What will our health systems look like in 2050?

Dr Hans Kluge

Director, Division of Health Systems and Public Health

WHO Regional Office for Europe

World Health Organization
REGIONAL OFFICE FOR Europe

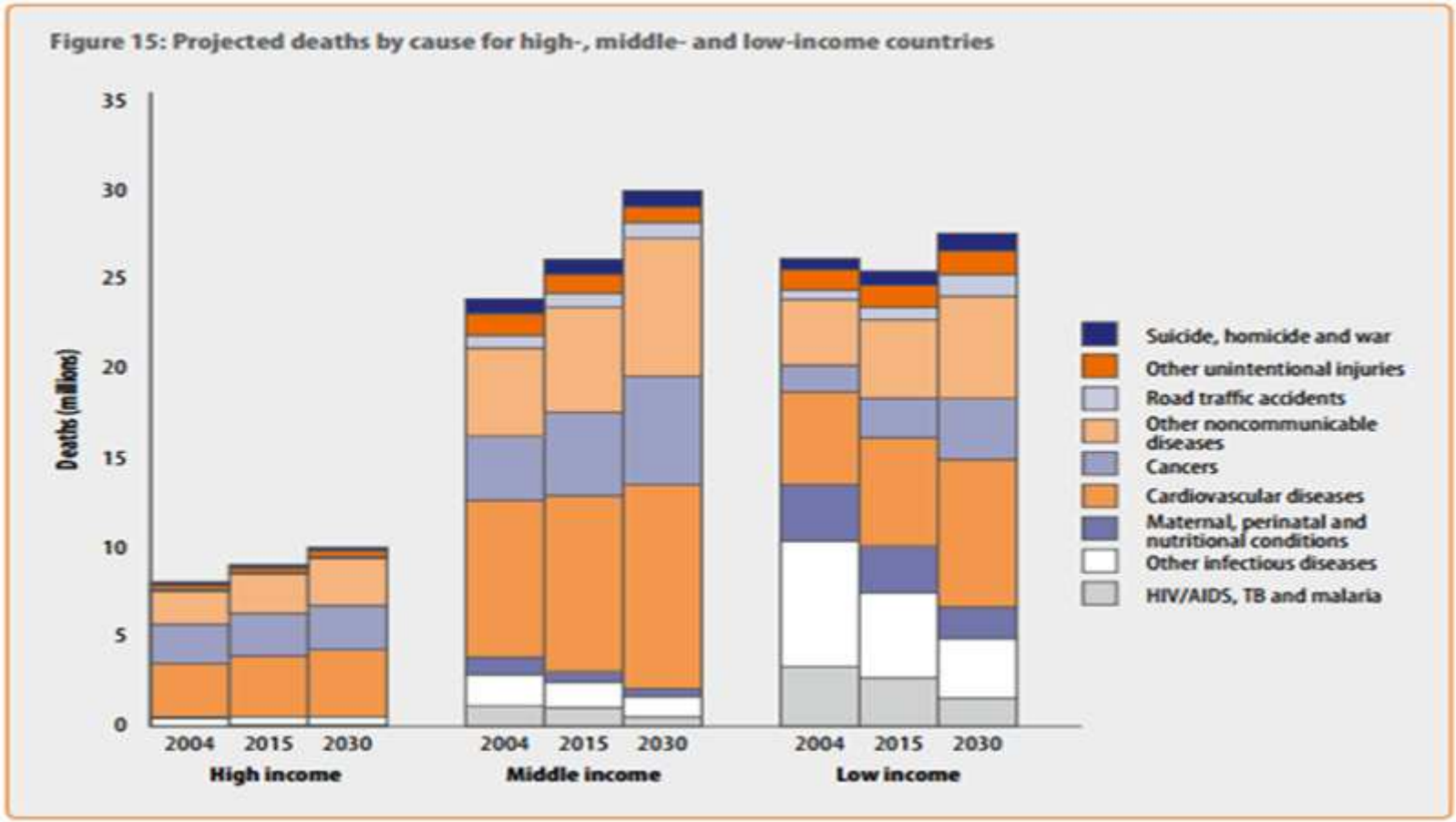
15th European Health Forum
Gastein, 5 October 2012

"The Future is already here – it is just not evenly distributed" - William Gibson

Overview

- Historic health patterns
- Current and future health patterns
- Main Public Health challenges - 2050
- Implications for Health Systems and Public Health Services
- Public Health Research priorities - 2050

Projected Cause of Death - Income



Source: WHO Global Burden of Disease 2004.

Global Burden of Disease 2004 – 2030

Figure 27: Ten leading causes of burden of disease, world, 2004 and 2030

2004 Disease or injury	As % of total DALYs	Rank	Rank	As % of total DALYs	2030 Disease or injury
Lower respiratory infections	6.2	1	1	6.2	Unipolar depressive disorders
Diarrhoeal diseases	4.8	2	2	5.5	Ischaemic heart disease
Unipolar depressive disorders	4.3	3	3	4.9	Road traffic accidents
Ischaemic heart disease	4.1	4	4	4.3	Cerebrovascular disease
HIV/AIDS	3.8	5	5	3.8	COPD
Cerebrovascular disease	3.1	6	6	3.2	Lower respiratory infections
Prematurity and low birth weight	2.9	7	7	2.9	Hearing loss, adult onset
Birth asphyxia and birth trauma	2.7	8	8	2.7	Refractive errors
Road traffic accidents	2.7	9	9	2.5	HIV/AIDS
Neonatal infections and other[a]	2.7	10	10	2.3	Diabetes mellitus
COPD	2.0	13	11	1.9	Neonatal infections and other[a]
Refractive errors	1.8	14	12	1.9	Prematurity and low birth weight
Hearing loss, adult onset	1.8	15	15	1.9	Birth asphyxia and birth trauma
Diabetes mellitus	1.3	19	18	1.6	Diarrhoeal diseases

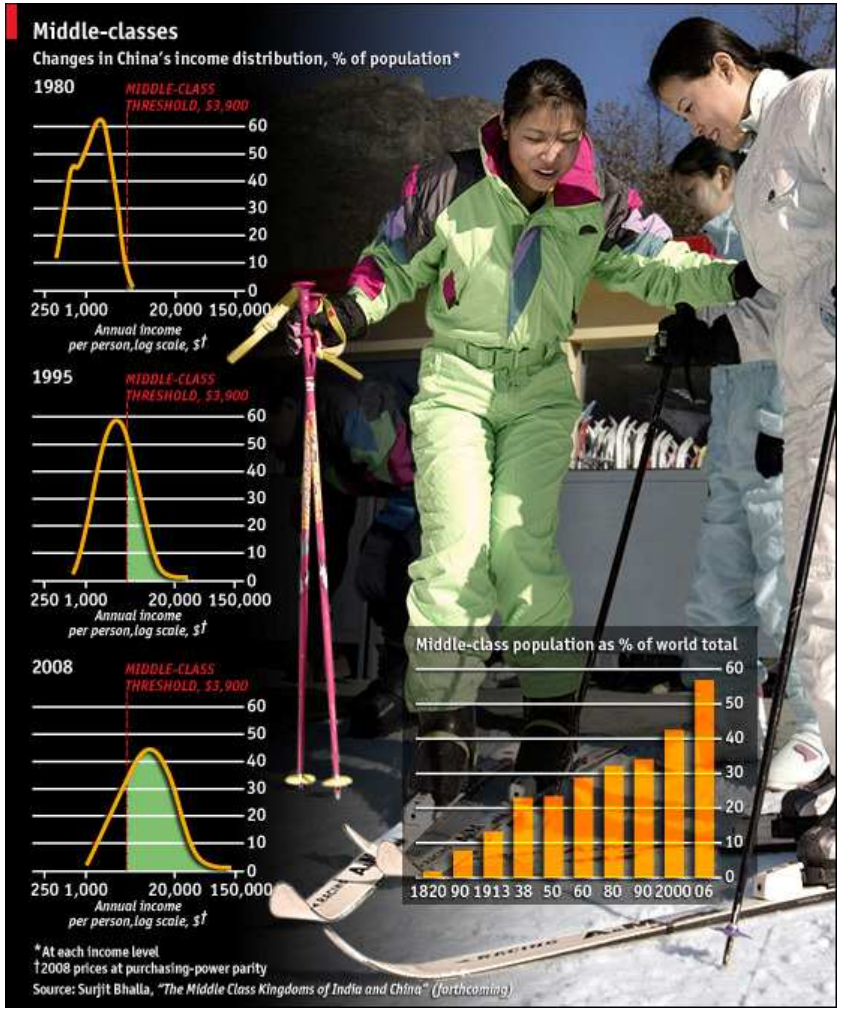
Source: WHO Global Burden of Disease 2004.

15th European Health Forum Gastein, 5 October 2012

The demand transition:

changing needs and changing expectations

- From curing single severe childhood disease through invasive technology
- To supporting a continuum of care for multiple disease and disability
- The emerging middle class drives demand to private tertiary care and increases total expenditures on health
- Implications: Stratified demand for health, gravitating providers towards profit-making services

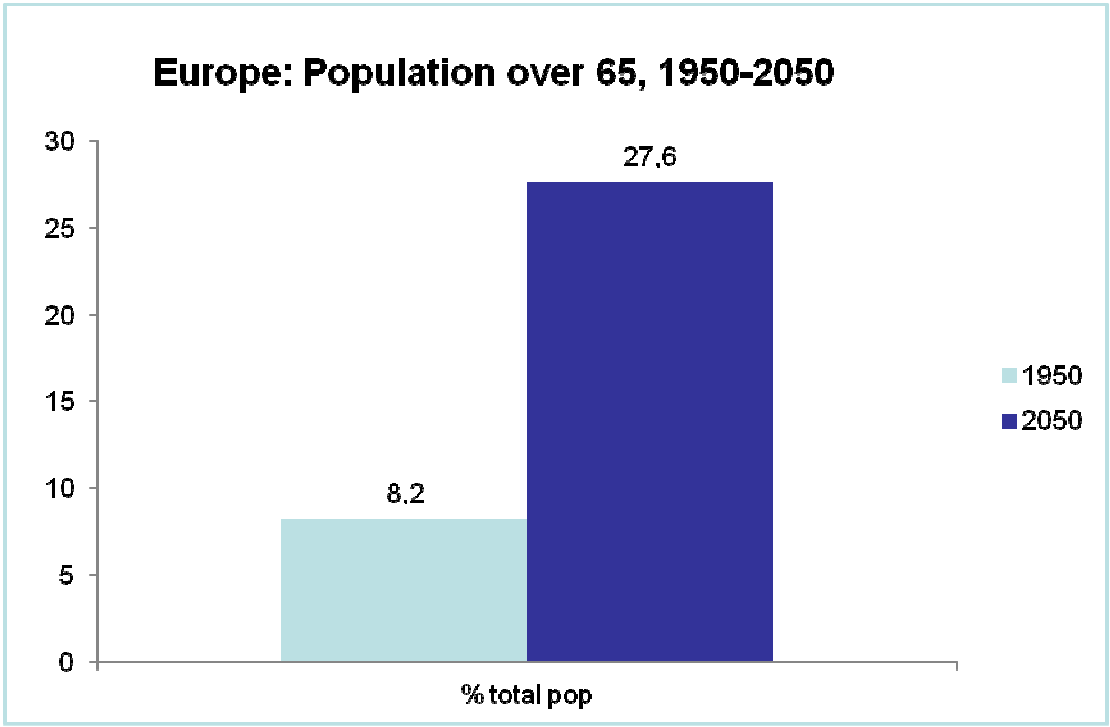


Ageing in Europe

By 2050 in Europe: Elderly population to increase from 14% in 2010 to over 25%

Health Implications:

- ⇧ ratio age-dependency
- acute ⇨ chronic illness
- ⇩ healthcare workers



Source: European Rural Development (ERD) Database. IIASA, 2012

Ageing – the Health System and Public Health Service Response

- Ensure **health protection** – elderly vulnerable to flu, disasters, heat and cold
- Improve access to **disease prevention** services eg via Primary Health Care
- **Empower** patients to self-manage
- Increase lifelong **health promotion** - keeping older people engaged in physical, mental and social activities

Productivity of the health workforce in the European Union

Main challenges

- Increase in *labour demand*
- *New care delivery models* required
- *Decrease in number* of health professionals
- Difficulties in *recruiting* and *retaining* workers

By 2020 potential shortfall of 1 million healthcare workers

⇒ 15% total care not covered

Solutions

- Forecasting workforce needs and improving workforce planning methodologies
- Anticipating future skills needs
- Share good practice and data
- Channel efficiency – recreate roles within healthcare system

Key health sector responses for Climate Change

- Health Protection
- Health System Resilience
- Public Health Advocacy and Innovation

- Multi–sectoral approaches to prevention
- Sustainable Health Promotion

Disaster and Emergency

Disaster burden likely to increase by 2050: OECD countries GDP-PPP is projected to increase by 138%

- Assessing and predicting risks
- Multi-sectoral prevention
- Improve governance
- Early warning systems
- Strengthen Emergency planning
- Workforce development

Food and Water

Inequality

- Food security an issue in central Asian republics
- Malnutrition evident in CAR and Eastern European countries
- 50% of adults in WHO EURO are overweight

By 2050

- 70% increase in agriculture production needed globally
- 55% increase in global water demand, decreasing amount for irrigation
- 40% living under 'severe water stress'

Health Systems and Public Health Services Solution

- Reduce over consumption of energy rich/unhealthy foods
- Integrate health into food and water policies
- Ensure food safety measures help to reduce waste

Technological and information improvements

- ICT - ehealth, telemedicine
- Nanotechnology
- Medical genetics

Future Health Implications:

Potential to **increase** or **decrease** healthcare costs

- Greater patient involvement and access to information
- Potential for inequalities to widen
- Impact of genomics on insurance and pharmaceuticals

Caution:

Need to address privacy concerns and standardise systems

Urbanisation and Migration

By 2050:

Globally 2.2 million migrants annually to HIC; 80% of Euro population living in *urban* areas

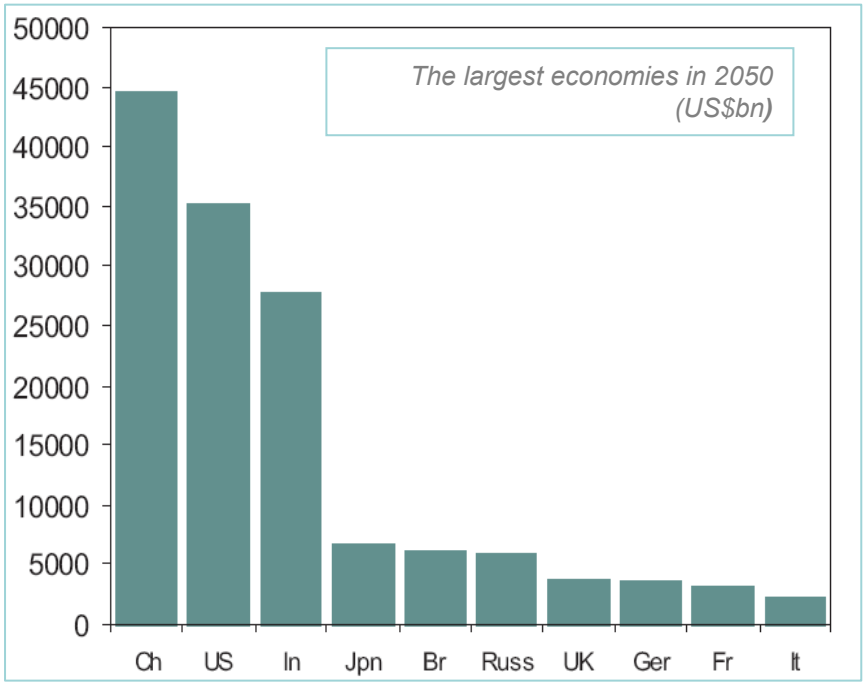
⇒ **Potential widening of inequalities**

⇒ **Increasing demand upon Health systems**

Health Systems Response

- Multisector engagement to promote healthy cities
- Increased health systems capacity with a focus on migrant health
- Global Code of Conduct to internationally recruit health workforce

Economics and Inequalities



The Future?

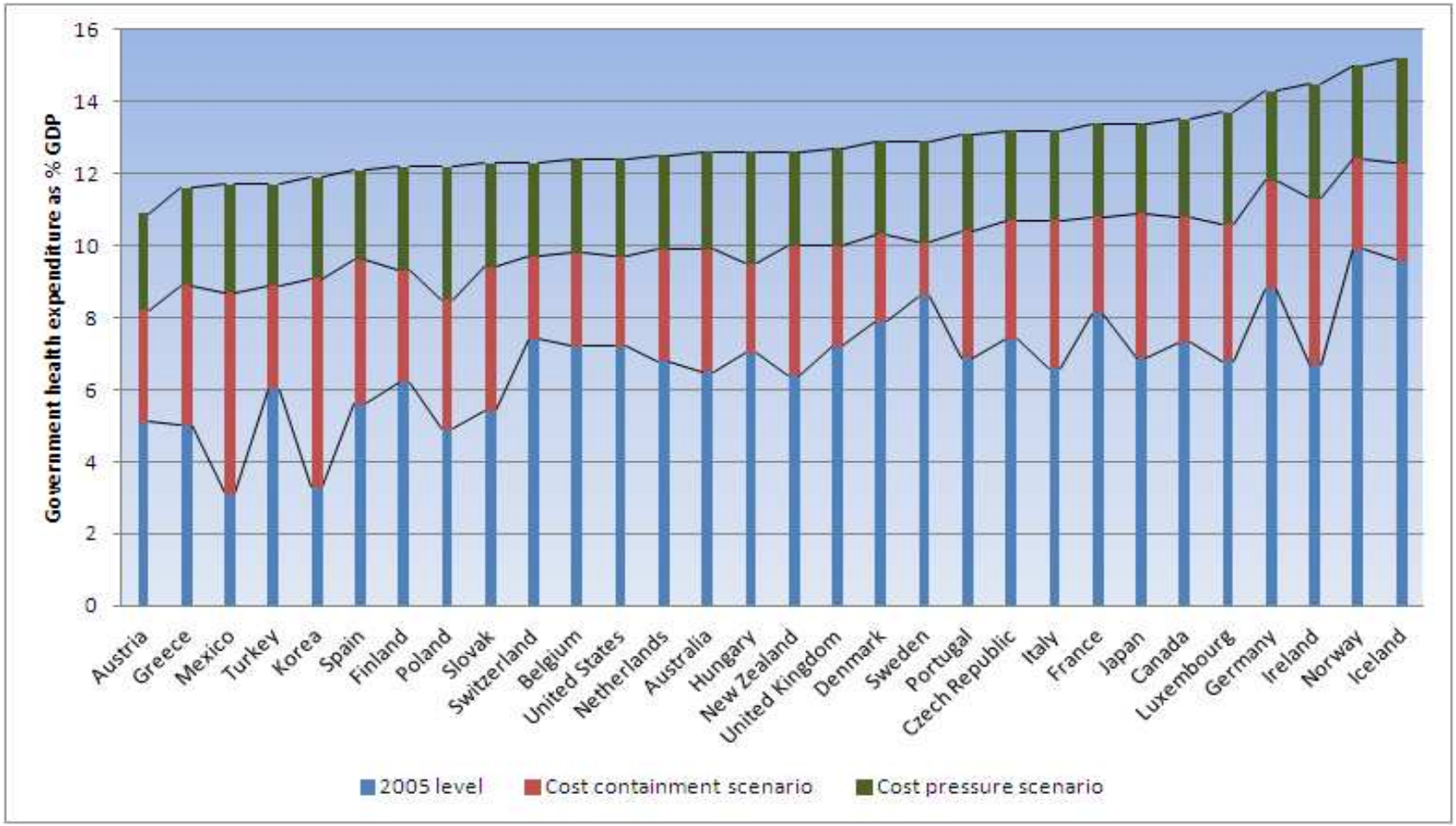
- ↑ Life expectancy by further 6 yrs
- shift in global market economies
- ⇒ *reduced growth in Europe*
  ⇒ changes in welfare and pensions

employment shifts and **widening inequalities**

Health Spending

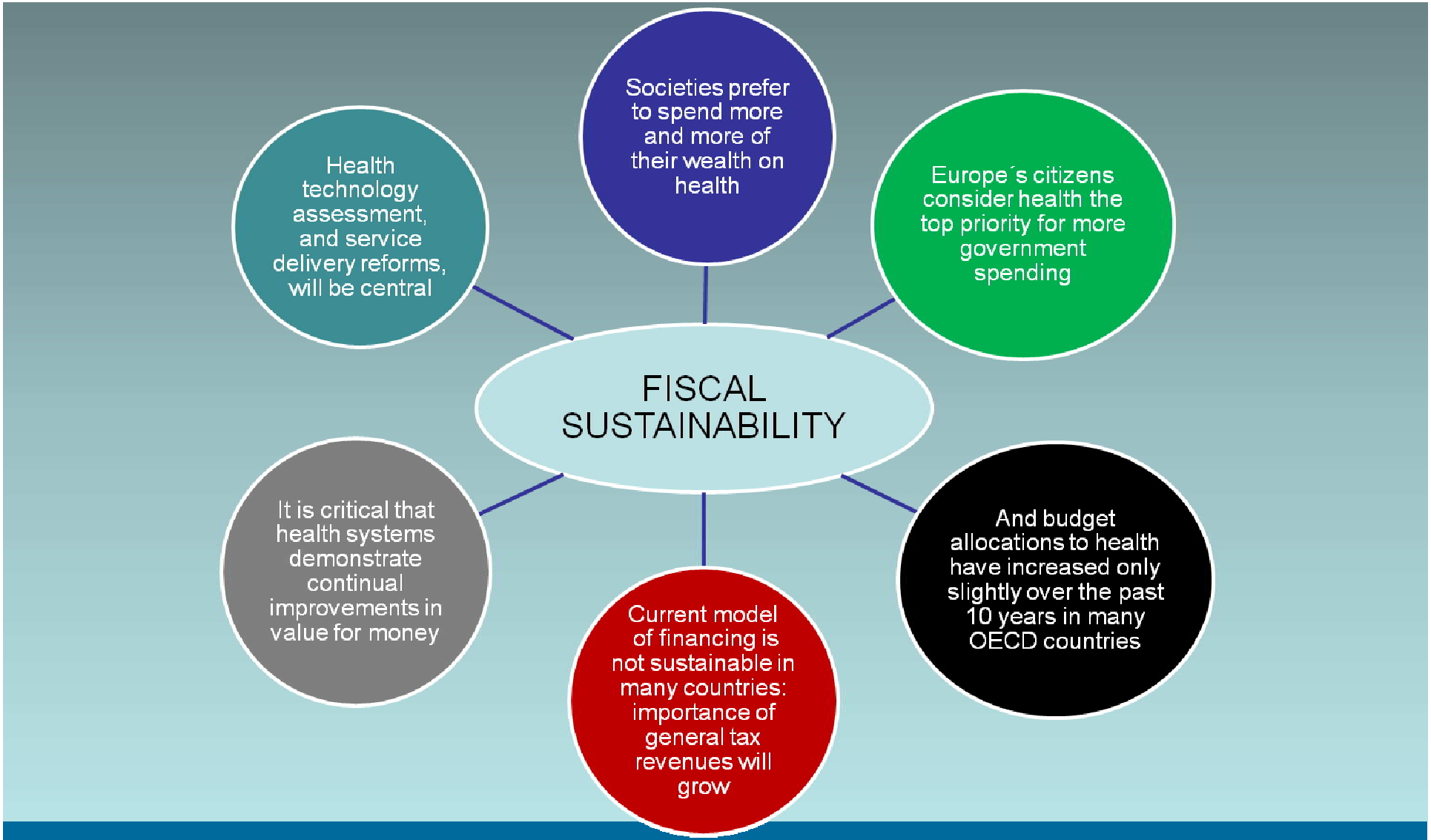
- **Strengthen systems** to cope with increasing demand
- Invest in **prevention** and **primary health care**

Projected government health spending in 2050 - OECD countries



Source: Chapter 3, OECD Economic Outlook No. 79 (June 2006)

How much of a threat is expenditure growth?



Integrated health service delivery

Primary Prevention → Early Management → Acute Management → Rehabilitation & secondary prevention

* Primary Health Care : move from hospitals into community settings
* Redefine role of hospitals
* Practice-based team care
* Population management – social determinants of health & intersectorality
* Patient self management
* Quality measurement and improvement
* Care continuity
* Digital health coaches
* New payment systems

The Future of Health Systems

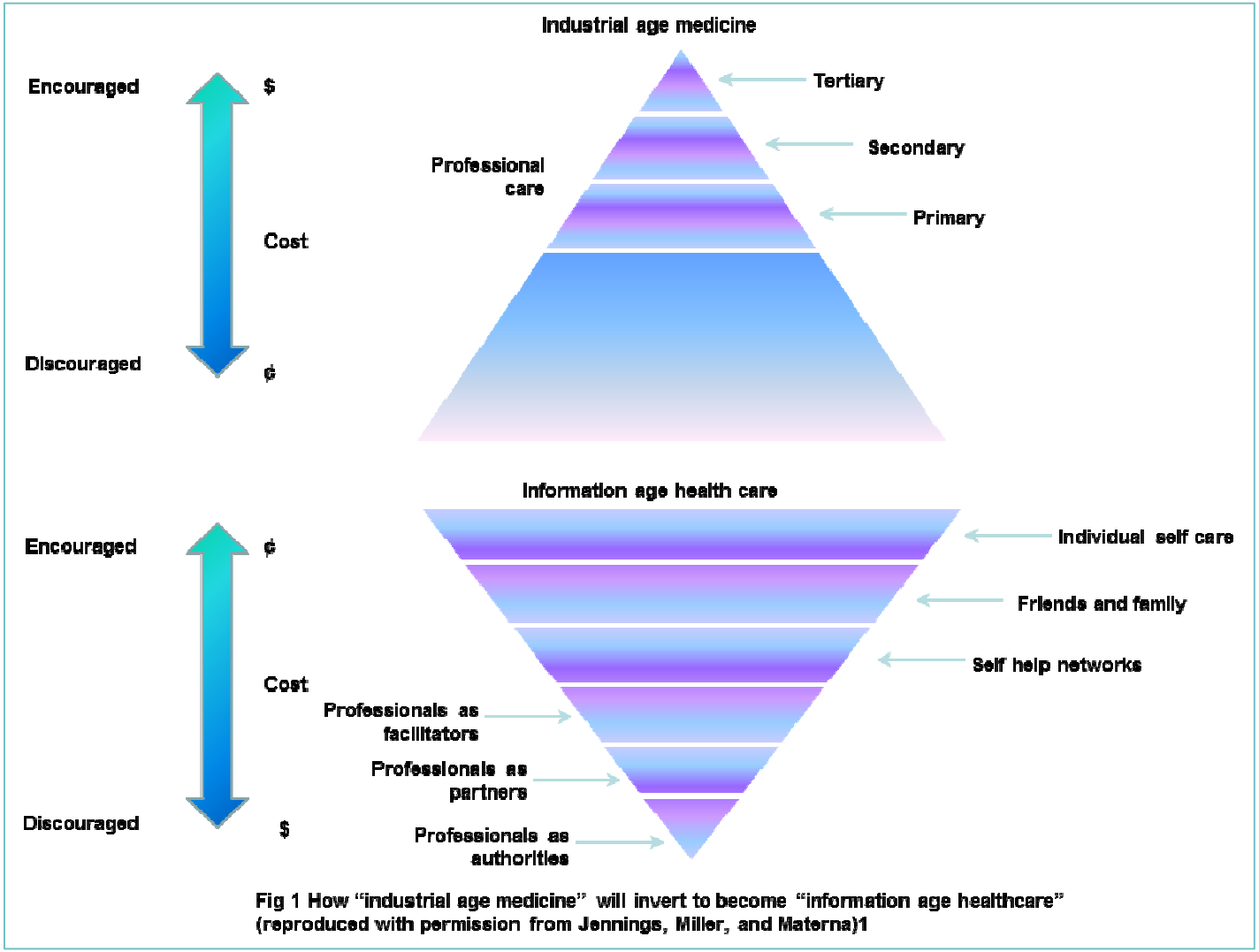
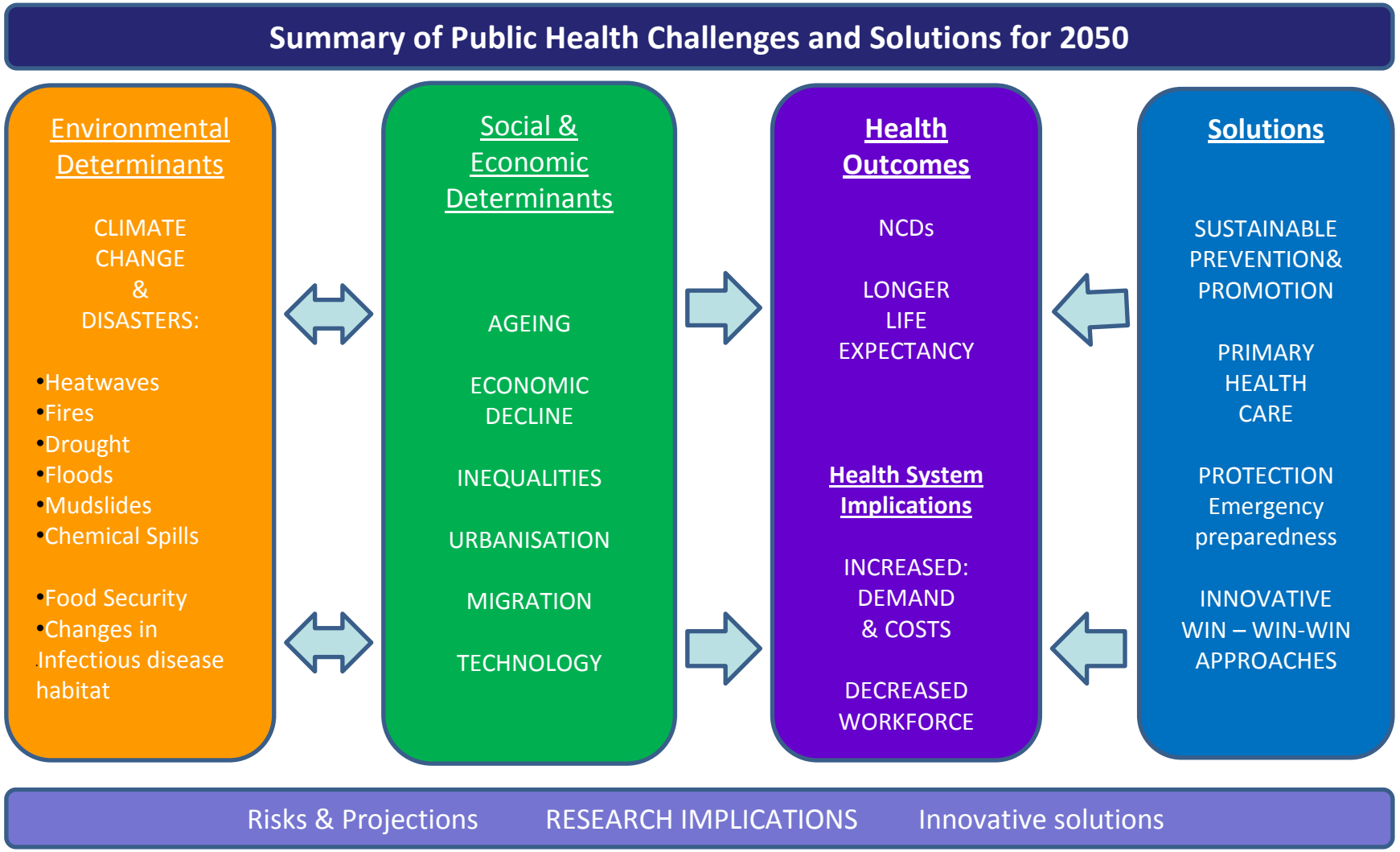
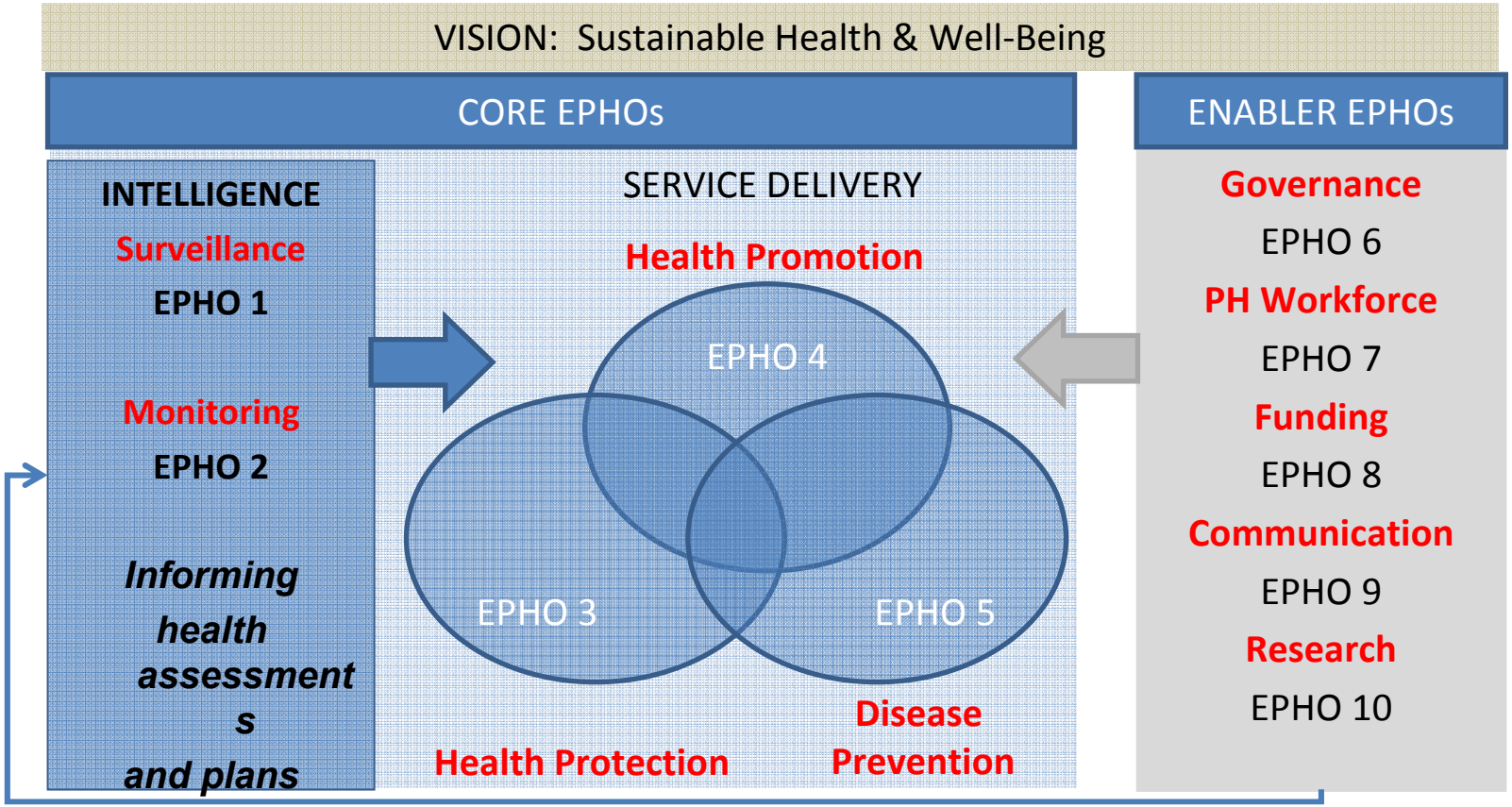


Fig 1 How "industrial age medicine" will invert to become "information age healthcare" (reproduced with permission from Jennings, Miller, and Materna)1

BMJ, 314, 24May1997


Summary of Public Health Challenges and Solutions for 2050
Environmental Determinants
CLIMATE CHANGE & DISASTERS:
•Heatwaves
•Fires
•Drought
•Floods
•Mudslides
•Chemical Spills
•Food Security
•Changes in Infectious disease habitat
Social & Economic Determinants
AGEING
ECONOMIC DECLINE
INEQUALITIES
URBANISATION
MIGRATION
TECHNOLOGY
Health Outcomes
NCDs
LONGER LIFE EXPECTANCY
Health System Implications
INCREASED: DEMAND & COSTS
DECREASED WORKFORCE
Solutions
SUSTAINABLE PREVENTION& PROMOTION
PRIMARY HEALTH CARE
PROTECTION Emergency preparedness
INNOVATIVE WIN – WIN-WIN APPROACHES
Risks & Projections
RESEARCH IMPLICATIONS
Innovative solutions

WHO European Action Plan to Strengthen Pubic Health 2012-2020



Discussion points - Research implications for Public Health

- **Modelling and Projections** of future scenarios and their interactions, in order to prioritise risks to health and the potential impact of interventions
- **Cost effective and cost saving** approaches to address increased demand and reduced resources
- **Increase balance on prevention** approaches vs treatment – as more cost effective way of maximising health gain
- **Innovative and transformational approaches** – eg applying complexity science, sustainability principles, new technologies to current and future challenges
- **Shift from single interventions to packages of interventions** – to support the reality of health system delivery and create efficiencies
- **Adapt findings for policy and practitioners** - production of accessible policy briefs, integrated care pathways and prevention packages - to speed up learning and adoption of findings by policy and practitioners

Broad social movement for Health and Wellbeing

Dr Roza Abzalova, PHC Center “Demeu”, Kazakstan