

Using Sensor-Based Networks to Address Global Issues Health and Elderly Care :

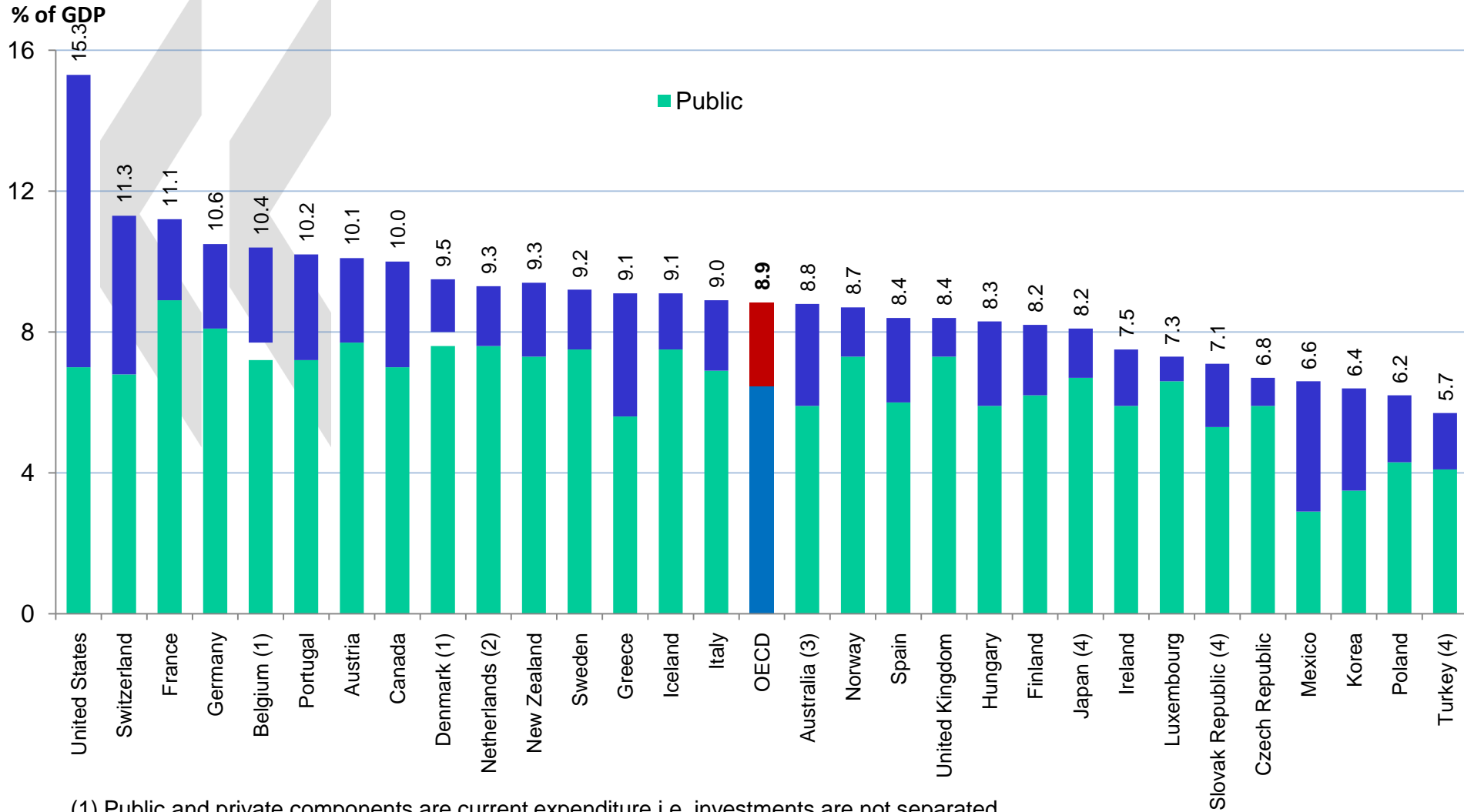
elettra ronchi

8-9 June 2009

Global health system challenges

- *Demographic* : Growing number of frail elderly
- *Epidemiological*: Growing number of chronic disease patients (hypertension, diabetes, asthma, cardiovascular problems etc)
- *Economic*: Increasing costs of health care delivery
- *Workforce*: Shortage of health providers
- *Access*: Health care provision for all

Health Expenditure as a Share of GDP, 2006



(1) Public and private components are current expenditure, i.e. investments are not separated.

(2) Current expenditure.

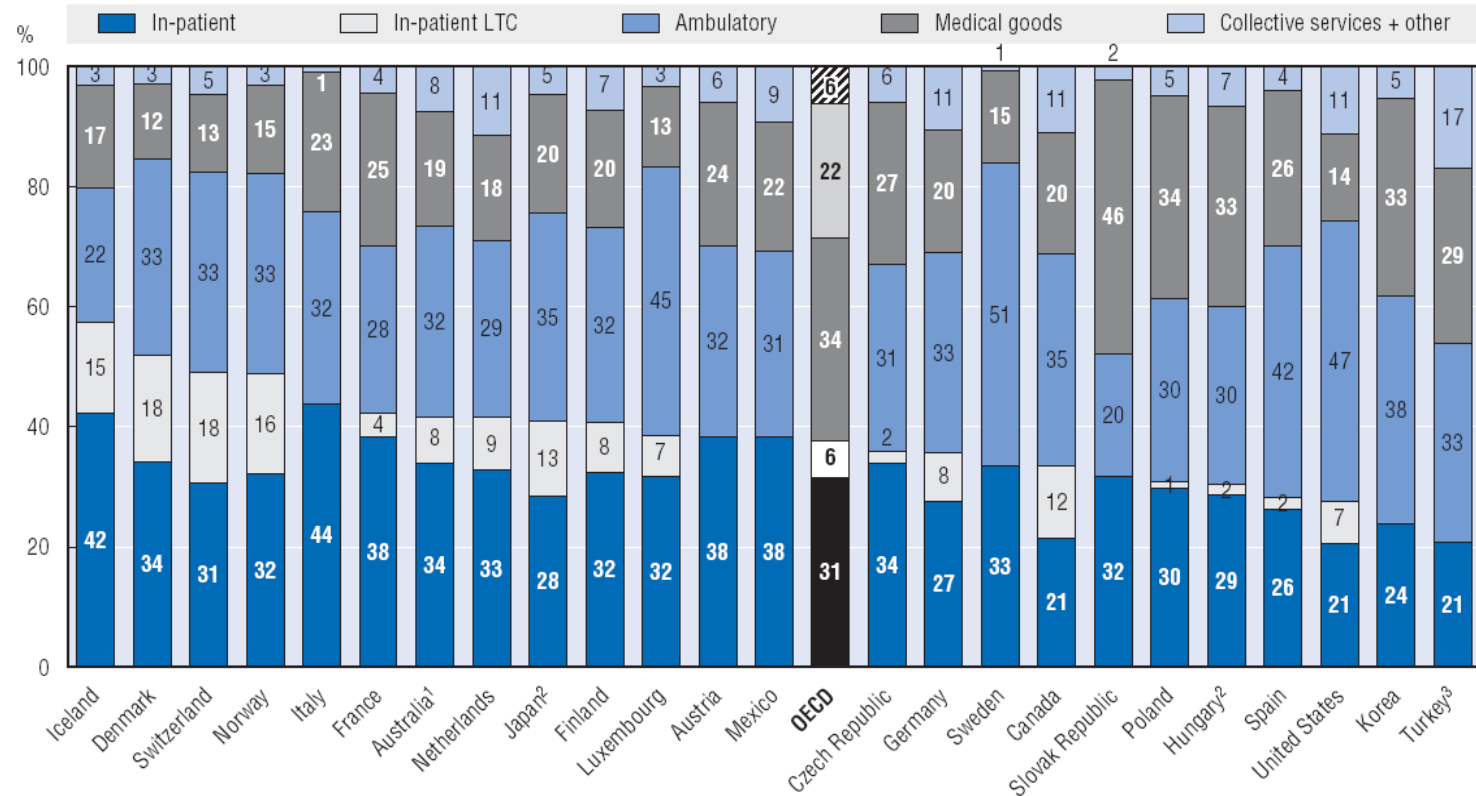
(3) Data refer to 2005/06. (4) Data refer to 2005.

Source: *OECD Health Data 2008*, June 2008.

Assessing the costs of services

Chart 3.11. **Current expenditure by medical services, medical goods and collective care, 2003**

Countries are ranked by total in-patient care as share of current expenditure on health



Note: LTC: Long-term care.

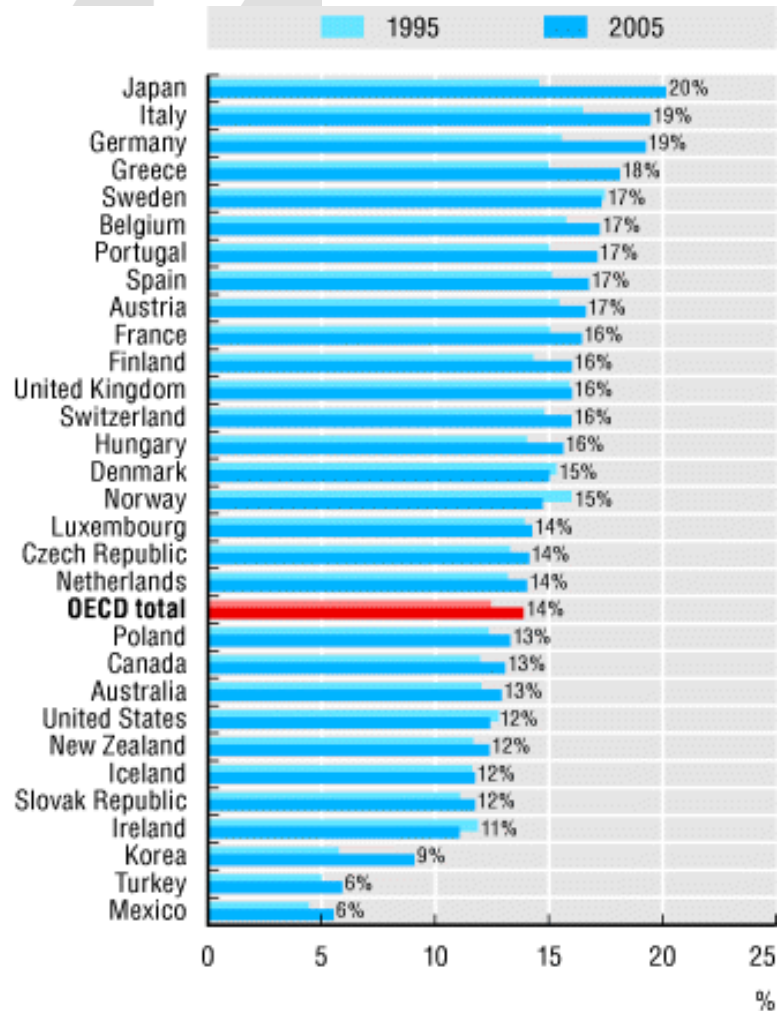
1. 2001.

2. 2002.

3. 2000.

● OECD's *Health at a Glance 2005*

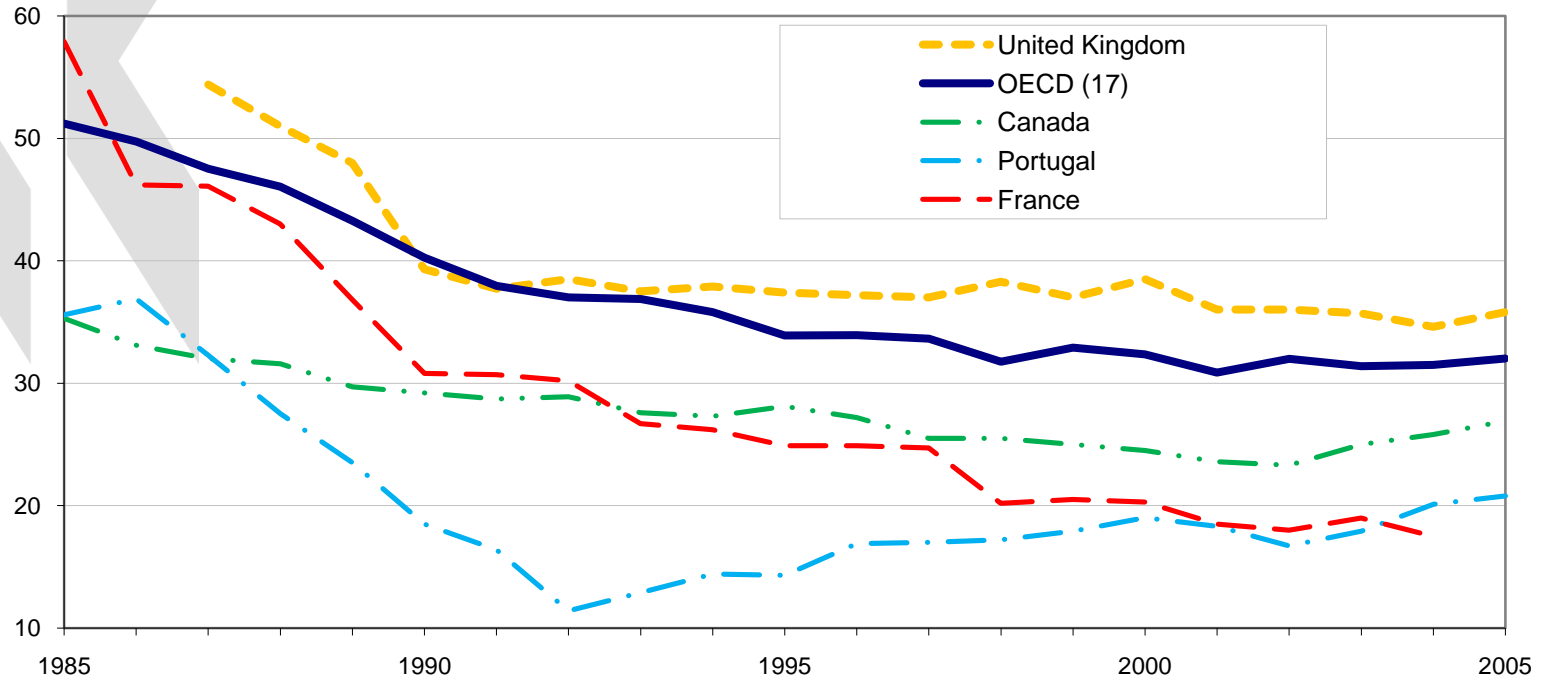
National elderly population as a percentage of the total population



- In Japan, Italy and Germany the elderly population was almost one-fifth of total population in 2005. On the other extreme, in Turkey, Korea and Mexico the elderly population represented less than 10% of the total population

The supply sources

Number of medical graduates per 1 000 physicians, selected OECD countries, 1985 to 2005

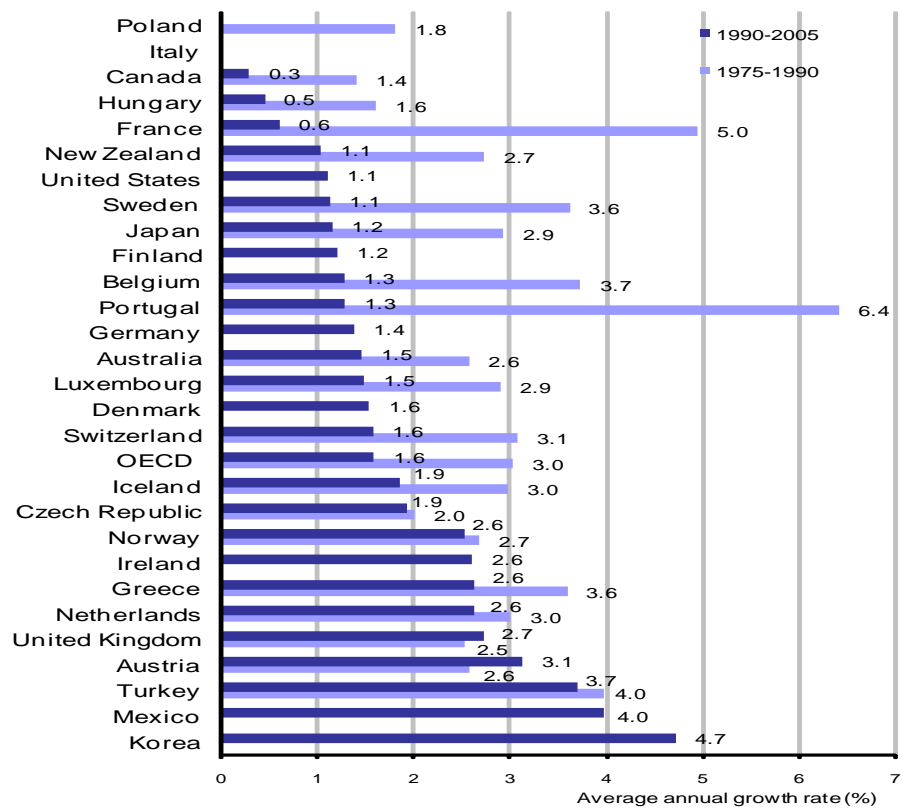


Note. Consistent average is calculated on the base of 17 OECD countries

Source: *OECD Health Data 2007*

OECD Countries have not expanded medical education in line with growth in their medical workforce

Change in practicing physician density, 1975-1990 and 1990-2005



Note: Ireland, the Netherlands, New Zealand and Portugal provide the number of all physicians entitled to practise rather than only those practising.
 OECD consistent average is calculated for 20 countries.
 Source: OECD Health Data 2007

In most OECD countries, and in particular European ones, there has been strong deceleration in the rate of growth of the physician workforce over the last 15 years.

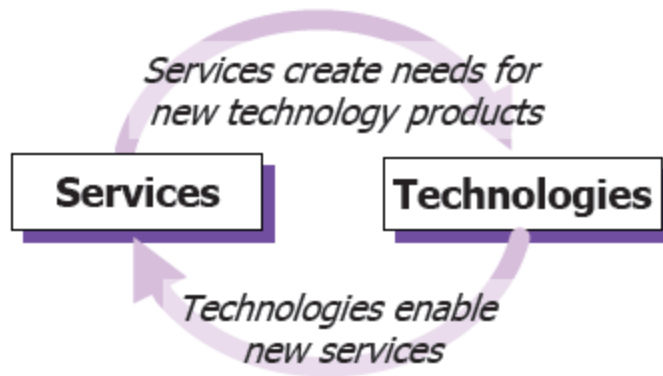
A key challenge for elderly care: three scenarios

- 1) Older people “less sick/less disabled”:
 - compression of morbidity due to disease prevention

- 2) Older people “more sick/more disabled”:
 - expansion of morbidity due to higher survival rates of people in poor health

- 3) Older people “more sick/less disabled”:
 - intermediate scenario due to improved medical treatment/management of conditions (reducing their disabling effects), as well as increase use of aids

How can we enable new care delivery models through sensor-based networks?



- Where do we need to be? The vision and opportunities
- Where are we now?
- The Key Barriers
- Is there a role for Government?