Can we avoid the perfect storm?

Prof. Walter Ricciardi
President
Italian National Institute of Health
Agenda

• The changing health landscape
• A perfect storm?
• Possible actions
• Biobanking promises opportunities and challenges
• Final remarks
“other forms of research such as basic science and drug discovery are prestigious while health systems research is seen as fluffy, pedestrian, and applied.”

Andy Haines
Health systems problems are political
Answers are slow to arrive and uncertain
Generalisations can be difficult
The right questions not being asked
Indifference
Lack of funding
Fully revised and updated for the third edition, the Oxford Handbook of Public Health Practice remains the first resort for all those working in this broad field. Structured to assist with practical tasks and translating evidence into policy, this handbook provides concise summaries and includes real-world issues from across the globe, which literally provides a world of experience at your fingertips.

Easy-to-use, concise and practical, it is structured into seven parts that focus on the vital areas of assessment, data and information, direct action, policy, health-care systems, personal effectiveness and organisational development. Reflecting recent advances, the most promising developments in practical public health are presented, as well as maintaining essential summaries of core disciplines. This handbook will assist students and practitioners around the world, for improved management of disasters, epidemics, health behaviour, acute and chronic disease prevention, community and government action, environmental health, vulnerable populations, and more.

Provides a problem-based approach to public health practice

Emphasises practical advice, contemporary issues, and latest advances

Presents worldwide experience at your fingertips

The global guide for continuing professional development
The unthinkable

Lehman collapse sends shockwave round world
Financial constraints

Demand

Resources

Time

2000  2010  2020

Source: Gray M., Ricciardi W. Better value health care, 2008
Financial constraints

Need & Demand

2012

€
Health spending

Average annual growth in health spending in real terms

Source: OECD Health Data 2013
The changing health landscape

- Scarcity of resources
- Chronic diseases
- Growing demand
- Growing expectations of patients/citizens
The waves of demand and supply

Demographic and epidemiological transition

Health Systems

Technological innovation

Professional differentiation

Populations needs and demand
DEMOGRAPHY: By 2050 over 1/3 of EU population will be over 60 years old (UN)

% of EU population aged +60

1950 - 13.9%

2050 - 35.1%

Demand
Chronic diseases

Source: Projections of global health outcomes from 2005 to 2060 using the International Futures integrated forecasting model. WHO bulletin 2011.
It has been estimated that the commonest chronic conditions are costing the EU countries more than 1 trillion Euros per year, which is expected to increase to 6 trillion Euros by the middle of the century. In UK the cost of chronic conditions such as stroke, heart diseases, diabetes, cancer and dementia pile up to over 50% of total healthcare expenditure.

No country can afford this
Doctors’ views: greatest innovations of the second healthcare revolution

- MRI and CT scanning
- ACE inhibitors
- Balloon angioplasty
- Statins
- Mammography
- Coronary artery bypass graft surgery
- Proton pump inhibitors and H2 blockers
- SSRIs and recent non-SSRI antidepressants
- Cataract extraction and lens implants
- Hip and knee replacement
- Ultrasonography
- Gastrointestinal endoscopy
- Inhaled steroids for asthma
- Laparoscopic surgery
- Non steroidal anti-inflammatory drugs
- Cardiac enzymes

Source: Fuchs, VR et al, Physicians’ views of the relative importance of thirty medical innovations, Health Affairs, 2001
Nanomachines swim through veins and arteries cleaning out cholesterol and plaque deposits.
Nanotechnology can explore the process of thoughts and perception at the molecular level.
Generation of new approaches in psychology, in the design of new drugs and in the treatment of pain.
Neural implants can counteract Parkinson’s disease and tremors from multiple sclerosis.
Blind patients are now able to see crude patterns thanks to a computer-driven dot matrix display.
Shirts with sensors can monitor heartbeat and other vital signs directly to a doctor.
Who is going to pay?

USA IN 2050
INDONESIA IN 2090
A "perfect storm" is an expression that describes an event where a rare combination of circumstances will aggravate a situation drastically.

The term is also used to describe an actual phenomenon that happens to occur in such a confluence, resulting in an event of unusual magnitude.
Who shall live?
KEEP CALM AND Join The Revolution
“There are two kinds of problems in life. Big ones and small ones. The small ones money can solve. The big ones money cannot solve”

Will Roberts
Need for Action

To pursue a sustainable health and of health care systems, it is demanding a shift:

From acute care to prevention and early intervention

From medical paternalism to citizen empowerment

From hospital dependency to integrated care

From ad hoc data collection to systematic surveillance and monitoring

From volume to value based payments

The paradigm is known and widely supported, but it seems that health is not given the urgent attention it deserves.
<table>
<thead>
<tr>
<th>20th CENTURY HEALTHCARE</th>
<th>21st CENTURY HEALTHCARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor centred</td>
<td>Patient centred</td>
</tr>
<tr>
<td>Patient as passive complier</td>
<td>Patient as co-producer</td>
</tr>
<tr>
<td>Hospital</td>
<td>System</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>Network</td>
</tr>
<tr>
<td>Driven by finance</td>
<td>Driven by knowledge</td>
</tr>
<tr>
<td>High carbon</td>
<td>Low carbon</td>
</tr>
<tr>
<td>Focussed on effectiveness</td>
<td>Focussed on value and waste</td>
</tr>
<tr>
<td>Challenges met by growth</td>
<td>Challenges met by transformation</td>
</tr>
</tbody>
</table>

J.A. Gray, W. Ricciardi, Better value health care, 2008
Healthcare systems need to be reorganized, and sustainability framework represents a prominent option to guide new policies, plans and programs.

Aim

Policy Maker = Investment

Citizen = Gaining health

Prevention and Early Intervention

Empowered and responsible citizens

Reorganisation of care
You cannot escape the responsibility of tomorrow by evading it today

Abraham Lincoln
Researchers are from Mars
Policy makers are from Venus
Botticelli, Florence

Loved
Voted
Elected
Power
Villa Adriana, Rome

Evidence Science Transparency Accountability
Where am I?

You must be a researcher...

Yeah, but how did you know?

Because you gave me a very accurate but totally irrelevant answer.

You must be a politician...

Because you don't know where you are, you don't know where you are going and you are blaming me for all this mess.
What do we need to change?

To put research into practice

- Improve (as much as possible the current generation)
- Educating better the next generation
The future is not a destination like Rome or the Garda Lake, waiting for our arrival;
it is something like a beautiful bridge that we have to imagine, plan and build
Thanks for your attention