What will our health systems look like in 2050?

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“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

Global Burden of Disease 2004 – 2030

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

World Health Organization

15th European Health Forum
Gastein, 5 October 2012
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
Easing 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)
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 Mattern)!

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

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WHO European Action Plan to Strengthen Public Health 2012-2020

VISION: Sustainable Health & Well-Being

CORE EPHOs

INTELLIGENCE
Surveillance EPHO 1
Monitoring EPHO 2
Informing health assessments and plans

SERVICE DELIVERY

Health Promotion

Health Protection

Disease Prevention

EPHO 4

EPHO 3

EPHO 5

ENABLER EPHOs

Governance EPHO 6
PH Workforce EPHO 7
Funding EPHO 8
Communication EPHO 9
Research EPHO 10

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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

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