomes

- defining problems, solutions, resources, responsibilities, tools and methods for action
- developing a participative approach

To propose potential inter-sectoral actions

FROM THEORY TO ACTION

What to do? How to do?
Policy framework for actions

- Risk factors
- Health
- Social consequences
- Local context
- Allocation
- Moderating consequences
- Tailoring interventions
- Focusing prevention and health care
- Capacitating contexts
- Improving SDH

(Modified from Diderichsen 2001)
Differences in life expectancy at 65 anni by social class

- € € € € €

SOCIAL POSITION = LIFE CONTROL

RISK FACTORS
STRESS
LIFESTYLES
ENVIRONMENT
BARRIERS TO CARE

DISEASE

-3.00

-1.78

-1.03

20.8
Policy framework for actions

Actions

- Improving SDH
- Capacitating contexts
- Focusing prevention and health care
- Tailoring interventions
- Allocation
- Moderating consequences

Local context

Risk factors

Health

Social consequences

Social position

(Modified from Diderichsen 2001)
Work injuries in the construction industry before and after implementation of the European directive on safety in the eight regions early complying to the directive

Figure 2  Early intervention regions’ crude serious injury rate

Farina 2016
Compliance to guidelines in the integrated pathway of care of the DIABETES in Turin

<table>
<thead>
<tr>
<th>Mortality</th>
<th>Inequality</th>
<th>Cost</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR</td>
<td>RR</td>
<td>RR</td>
<td>%</td>
</tr>
<tr>
<td>MMG + Diab + LG</td>
<td>1</td>
<td>1.11</td>
<td>1</td>
</tr>
<tr>
<td>MMG + Diab</td>
<td>1.29</td>
<td>1.15</td>
<td>1.14</td>
</tr>
<tr>
<td>MMG</td>
<td>1.72</td>
<td>1.30</td>
<td>1.03</td>
</tr>
</tbody>
</table>

Gnavi, 2013
Trend of PET utilization in Piedmont according to education.

RR of access in less educated

- RR of access in less educated: 0.72
- RR of access in less educated: 1.27

Spadea et al., 2010
17 March 2017:

Plenary session, open meeting

- Official presentation of the monograph to the city
- Stakeholders present the outcomes of the project
- The main policy makers take up responsibility to drive and bring the change
- How to choose priorities?

PUBLIC COMMITMENT
Out of the MINDMAP community 15 of the most influential stakeholders and decision makers were engaged in the **Euro-Healthy Turin case-study**.

**Policy area**

**Public administration**
- Municipality
- social and welfare, education, environment, ICT, employment, household
- local health authority
- social housing authority
- Innovation and smart city

**Participants**
- 9

**NGOs**
- lenders and donors (banks), start up, migrants health network

**Participants**
- 3

**Labour union**

**Participants**
- 2

**No profit**

**Participants**
- 1
Methodology that supports the selection of a portfolio of policies (EuroHealthy)

**Evaluating with MACBETH**

- Evaluating policies in each axis
  - (Activity 1)
- Weighting
  - (Activity 2)
- Select policies

**Results**

- Calculate the global benefit of each policy
  - (Activity 3)

**Phase I:** Multicriteria group value model

- Phase II: Benefit-to-effort analysis & Prioritization

**Preparation phase**

- Define intervention axes needing attention
- Define, for each axis, a SQ and a Target
- Assess the doability of each policy
  - Scenario analysis
    - (Activity 4)
- Strategic graph
  - (Activity 5)
- Selection of a portfolio of policies
  - (Activity 5)
8 main axes of health inequalities (SDH) were identified as relevant at the city level:

- Being well educated
- Being employed
- Having a good quality of work
- Having adequate material resources
- Having adequate housing
- Having adequate family network
- Living in an adequate physical environment
- Living in an adequate social environment
Intersections between policies and axes of inequalities (SDH) were identified to prepare

<table>
<thead>
<tr>
<th>Areas of concerns</th>
<th>Occupational conditions</th>
<th>Education</th>
<th>Income</th>
<th>Family / household</th>
<th>Housing and Living conditions</th>
<th>Quality of work</th>
<th>Built Environment</th>
<th>Social Context</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(unemployment)</td>
<td>(low education)</td>
<td>(distribution below average)</td>
<td>(loneliness and frail in elderly people)</td>
<td>(bad living conditions)</td>
<td>(manual workers)</td>
<td>(Indicators of Accessibility)</td>
<td>(Rate of social and physical disorders notified to or discovered by the police)</td>
</tr>
</tbody>
</table>

**Indicators for the SQ definitions**

<table>
<thead>
<tr>
<th>Policies / intervention</th>
<th>Policies for Quality of Work and Organizations</th>
<th>Employment Integration Policies</th>
<th>Social protection policies and empowerment</th>
<th>Policies for education and cultural promotion</th>
<th>Policies for the Quality of the Living Environment</th>
<th>Health and social integration policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Promozione della qualità nel lavoro</td>
<td>Gestione di incontro domanda-offerta e servizi per il lavoro</td>
<td>Sostegne al reddito</td>
<td>Contrasto all'abbandono scolastico e di integrazione</td>
<td>Riduzione dell'inquinamento e aumento sostenibilità</td>
<td>Servizi e residenze per anziani non autosufficienti</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>conciliazione e servizi territoriali, orari e accessibilità</td>
<td>orientamento</td>
<td>risposta alla domanda sociale di abitazioni</td>
<td>integrazione sociale per migranti e richiedenti asilo</td>
<td>miglioramento delle aree verdi</td>
<td>promozione della domiciliarietà</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Alteranza scuola lavoro</td>
<td>x</td>
<td>integrazione sociale per migranti e richiedenti asilo</td>
<td>Sostegni di comunità per donne e minori</td>
<td>riquadramento spazi abbandonati</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Formazione professionale</td>
<td>x</td>
<td>strategie di inclusione attiva e promozione di comunità</td>
<td>politiche di supporto economico allo studio</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
EXPECTED BENEFIT FROM THE POLICY IN REDUCING HEALTH INEQUALITIES

INTERVENTION ON THE QUALITY OF WORK AND WORK ORGANIZATION

<table>
<thead>
<tr>
<th>FATTORI DI RISCHIO</th>
<th>Condizione occupazionale</th>
<th>Qualità del lavoro</th>
<th>Istruzione</th>
<th>Reddito</th>
<th>Condizione familiare</th>
<th>Condizione abitative</th>
<th>Ambiente costruito</th>
<th>Ambiente sociale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality at Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Null to Extreme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conciliation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Null to Extreme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternance School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Null to Extreme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### EXPECTED DO ABILITY OF POLICIES

<table>
<thead>
<tr>
<th>Politiche per l'istruzione e la promozione culturale</th>
<th>Politiche per la qualità dell'ambiente di vita</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contrasto all'abbandono scolastico</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image1" alt="Graph" /></td>
<td><img src="image2" alt="Graph" /></td>
</tr>
<tr>
<td><strong>Promozione socio-culturale giovani</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image3" alt="Graph" /></td>
<td><img src="image4" alt="Graph" /></td>
</tr>
<tr>
<td><strong>Supporto economico studio</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image5" alt="Graph" /></td>
<td><img src="image6" alt="Graph" /></td>
</tr>
</tbody>
</table>

- **Nullo**
- **Molto debole**
- **Debole**
- **Moderato**
- **Forte**
- **Molto forte**
- **Estremo**
<table>
<thead>
<tr>
<th>Social Determinants</th>
<th>% of deaths attributable to inequalities</th>
<th>Absolute number of death per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>35%</td>
<td>408</td>
</tr>
<tr>
<td>Family / household</td>
<td>22%</td>
<td>172</td>
</tr>
<tr>
<td>Income</td>
<td>17%</td>
<td>149</td>
</tr>
<tr>
<td>Quality of work</td>
<td>10%</td>
<td>38</td>
</tr>
<tr>
<td>Housing and Living conditions</td>
<td>7%</td>
<td>77</td>
</tr>
<tr>
<td>Employment condition</td>
<td>5%</td>
<td>47</td>
</tr>
<tr>
<td>Social Context</td>
<td>5%</td>
<td>63</td>
</tr>
<tr>
<td>Built Environment</td>
<td>2%</td>
<td>15</td>
</tr>
</tbody>
</table>
• BENEFIT VS DO-ABILITY

- [IntegMigrant]
- [StilidiVita]
- [SuppStudi]
- [Abband-Scol]
- [SalutMent]
- [ProfComun]
- [AlternScLa]
- [Sost-Redd]
- [FormProf]
- [PromSC-giov]
- [Domicili]
- [AnziniNonAut]
- [InseSo-cLav]
- [Conciliaz]
- [Donne-Minori]
- [AccessCure]
- [DomAbitaz]
- [PM10-2.5]
- [A-Verdi]
- [Riqualif-Urb]

- Nullo
- Molto debole
- Debole
- Moderato
- Forte
- Molto forte
- Estremo
- Estremo
What next?

• Sensitivity analysis of priority setting in different
  – expected scenarios
  – health dimensions (mental health vs mortality)
  – time perspective (short-long) and latency

• Joint effort (social, housing, health care) for an
  integrated urban strategy towards more equity
  in health
  – piloting on a deprived area with the same
    participatory approach (Vallette)
1. Putting (health) Equity ‘on’ the Agenda DONE!

2. Keeping (health) Equity ‘in’ Policies

How do we make joint investments for equity in health work in practice?
Co Production

ACCOUNTABILITY

PARTICIPATION

Joint Responsibility

COOPERATION

Shared Benefits

Chris Brown, 2016
Le lenti dell’equità

A network of health equity cities?
Clusters:

- **Cluster 1**: Relatively positive and active response to health inequalities.
  - At least one national response to health inequalities or a comprehensive regional HI policy response.

- **Cluster 2**: Variable response to health inequalities.
  - No explicit national policy on HI, but at least one explicit regional response or a number of other policies with some focus on health inequalities.

- **Cluster 3**: Relatively undeveloped response to health inequalities.
  - No focused national or regional responses to health inequalities, no explicit health inequality reduction targets (though there may be targeted actions on the social determinants of health).
giuseppe.costa@epi.piemonte.it

http://www.disuguaglianzedisalute.it/