SCIENCE AND POLICY: THE HEALTH CASE

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Why evidence informed policy making in health

- Limited resources
- Growing cost of medical technologies
- Legal responsibilities
- Growing population awareness (health literacy)
- Alternative information sources (internet)
Issues addressed

• Cross border health threats
• The NCD global epidemics
• Methodological challenges
  – Addressing complexities
  – Dealing with risk perception in the age of social media
Public Health alerts worldwide

Emerging diseases likely to cause major epidemics
- Crimean Congo hemorrhagic fever
- Ebola virus disease
- Marburg
- Lassa fever
- MERS and SARS coronavirus diseases
- Nipah
- Rift Valley fever
Lessons learnt from Ebola

• Possible to compress R&D timeliness from a decade to a single year;
• Platforms expediting vaccine clinical trials, drug testing and data sharing are needed;
• Social mobilization plans should be in place ahead of an epidemic;
• Funding sources readily available.
Why is WHO calling for increased commitment to immunization?

Vaccine hesitancy is a threat to public health that must be monitored and addressed.
Anti-Influenza vaccination in population => 65 years of age
Italy 1999 - 2015

Source: Italian Ministry of Health
GBD – attributable to 20 risk factors 2010 as % DALY

15 out of 20 RF linked with nutrition and PA

Lim & al. 2012
Obesity: the web of causation

Social Influences

Individual Psychology

Food Production

Food Consumption

Activity

Environment

Biology
Diet as a major risk factor in Europe

**SALT**
WHO recommends less than 5 grams per day
53 countries exceed this recommendation

**SATURATED FAT**
WHO recommends maximum 10% of total calories consumed per day
48 countries exceed this recommendation

**SUGAR**
WHO recommends less than 5% of total calories consumed per day
in 24 countries, 25% of 15 year old boys consume sugary drinks on a daily basis

- Eliminate *trans* fats from food supply
- Strengthen policies for healthy school food

World Health Organization
Regional Office for Europe

HEALTHY DIETS
SILENCE
SAVE LIVES
Overwhelming evidence of the adverse effects of consuming *trans* fats

- Evidence on the effects of industrially produced *trans* fats has been increasing over the past three decades.
- The most recent WHO recommendations state that intake of *trans* fats should be as low as possible.
- The recommendation to minimize *trans*-fat intake is based predominantly on evidence that *trans*-fat consumption significantly increases the risk of coronary heart disease.
Collectively, the evidence suggests with reasonable confidence that price policies applied to food can influence what consumers buy and could contribute to improving health by shifting consumption and supporting healthier diets.

Growing body of evidence is diverse in terms of research methods, outcome of interest, type and level of taxation or subsidy, and target food or nutrients.
Policy implementation – EURO EU MS

- Consumer preferred labelling (in place or planned)
- Measures to affect food prices
- Breastfeeding promotion and protection
- Early nutrition interventions
- Physical activity education sector
- Surveillance mechanisms
- Comprehensive salt reduction initiatives
- Marketing HFSS foods to children - restrictions
- Reformulation - less sugar and salt

Legend:
- Red: No Action
- Blue: at least partial implementation
WHO FCTC: influence of price of cigarettes on smoking habits (Article 6)

Key highlights

- Encourages tobacco users to quit
- Prevents children and non-smoker adults from starting to smoke
- Allocating tax revenues for tobacco control and other important health and social programmes further increases their popularity.

Impact of increase of taxes in Ukraine 8 times and prices 4 times between 2008 and 2012

Tobacco excise revenue, cigarette sales and number of smokers 2008-2012

Tobacco excise revenue, bln UAH

Cigarette sales, 10 bln stick

Number of daily smokers, mln
Current situation of plain packaging
In the news since October 2015

Processed and red meats are linked to cancer - so how dangerous is a bacon sandwich?

Le Monde

Le débat : peut-on encore manger de la viande ?

HOW MUCH IS TOO MUCH?

Daily approximate amounts of foods that will raise your health risks by 18%:

1 1/4 HOT DOGS
OR
6 THIN SLICES OF HAM
OR
2 2/3 SLICES OF BACON

SOURCES: International Agency for Cancer Research; USA TODAY researh by George Petras and Jim Sergent, USA TODAY
IARC groups represent the strength of the evidence of carcinogenicity

- **Sufficient evidence of carcinogenicity in humans**: consumption of processed meat causes colorectal cancer
  - Evaluation based on cohort and case-control studies in Europe, North America and Asia
- **Moderate mechanistic support**
- **Overall evaluation**: Group 1, Carcinogenic to Humans

Source: Oyster healthcare communications
Classifications under hazard systems

Under an hazard identification system, banana skins and cars would come under the same category

However, they do not have the same consequences!!!
Impatto sulla salute e percezione del rischio per alcune esposizioni ambientali in Italia

<table>
<thead>
<tr>
<th>Esposizione</th>
<th>Patologia</th>
<th>Numero atteso di casi/anno</th>
<th>Rilevanza per la sanità pubblica</th>
<th>Percezione del rischio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RADON</strong></td>
<td>Tumore polmone*</td>
<td>1.600-6.400 (^{(1)})</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td><strong>BENZENE</strong></td>
<td>Leucemia**</td>
<td>16 - 275 (^{(2)})</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td><strong>ELF</strong></td>
<td>Leucemia**</td>
<td>3 (^{(3)})</td>
<td>+</td>
<td>+++</td>
</tr>
</tbody>
</table>

* Numero totale stimato di casi annui di tumore del polmone \(\cong 32.000\)
** Numero totale stimato di casi annui di leucemia \(\cong 5.500\)

(1) Stime basate sulla letteratura
(2) Stime della Commissione Tossicologica Nazionale (1995)
(3) OMS, 1997
Risk perception in an era of post-truth politics

**Bodies of evidence**

United States

**Homicides**

Per 100,000 population

- Respondents who believe that crime is increasing, %

- Sources: Gallup; FBI

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**Art of the lie**

Post-truth politics in the age of social media
Credibility and trust

QA10. I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it.

- Tend to trust - %EU

The European Union
The (NATIONALITY) Parliament
The (NATIONALITY) Government
Challenges for knowledge brokering

- Evidence is not communicated effectively (wrong targeting)
- Evidence is not available when policy-makers need it and in a form that they can use it (i.e., wrong time and wrong packaging)
- Policy-makers lack the capacity to find and use evidence efficiently and lack mechanisms to prompt to use it
- Policymakers lack opportunities to discuss system challenges with researchers
- Pressure from vested interests
- Public perception and the role of social media
“There is nothing a politician likes so little as to be well informed, it makes decision making so complex and difficult.”

John Maynard Keynes
Science and policy: a possible solution