Policy response in Italy
Challenges for research

Giuseppe Costa, University of Torino and Piedmont Region
on behalf of the Italian coordinating team
ISS, AgeNas, INMP, Piedmont Region, Ministry of Health
Health Equity Italy!

- JAHEE: where we are (Europe)
- Policy response in Italy (under the commitment of JAHEE)
- Challenges for research (and ISS?)
- Contribution to the SDGs agenda (ASVIS)
Health Equity Italy!

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EDUCATIONAL INEQUALITIES IN MORTALITY ACROSS 17 EU POPULATIONS, MEN 1980-2014 (Mackenbach, Pnas 2018)

Social inequalities in health are still there

Heterogeneity in policy response

Narrowing absolute inequalities?

East-West divide

Social divide
JAHEE
three steps

PFA Policy framework for action “TO BE”

What should be done?

How far we are from what should be done and why?

Actions to be implemented

It can be done!

Lessons learned: what next?

We are here: DONE!
Five policy domains

WP5 monitoring

WP6 healthy living environments

WP7 immigration

WP8 health systems

WP9 governance/HiAP
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WP5 monitoring

WP6 healthy living environments

WP7 immigration

WP8 health systems

WP9 governance/HiAP
WP5 monitoring: INTEGRATING CENSUS COVARIATES INTO THE INDIVIDUAL RECORD OF THE NHS POPULATION REGISTRY

WP6 healthy living environments

WP7 immigration

WP8 health systems

WP9 governance/HiAP
Simulation of regional variation in NHS capitation formula 2015 (Euros), according to the adjustment of the impact of age (green) and deprivation (grey) on the need of each level of care (hospitalization, outpatient care, medication).
WP5 monitoring: INTEGRATING CENSUS COVARIATES INTO THE INDIVIDUAL RECORD OF THE NHS POPULATION REGISTRY

WP6 healthy living environments: HEALTH EQUITY AUDIT IN THE NEW NATIONAL PREVENTION PLAN PNP

WP7 immigration

WP8 health systems

WP9 governance/HiAP
## Potential Maximum Impact of Levelling Exposure to Risk Factors to the One of the More Educated?

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Tra il 15% e il 30% della mortalità maschile e tra il 10% e il 30% di quella femminile è dovuta alle disuguaglianze sociali. Non c'è nessun altro determinante così importante. E quella dovuta alle disuguaglianze nei fattori di rischio?

% MORTALITY ATTRIBUTABLE TO LOW EDUCATION

- Piemonte
- Liguria
- Lombardia
- Trentino
- Veneto
- Friuli
- Emilia
- Marche
- Toscana
- Umbria
- Lazio
- Campania
- Abruzzo
- Molise
- Puglia
- Basilicata
- Calabria
- Sicilia
- Sardegna

Uomini
Donne
CONTRIBUTION OF THE EDUCATIONAL INEQUALITIES IN THE THREE MAIN RISK FACTORS (SMOKING, PHYSICAL ACTIVITY, BMI) TO THE MORTALITY ATTRIBUTABLE TO LOW EDUCATION

MORE EQUITY FOCUSED
NATIONAL, REGIONAL, LOCAL PREVENTION PLANS
WP5 monitoring: INTEGRATING CENSUS COVARIATES INTO THE INDIVIDUAL RECORD OF THE NHS POPULATION REGISTRY

WP6 healthy living environments: HEALTH EQUITY AUDIT IN THE NEW NATIONAL PREVENTION PLAN PNP

WP7 immigration: NO COMMENT

WP8 health systems

WP9 governance/HiAP
Policy response in Italy under the umbrella of JAHEE?

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WP6 healthy living environments: NUOVO PNP

WP7 immigration: NO COMMENT

WP8 health systems: HEALTH EQUITY AUDIT IN THE PROCESS OF CARE AND OUTCOME EVALUATION (CHRONIC DISEASE)

WP9 governance/HiAP
Prevalence % of diabetes in 2017, age adjusted

Turin case study on diabetes

Income in 2008

Ischaemic heart disease age adjusted 2009
Educational inequalities in % of diabetic patients not complying the recommendation of HbA1c control every six months

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<td>sup.5aa/laurea</td>
<td>11.4</td>
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Pro-active pathways of care of chronic diseases can make the difference in outcomes, equity at the same costs.

- Lower mortality compared to model with higher costs
- Equal or lower costs compared to model with higher mortality
- Lower mortality inequalities

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<th>Cost RR</th>
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WP8 health systems: HEALTH EQUITY AUDIT IN PROCESS OF CARE AND OUTCOME (CHRONIC DISEASE)

WP9 governance/HiAP: INTERSECTORAL MECHANISMS OF COORDINATION/COOPERATION
FROM THEORY TO ACTION

LISTENING & ENGAGEMENT

RAISING AWARENESS AND COMMITMENT

BUILDING COMMUNITY

FROM AUTHORITIES
Torino Social Impact
A PLATFORM OF ENTERPRISES FOR SOCIAL INNOVATION

2.5 I partner TSI

| Associazione di Progettazione sociale M.M. | Finpiemonte onlus |
| Associazione Quinto Ampliamento | Fondazione Contrada Torino Onlus |
| Associazione Rete delle Case del Quartiere | Fondazione Fitzcarraldo |
| Centro Servizi Volontariato Vol.To | U.S. 2I3T |
| Città Metropolitana Torino | Impact Hub Torino |
| Club degli Investitori | Izmade srl SB |
| Comitato imprenditorialità sociale | Legacao Piemonte |
| Comitato Torino Finanza | Links |
| Compagnia di San Paolo | Mamazen srl |
| Comune di Torino | Nesta Italia |
| Confcooperative Piemonte Nord | Nestor srl |
| CSP - Innovazione nelle ICT Scarl | Torino Passa Critica |

TURIN LONGLITUDINAL STUDY AND EQUITY LENS
AS A LABORATORY FOR IMPACT ASSESSMENT IN SOCIAL INNOVATION AND IMPACT FINANCING

| SocialTech | Startaed |
| Sumisura s.c. | Talent Garden |
| Toolbox | Top-IX |
| Torino Wireless | Unicoop Piemonte |
| Unione Industriale Gruppo Giovani imprenditori | Università degli Studi di Torino |
| Urban Center | SocialFare |
Health Equity Italy!

- JAHEE: where we are (Europe)
- Policy response in Italy (under the commitment of JAHEE)
- Challenges for research (and ISS?)
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Causation issues behind health inequalities (FEAM/ALLEA panel)

**INVITATION**

FEAM/ALLEA symposium

Health inequalities

An interdisciplinary discussion of socioeconomic position, health and causality

Despite decades of research into health inequalities there is still no consensus on some of the basic issues. For example, different disciplines hold different views on whether there is a causal effect of low socioeconomic position on health, and on what the main mechanisms linking low socioeconomic position to ill-health and premature death are. The symposium aims to bring together key opinion leaders from various scientific backgrounds and kick-start the much needed interdisciplinary discussion about these issues.

You are kindly invited to attend this international symposium. The symposium is organized by the Scientific Committee on Health Inequalities, established by the Federation of European Academies of Medicine (FEAM) and All European Academies of Science (ALLEA). The committee will present a discussion paper reviewing the evidence and charting the main areas of scientific consensus and dissensus.

**Date & time:** 24 May 2018, 9.30 a.m. - 17.00 p.m.
**Venue:** Da Costakade 102, 1053 WP Amsterdam, the Netherlands
**More information:** Academy website
Explanatory framework: good poor evidence

Social position

Social vulnerability

Direct causation

Inverse causation

Health

- education
- occupation
- income

- incidence
- progression
A major study provides additional insight since the time of the 2015 review: using Swedish data on players of the national lottery (the majority of the population in Sweden) to estimate the impact of random income shocks on adult health and child development. The results of this study of relatively permanent income shift show:

» No significant effect of wealth on mortality.

» No measurable effect on child health or development (except for increased risk of hospitalisation and decreased risk of obesity).

» A small reduction in adult use of mental health drugs.

» No signs of an effect growing with time or of stronger effect at lower initial levels of wealth.

The researchers concluded that, in affluent countries with extensive social security safety nets, causal effects of wealth are not the main source for wealth-mortality gradients nor of variations in child development. Prof van Doorslaer reinforced this with his own overall conclusion that there is no strong evidence for impact of income on health in high income countries and that the expectation of greater effects at the bottom end of income distribution was not confirmed. Thus, any contribution of wealth on health may be minor.
Child health A systematic review in 2017 "does money affect children’s outcomes?" draws on randomised clinical trials, quasi-experimental and longitudinal studies. This review concludes that income has causal effects on a wide range of outcomes including child physical health and development, cognitive and social achievement. Low income was not found to be a proxy for other factors such as education. Two potential mechanisms were proffered for the impact: (i) Investment model – via parents’ ability to invest in goods and services that promote a child’s healthy development; and (ii) Family stress model – low income affects parents’ mental health and influences their behaviour. Recent evidence from the UK Millennium Cohort Study (2017), analysing the time of first transition into income poverty, discloses increased child and maternal mental health risk (the latter influencing the former). Other work finds a dose-response relationship of poverty with child mental health risk, and longitudinal studies show that children from less advantaged backgrounds had higher risk of premature death in adulthood.

The public health point of view: M. Whitehead (Liverpool Univ.)

Adult health A systematic review in 2015 on "does money in adulthood affect adult outcomes?" provides strong evidence that additional resources reduce mental health problems, with the effect pronounced in lower socioeconomic groups. A recent US study on negative wealth shocks in middle-aged and older adults finds significant mental health toll and increased all-cause mortality over 20-years follow-up.

(reverse causation)? People with disability are at greater risk of living in or near poverty. But there are large differences between countries and the effect is context/policy dependent. Meta-analysis in 2015 shows that poor health in adolescence is associated with poorer education and employment in adulthood, with the evidence stronger for mental health conditions. Thus, public investment in health may improve life chances. Having to pay for health care is particularly impoverishing but there is a lack of EU evidence on this point.
Explanatory framework: good poor evidence

- Social position
  - education
  - occupation
  - income

- Health
  - incidence
  - progression

- Known mediators (exposure)
  - psychosocial
  - material
  - behavioural
  - environmental
  - barriers to care

- Mediated causation

- Direct causation
- Inverse causation
- Mediated causation

Social vulnerability
Explanatory framework: good poor evidence

- Social position
  - Direct causation
    - Known mediators (exposure)
    - Mediated causation
      - Health vulnerability
  - Inverse causation
    - Social vulnerability

- Health
  - Mediated causation
    - Local context as a modifier

Known mediators (exposure)
Research agenda for public health: mechanisms

What are the implications of LIFEPATH evidence for future research on lifestyle and environment related diseases?

Béatrice Fervers
Scientific Advisory Board

27/03/2019
Effect Modification by Socioeconomic Position (SEP)

- Activation of similar pathways
- Synergistic effects
- Social factors may act as inflammation-inducing trigger
- Increased inflammatory responsivity to environmental factors
Effect models over the life course:
Left truncation of exposure data

- **Critical period model**
  - Exposure during a specific (sensitive) period has lasting or lifelong effect on the structure or physical functioning of organs
  - "biological programming" or "latency model"

- **Critical period model with later effect modifiers**
  - Later life factors may modify the effect of an exposure during a critical period of development on later disease risk: synergy or antagonism.

- **Cumulative model**
  - Multiple effects accumulate over the life course.
  - Cumulative damage to biological systems
  - During developmental periods susceptibility may be greater
  - Sequence or trajectory of accumulation may be important

- **Chain of risk model/Trigger model**
  - Sequence of linked exposures where one leads on to the next.
  - Various intermediate factors between early life and adult health – such as lifestyle, educational attainment, social class and health behaviours
  - Timing of exposures may affect disease risk

Jacob et al., WHO 2017
Impact of Lifepath evidence on intervention studies on life style factors: adopting an enlarged vision

Target of intervention

– Complementarity of intervention on intermediate risk behaviours and on the social deprivation itself

Timing

– Adolescents and young adults: pivotal life stage for intervention research
Impact of Lifepath evidence on the understanding of the exposome: $\Sigma$ lifecourse exposures

- **Independent risk factor**
  - Biological embodiment

- **General external**
  - Social capital, education, financial status, psychological stress, urban-rural environment, climate, etc.

- **Internal**
  - Metabolism, endogenous hormones, body morphology, physical activity, gut micro flora, inflammation, aging etc.

- **Specific external**
  - Radiation, infectious agents, chemical contaminants and pollutants, diet, lifestyle factors (e.g. tobacco, alcohol), occupation, medical interventions, etc.

- **Upstream causal factor**
  - Effect modifier

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Wild CP (2012) Int. J. Epidemiol, 41: 24-32
Research agenda for public health: priority and target setting

Fig. 14.1. Schematic illustration of trends in relative and absolute inequalities: mortality rates for two periods and for two different levels of socioeconomic status (SES). In period 1, the relative risk mortality for people with low versus high SES is 2 and the rate difference is 200; in period 2, relative risk is 2 and the rate difference is 100. Therefore, relative inequalities have remained the same, whereas absolute inequalities have decreased.
Research agenda for public health: proportionate universalism

**Fig. 14.2.** Schematic illustration of the proportionate universalism approach: how a reduced gradient in health outcome by socioeconomic status is achieved after the implementation of an intervention which has a greater effect on those at a greater disadvantage. © Queen’s Printer for Ontario, 2015. Adapted and reproduced with permission.
Research agenda for public health: natural policy experiments

- to learn which effects could we expect from the incoming introduction of the Reddito di Cittadinanza (RdC, different from Minimum Basic Income) taking advantage of:
- minimum income schemes (SIA, REI) and unemployment benefit schemes that have been or still are available, which share many features with the RdC and are amenable for a quasi-experimental impact evaluation
  - SIA and REI in INAPP and SLT (Turin)
  - Unemployment benefit and lay off policies in WHIP salute (UNITO and Bocconi): discontinuity in duration, amount and recipiency of the benefit
About Natural Policy Experiments: the case of gambling
Different SES independent causes?
More exposure and more vulnerability among low SES and in deprived areas


Low education: poor cognitive competences needed to refuse gambling schemes?


Critical life events (unemployment, financial stress, family disruption): direct and inverse causation


Deprived areas: poverty of success and economic ransom stories


Other social risk factors: loneliness, juvies, gambling in the family, social capital (?)


Low SES victims of regressive taxation:


Equity oriented policies
new Piedmont law (NPE?)

• National and local regulation not requiring collaboration from the victims
• Fiscal regulation of the mix of offer proportional to the propensity of creating addiction
• Educational investment to increase cognitive competences needed to assess the probability of success in gambling
• Local regulation of exposure/access to gambling opportunities
• Damage reduction and control for inverse causation
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At the European JAHEE level

• despite general agreement on the reasonableness of the HiAP approach, its implementation in practice is rarely occurring with the exception of the environmental field; however social health inequalities is the most challenging area where HiAP is absolutely required; 17 countries out of the 24 participating to the JA (WP9 in HIAP is the most popular WP in JAHEE) decided to commit themselves to improve the intersectorial governance in some level of policy making;

• an additional impact at the European level is that the work of the specialized country assessments in each of the thematic WP (limited to the WP participants) and of the general country assessment of WP4 (for all the participating countries) will be a unique opportunity to update with a new piece of comparative evidence of differences in policy responses made across Europe after the 2013 EU review.

Is it of any value for the ASVIS commitment at the European level?
At the Italian JAHEE level

How can we improve the collaboration and coordination structures and mechanism for intersectoral governance in the case of health equity, taking advantage of the ASVIS activity and programmes?

– The ASVIS platform of stakeholders
– The ASVIS mechanisms of engagement and accountability
– The ASVIS capacity building and education tools
– ...

Is it Italian JAHEE workplan of any value for the ASVIS Italian commitment
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http://www.disuguaglianzedisalute.it/