

Public Health in Practice

Three highly interrelated domains of public health. They are?

Health improvement (including people's lifestyles as well as inequalities in health and the wider social influences of health).

Health protection (including infectious diseases, environmental hazards and emergency preparedness).

Health services (including service planning, efficiency, audit and evaluation).

Introduction

- Organization Theory

Organization Theory

The study of the structure, functioning and performance of organizations, and the behavior of groups and individuals within them.

It is a heterogenous study, with systematic analysis of sociologists, psychologists and economists mingling with distilled practical experience of managers, administrators and consultants.

Theoretical in the sense that they have tried to discover generalizations applicable to all organizations

Not science in a medical context

The History of Modern Organizations Theory

Structure of organizations

Weber: The Theory of social and economic organizations

1947(original in German 1924)

[bureaucracy- rules, job descriptions, and training]

The History of Modern Organizations Theory

Management and Decision-making

F.W.Taylor: Scientific Management 1947
[Scientific management - specialization and tight control]

H. Mintzberg: Structure in fives: Designing effective organizations 1983
[detailed empirical study – coordination]

The History of Modern Organizations Theory

Behavior in Organizations

Elton Mayo: *The Social problems of an industrial civilization* 1949

[Social science, Founding father of the human-relations movement]

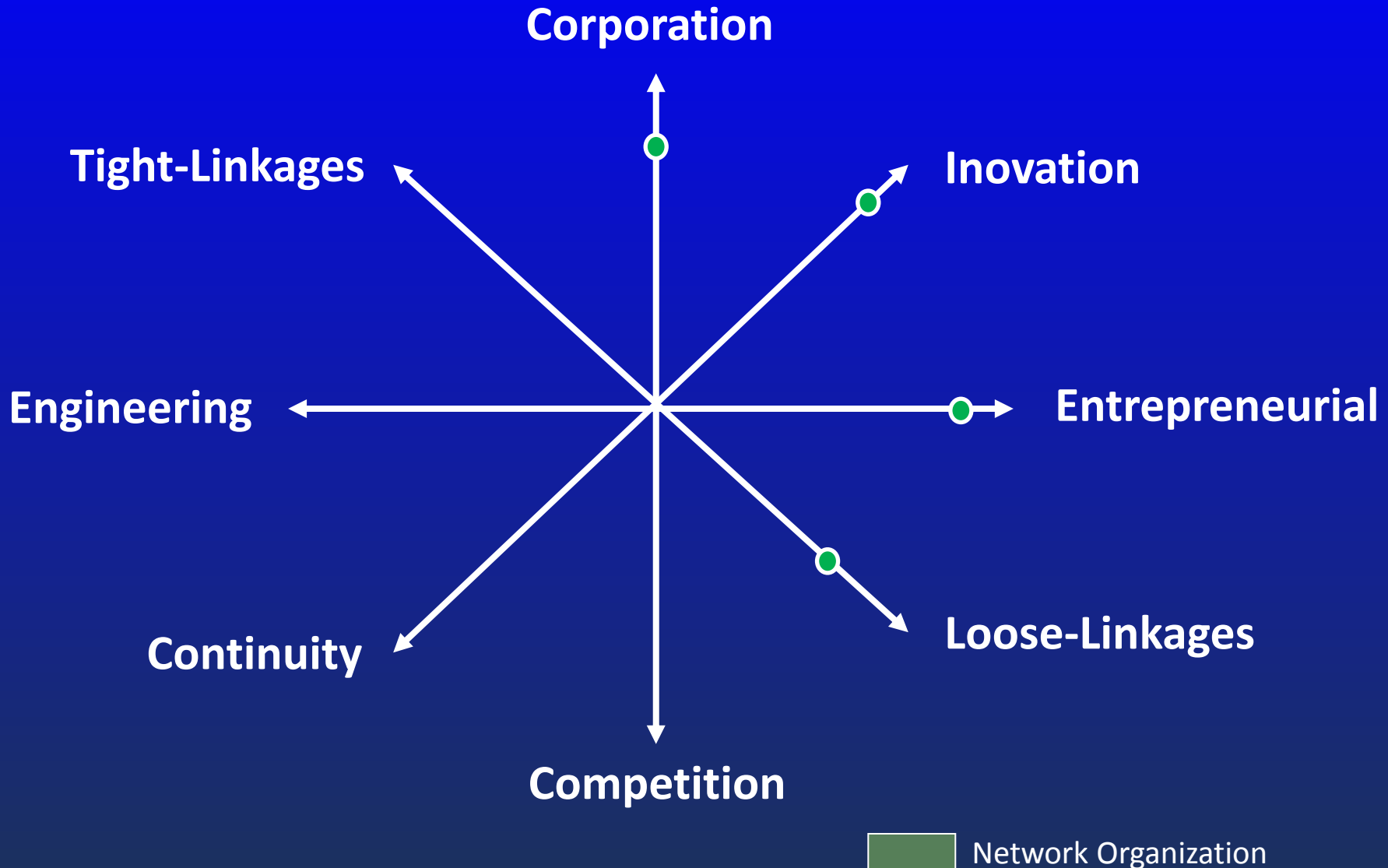
Garry Becker: *Human Capital* 1964

Theodore Schultz: *The economic value of education* 1963 & *Investment in Human capital* 1971 [Economic Human capital – financial advantage investing in education and training]

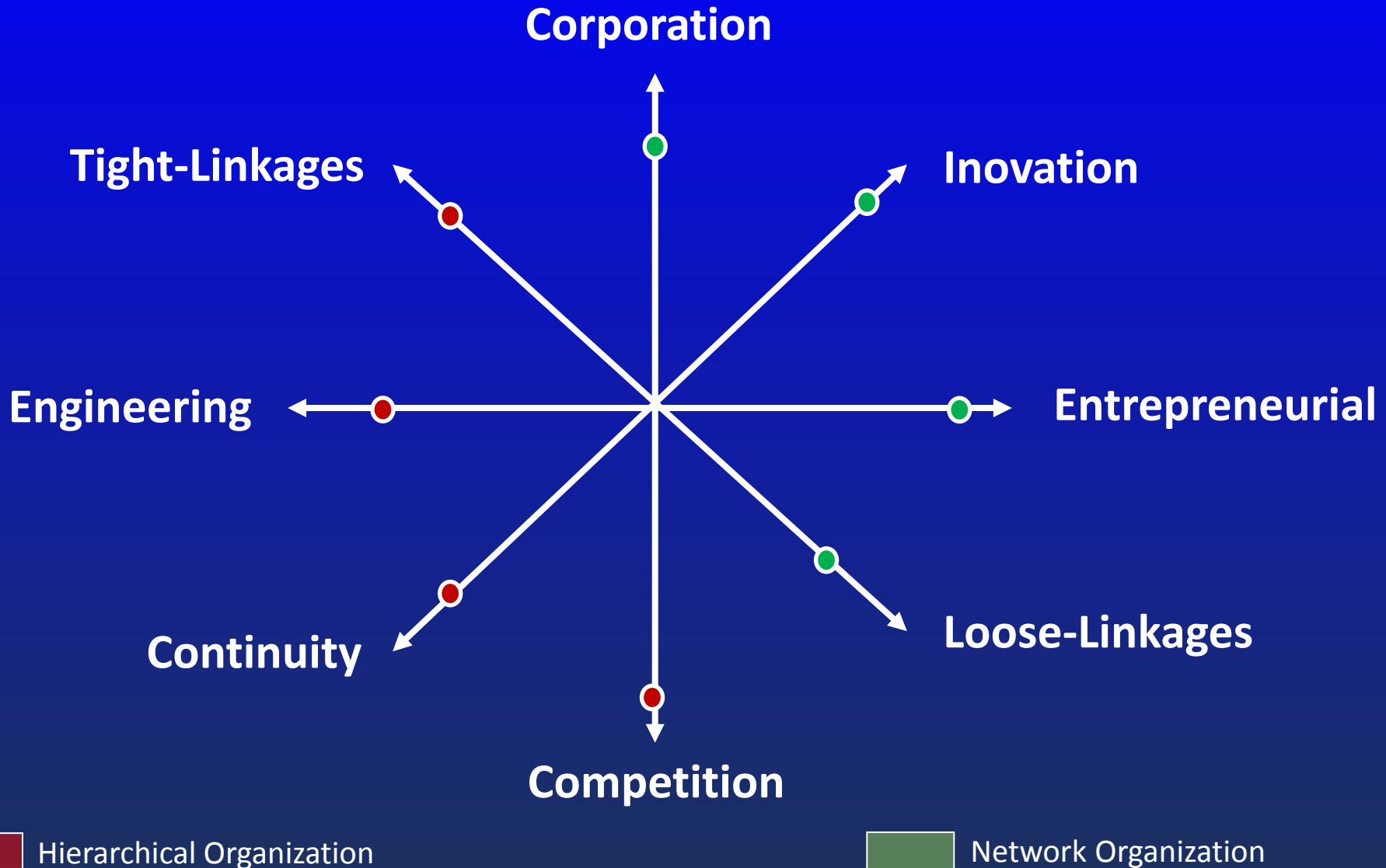
Introduction

- Organization Theory
- Type of organizations matters
 - Hierarchical versus network organizations

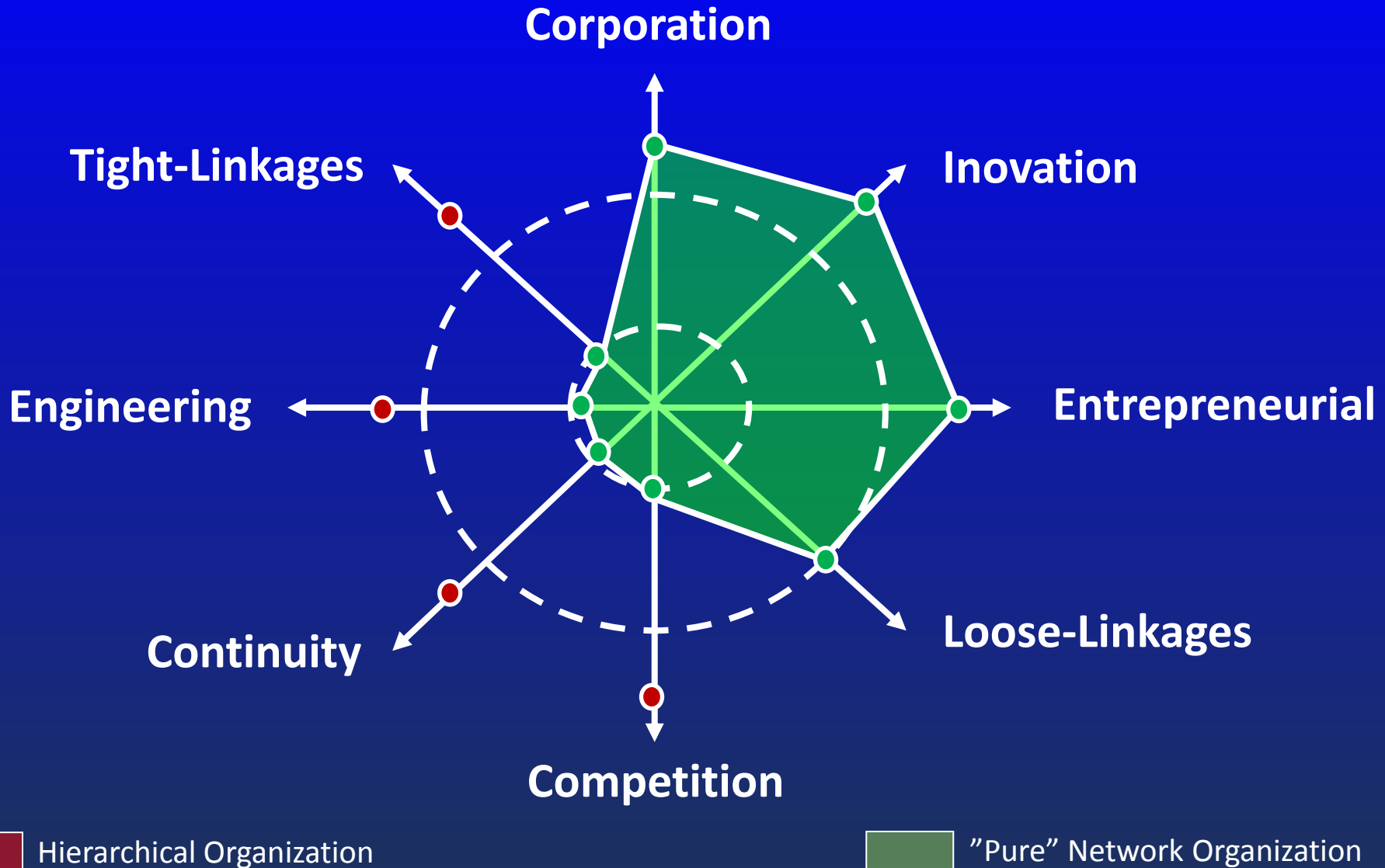
Type of organization matters



Type of organization matters

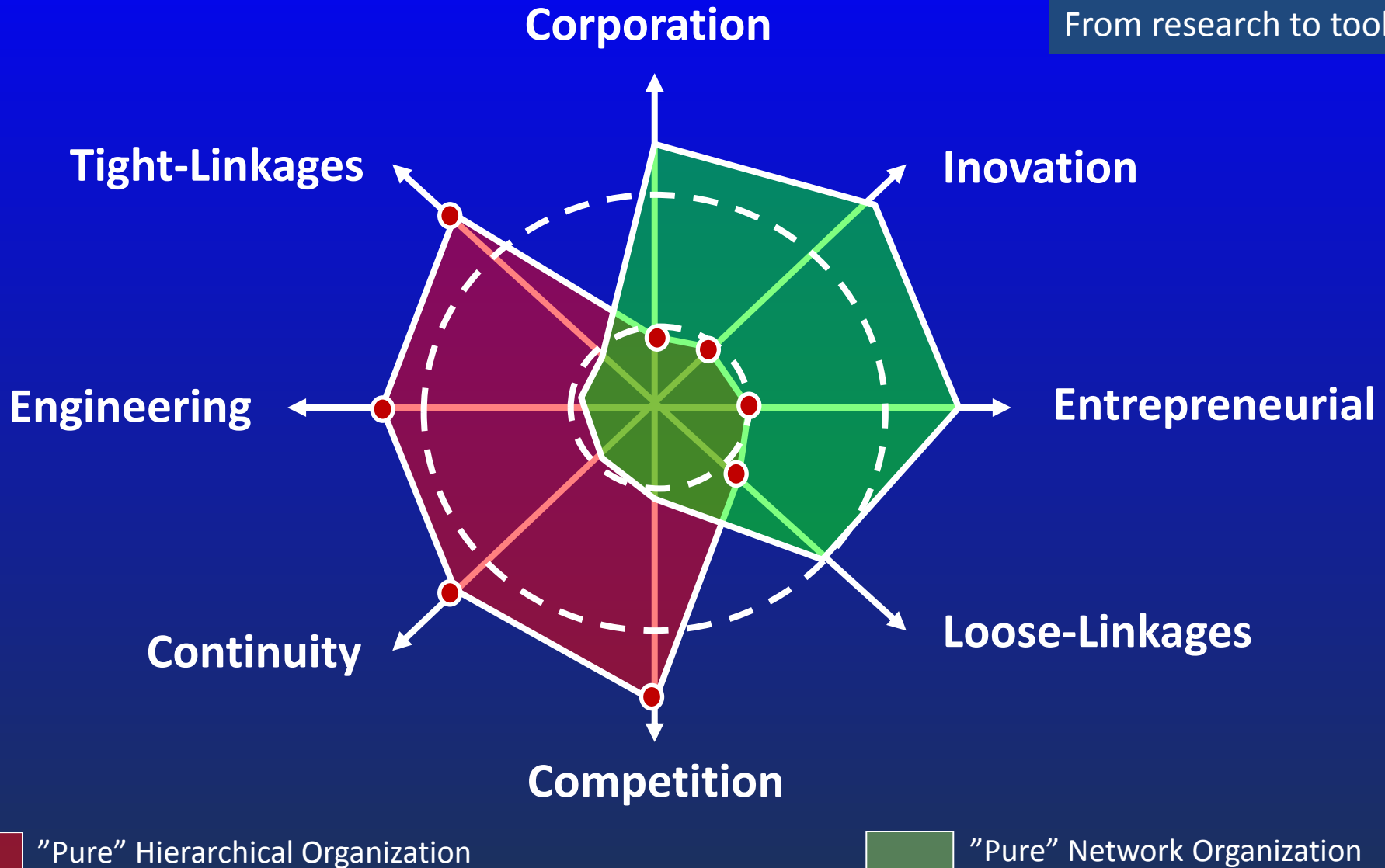


Type of organization matters

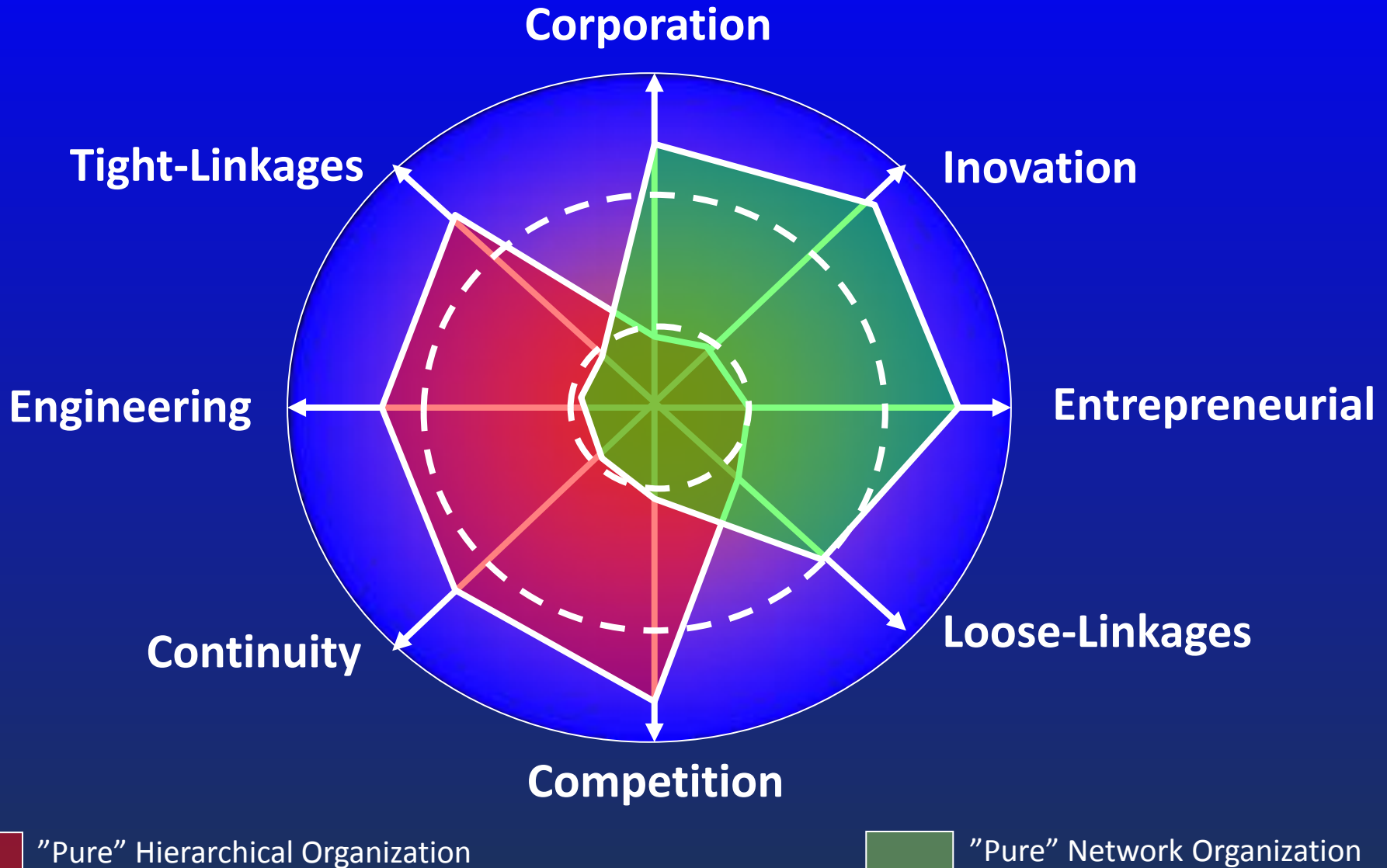


Type of organization matters

From research to tool



Tool to evaluate organizations



Health care organizations

What are they?

Organizations

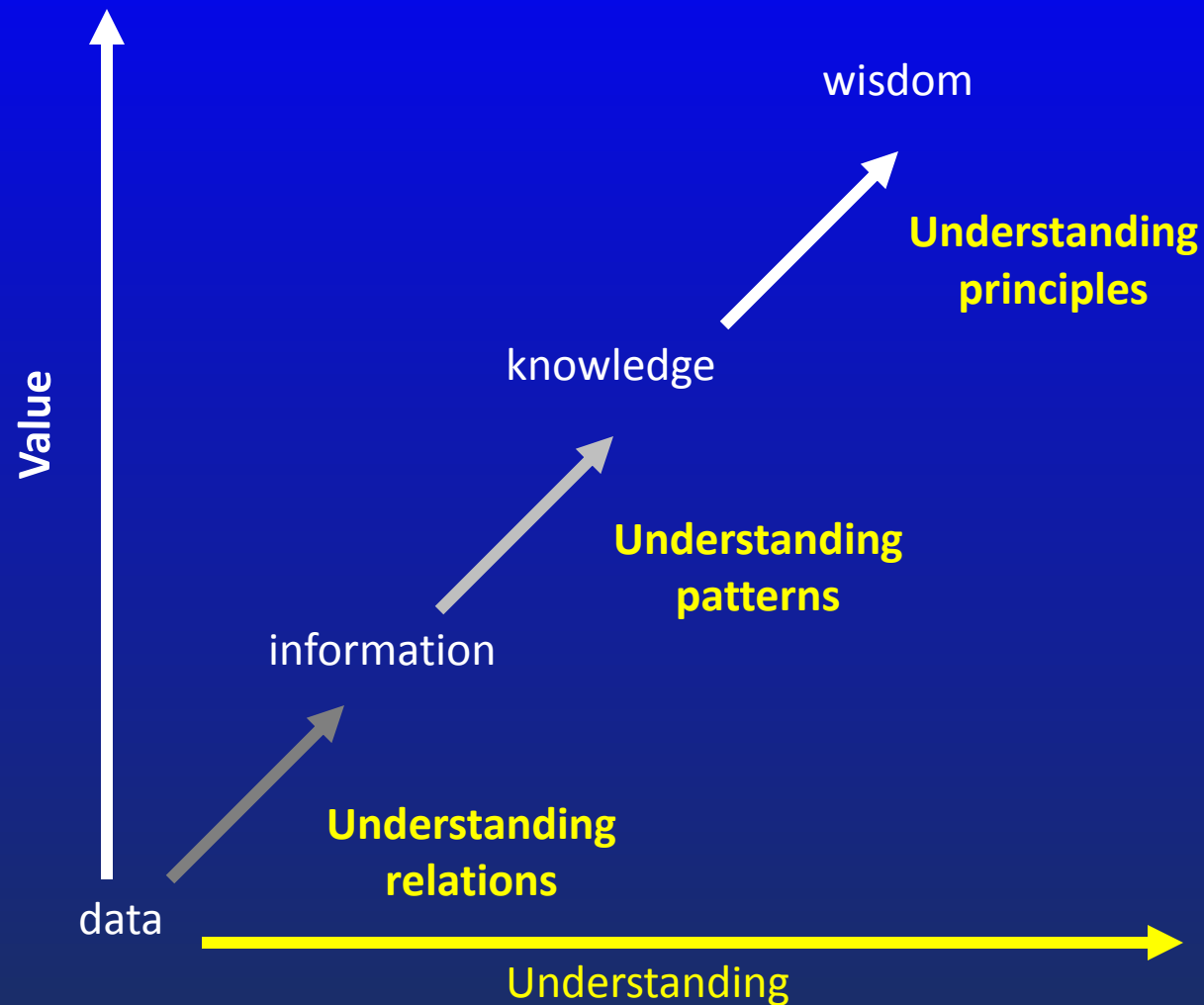
Complex Organizations

Complex Adaptive Organizations

Introduction

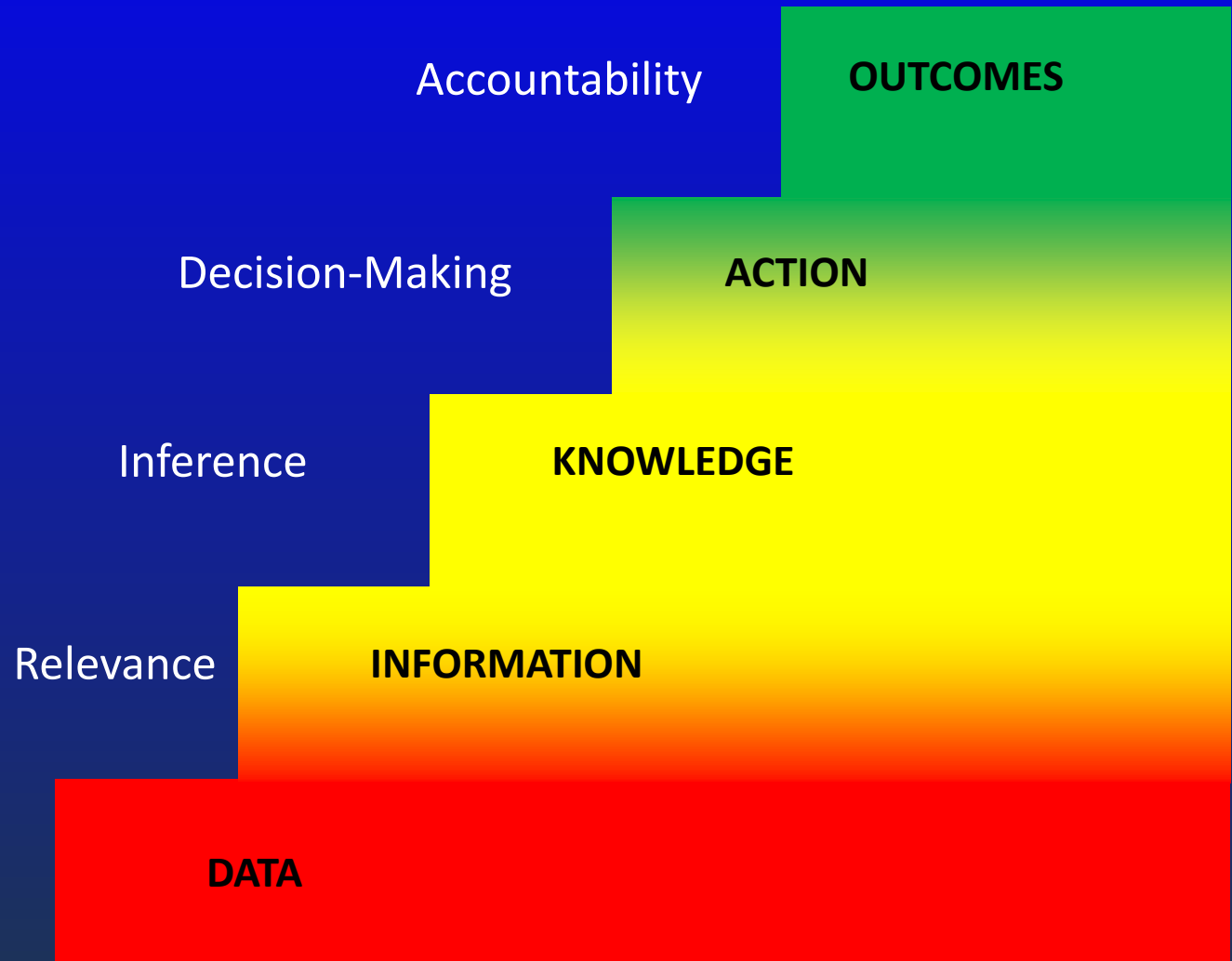
- Organization Theory
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- Data - knowledge

Understanding



Value of data

VALUE
WITHIN THE
ORGANIZATION



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 - The knowing-doing gab

The Knowing-doing Gap

- Treat talking about something as equivalent to actually doing something about it
- Making decisions as a substitute for action
- Making presentations as a substitute for action
- Preparing documents as a substitute for action
- Using mission statements as a substitute for action
- Planning as a substitute for action
- Negative people seem smarter
- People who talk a lot have more status

The Knowing-doing Gap

When memory is a substitute for thinking

People in organizations that use memory as a substitute for thinking often do what has always been done without reflecting

Stories about how things have always been and used to be, and standard operating procedures, become used as a substitute for taking wise action.

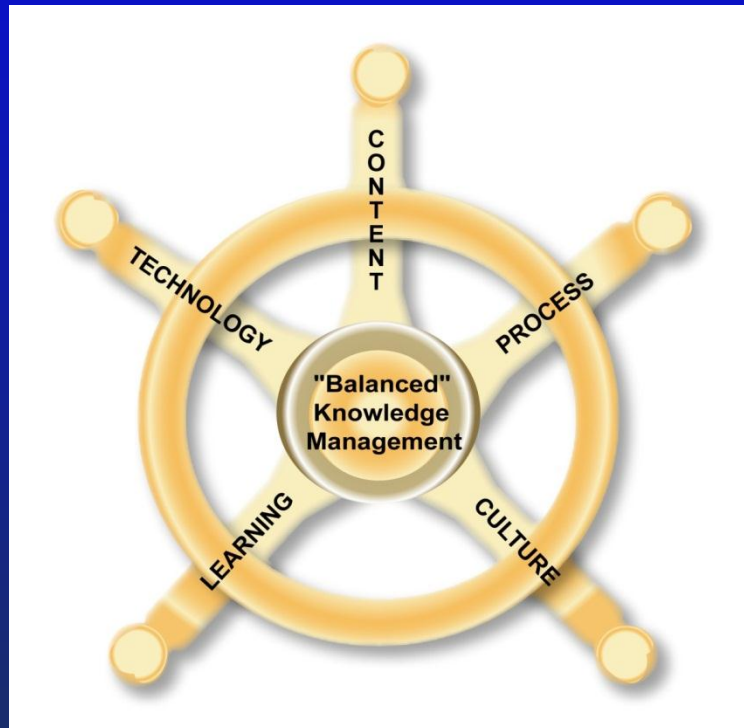
Is it Culture?

Knowledge Management

Context
Value
Relevancy
Currency
Credibility
Expertise

Enabling
Facilitating
Empowering
Promotes innovation

Creating
Growing
Strategic Thinking
Experimenting
Storytelling
Feedback loops
Discernment and Discretion



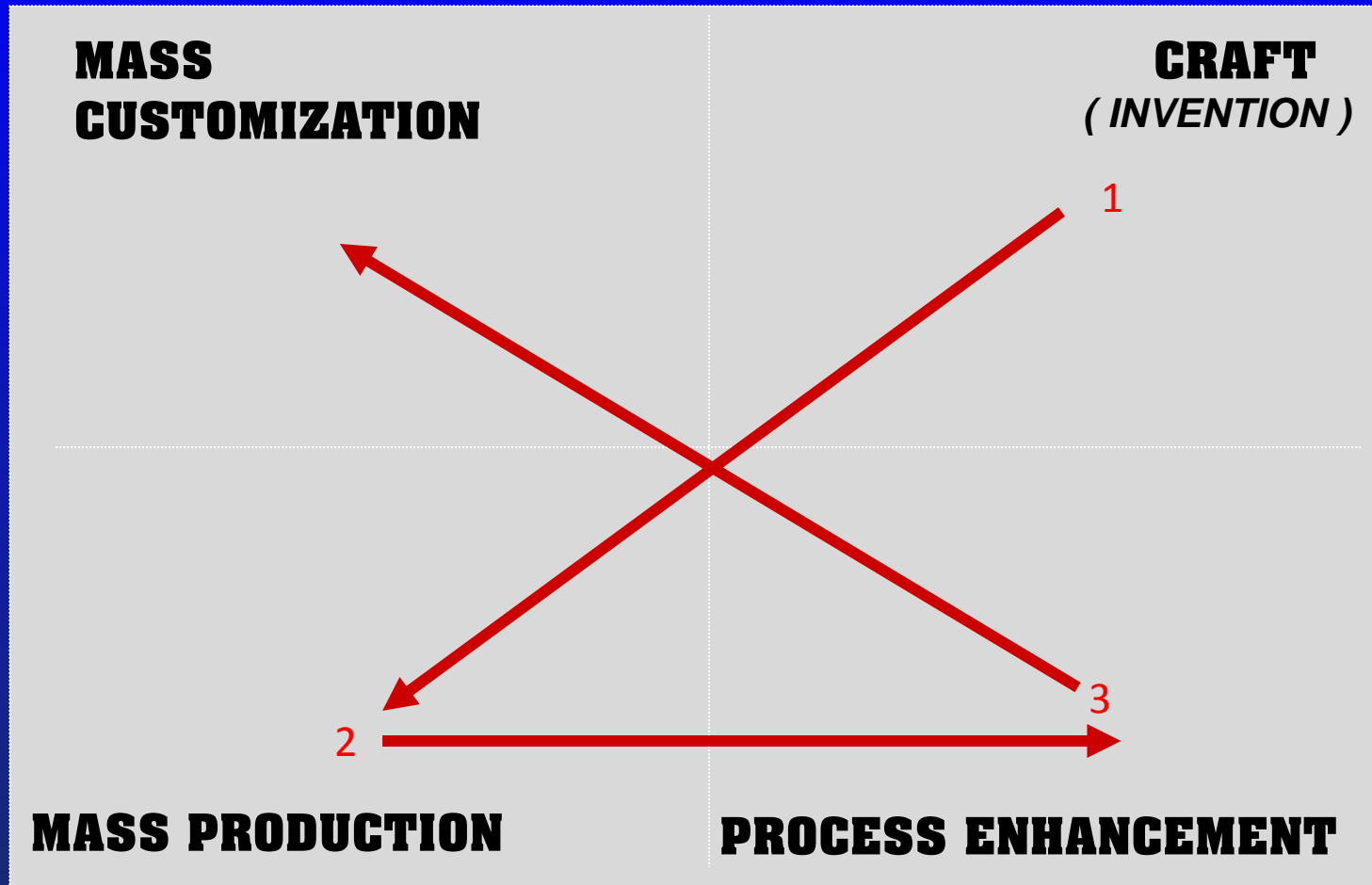
Making Explicit
Capturing
Categorizing
Clustering
Mapping
Analyzing
Disseminating
Presentation

Commitment
Sharing
Exchanging
Building relationships
Communities
Verification

Introduction

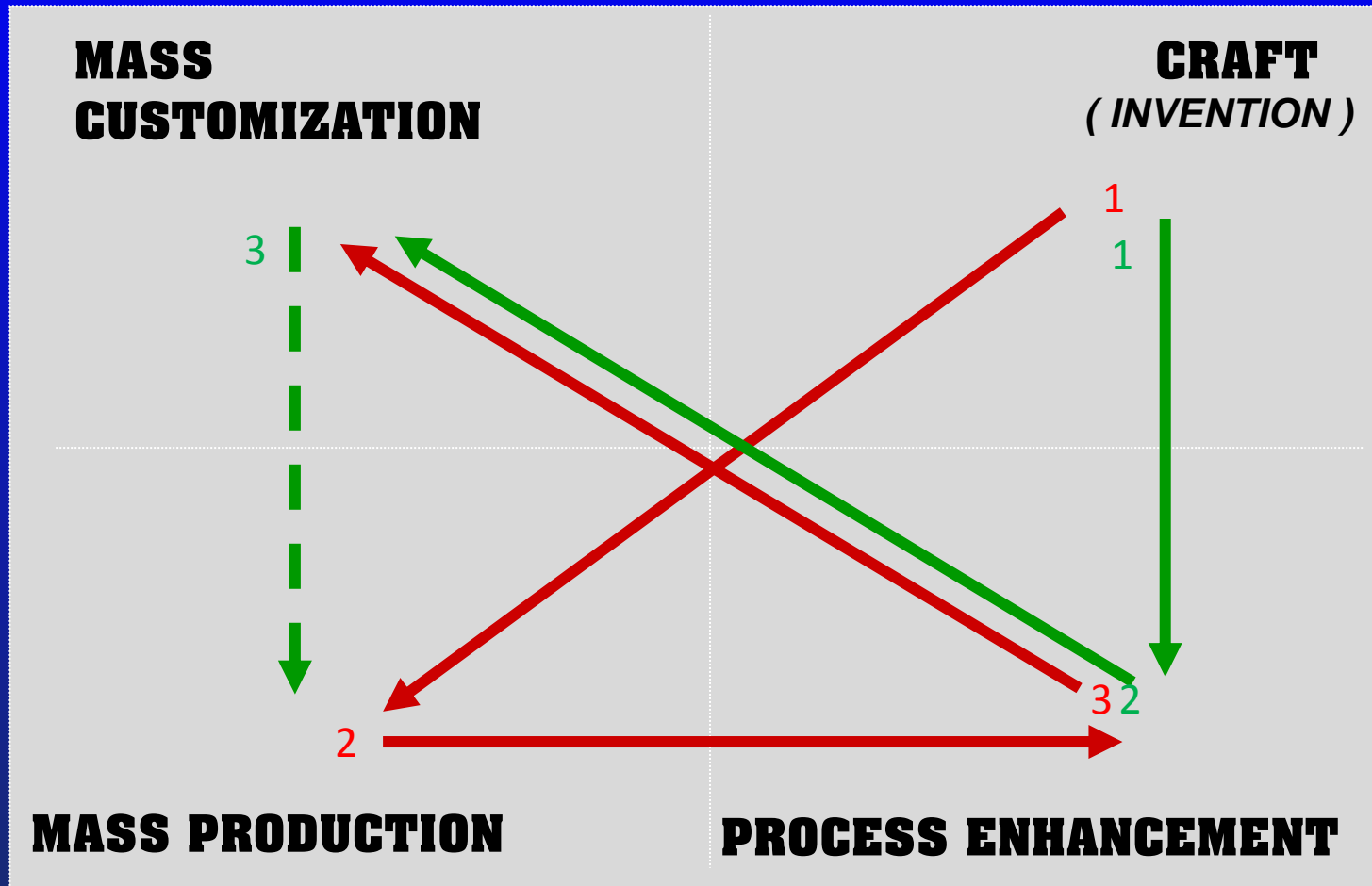
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- Dynamic –ongoing development

Industrial development



Traditional route of industrialization

Industrial development



Traditional route of industrialization

Common route in healthcare



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- Dynamic –ongoing development
- System performance

System performance

Health system performance are now firmly on the worldwide policy agenda as a priority area thanks to the publication of the '2000 World Health Report' by the World Health Organization and reports from The Commonwealth Fund.

Why read the reports ?

They give an comprehensive list of arguments for the need to improve performance and list a variety of parameters that can be used to compare health care systems.

- WHO. Health systems: Improving performance. Geneva: World Health Organization, 2000.
- Davis K. Toward A High Performance Health System: The Commonwealth Fund's New Commission. Health Aff 2005;24(5):1356-1360.

Different 'managements'



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- Dynamic –ongoing development
- System performance
 - Overlap with Human Resource Management

Not always strictly science

Productivity of team leaders

Time spend on/with team leaders

Max

KV

DD

Max

OA

NE

JO

PB

EK

KV

NE

EK

PB

JO

Min

DD

OA

Who would
you
consider
most
valuable ?

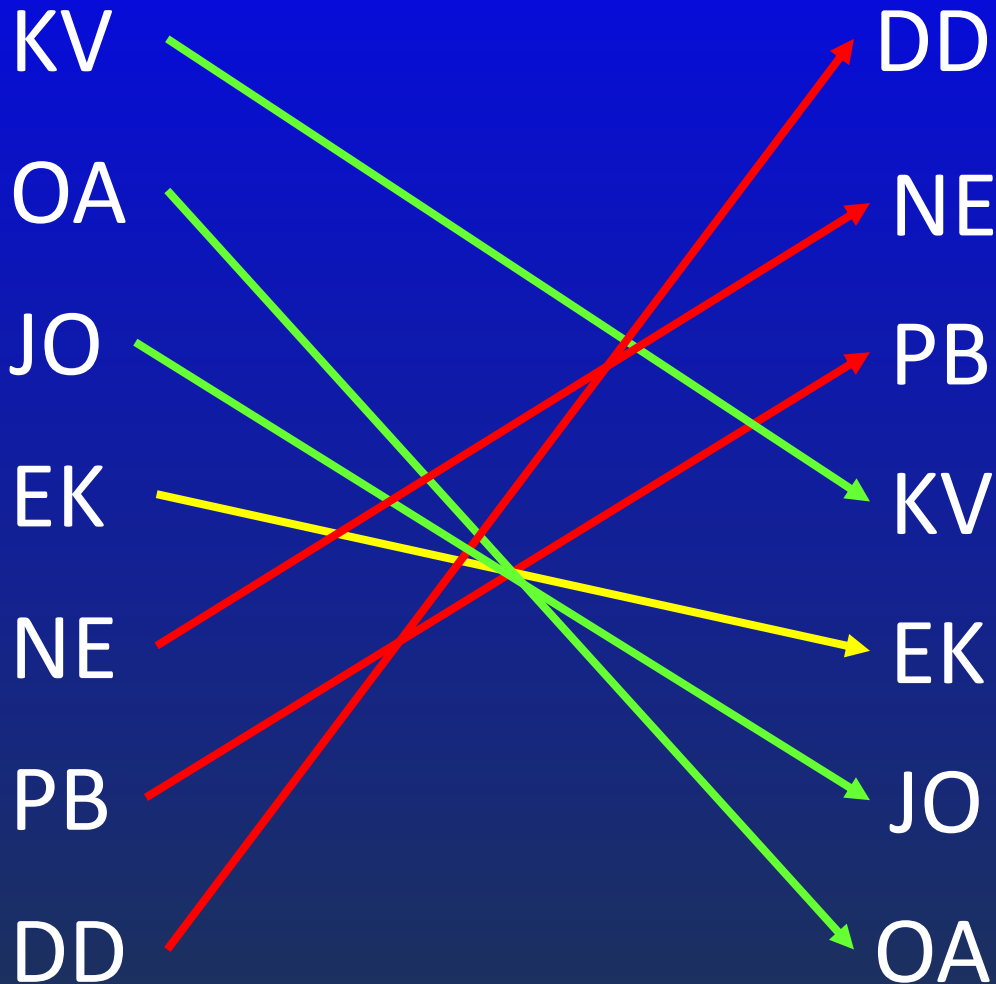
Not always strictly science

Productivity of team leaders

Time spend on/with team leaders

Max

Max



Min

Introduction

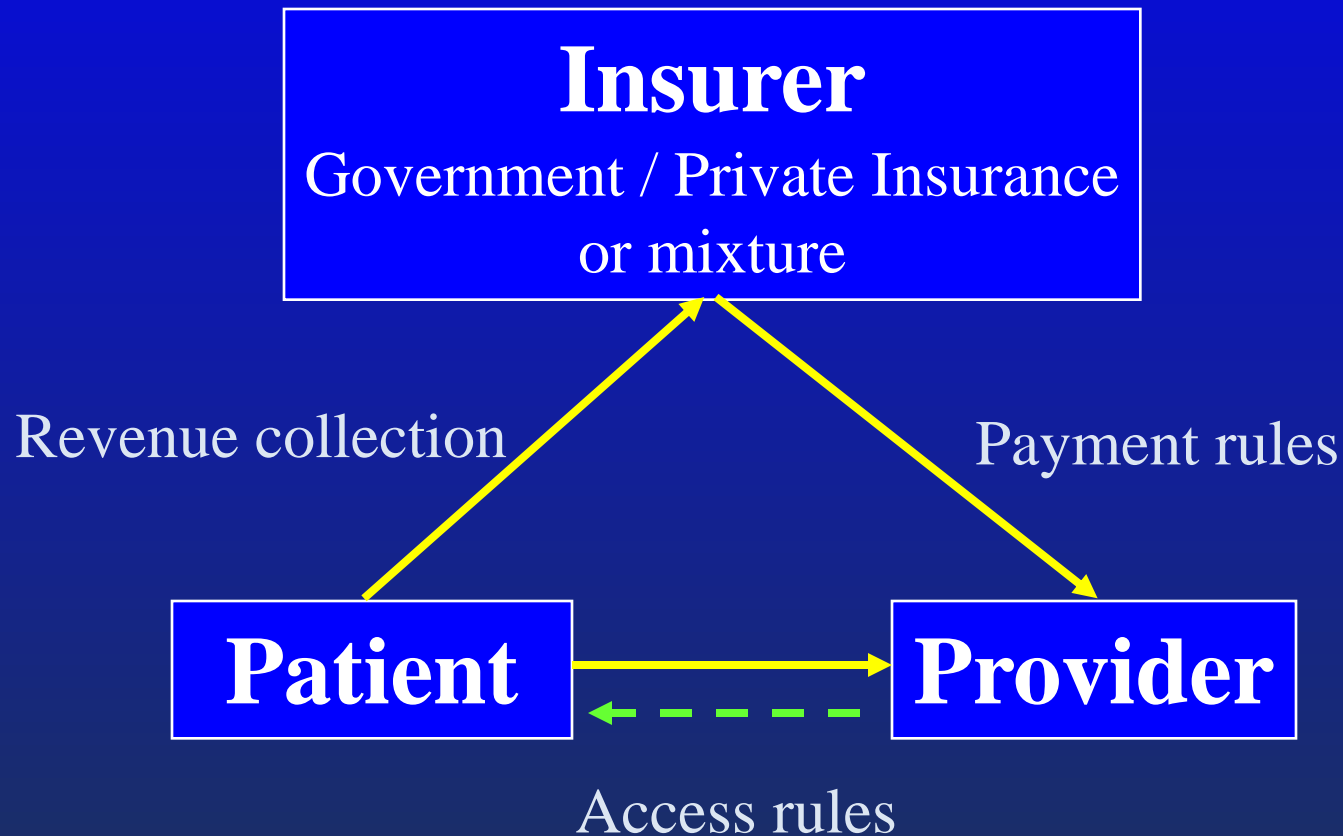
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 - Overlap with Human Resource Management
 - Overlap with health Economics

Health economics

Health economics is a broad discipline which deals with many different aspects of how health care resources are used

The central theme of health economics deals with the question how resources are best used

The simple model of how Health Care Systems works



Four 'archetypes' of healthcare system

Although every healthcare system is different, they can be grouped into four "archetypes."

- **Socialized medicine** (as in Britain or Sweden) covers everybody, has a single payer, and usually has those who provide care salaried or capitates (paid so much for every person for whom they provide care).
- **Socialized insurance** (as in Australia, Canada, or France) also covers everybody and has a single payer but pays those who provide care a fee for each service.
- **Mandatory insurance** (as in Germany, Brazil, Japan, Malaysia, and Singapore) again covers everybody but has multiple sickness funds or insurance carriers and provides care through a mixture of salaried public providers and private providers paid a fee for each service.
- **Voluntary insurance** (as in the United States or South Africa) does not offer cover to everybody and has many payers and providers and different systems of payment and delivery

Four 'archetypes' of healthcare system

What type is your system ?

What is the implications for

Equity ?

Accessability?

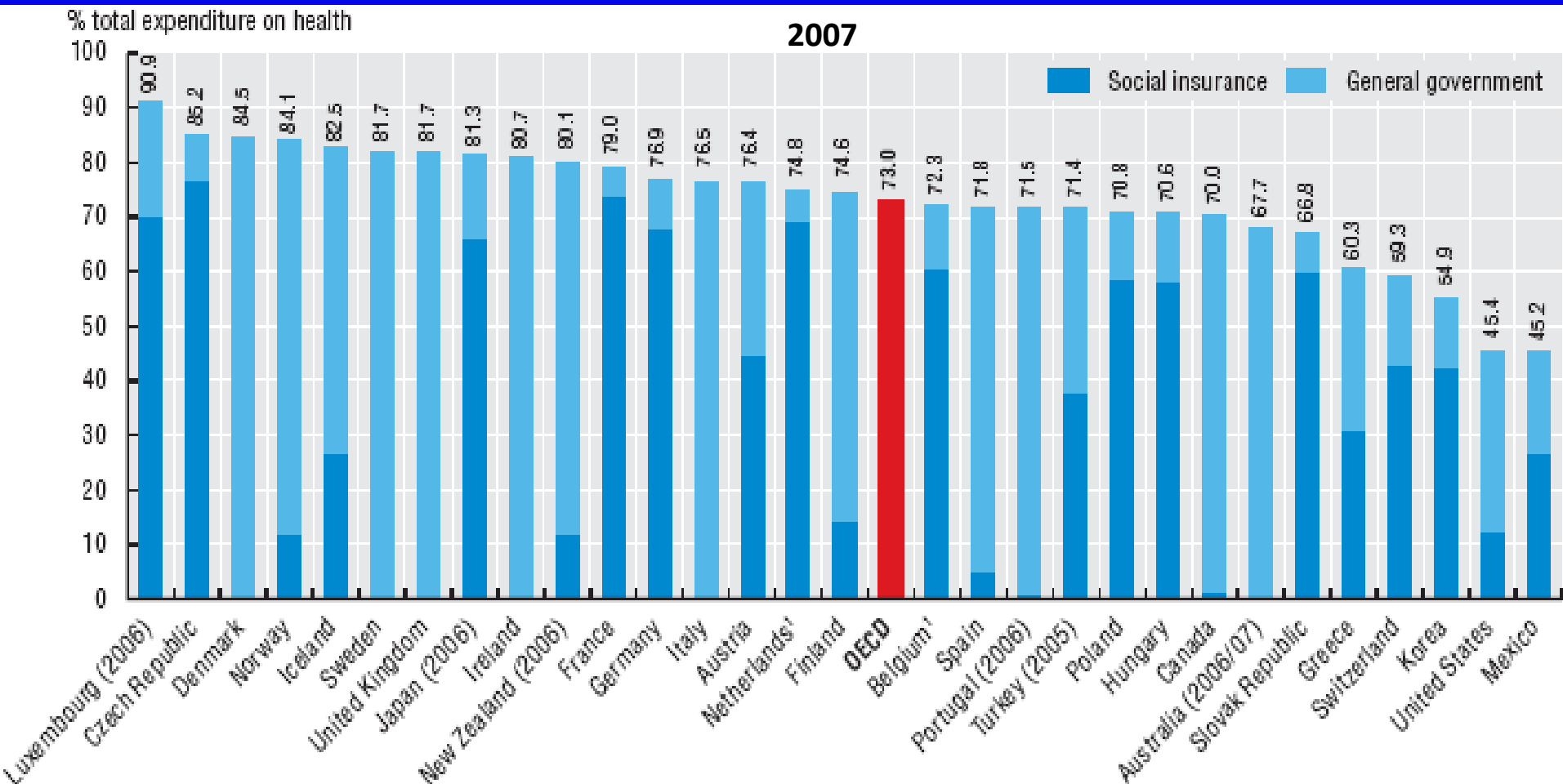
Quality?

Accountability ?

Efficiency ?

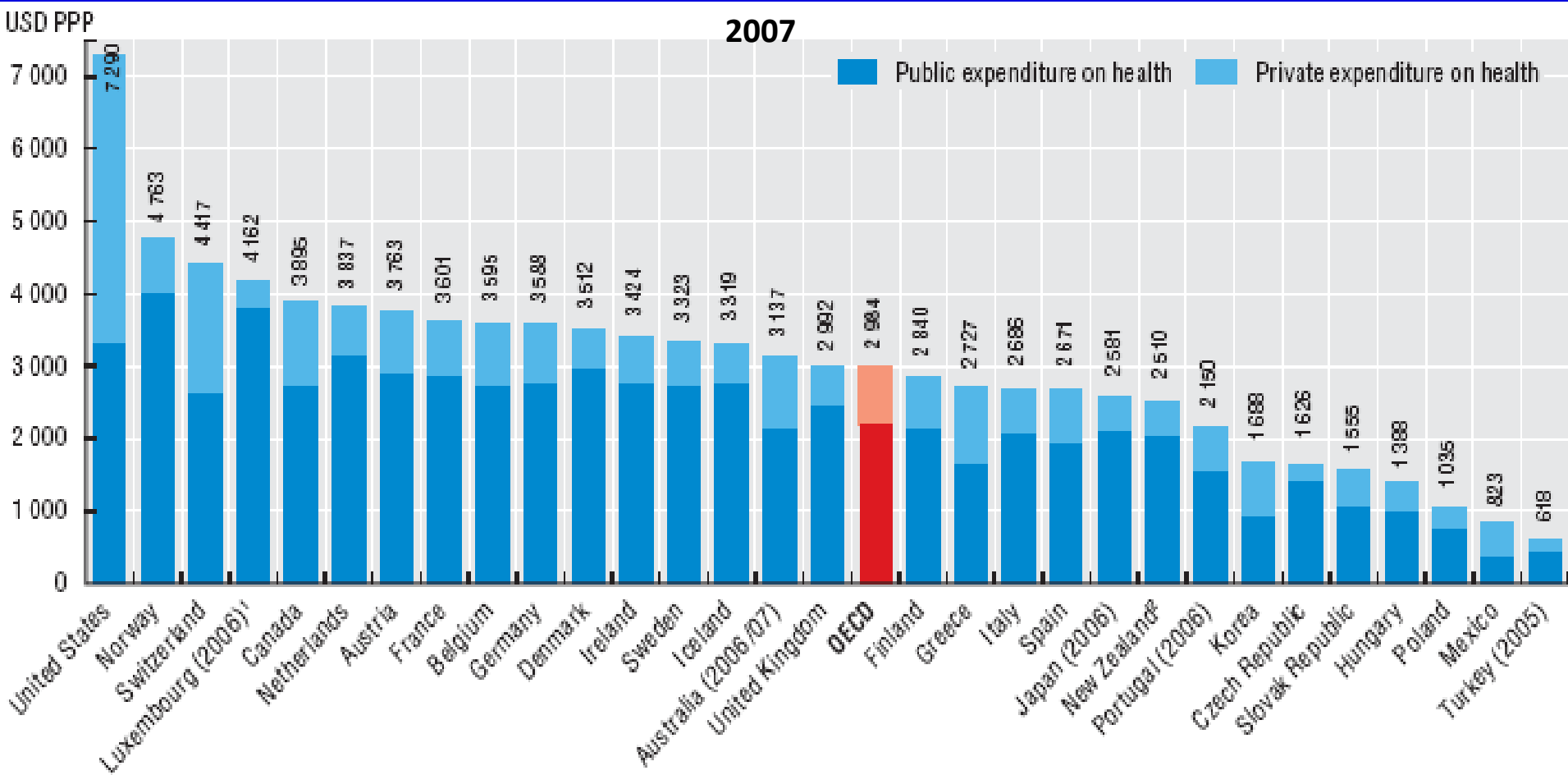
Ofcause hybrid system exsists

Hybrid systems?

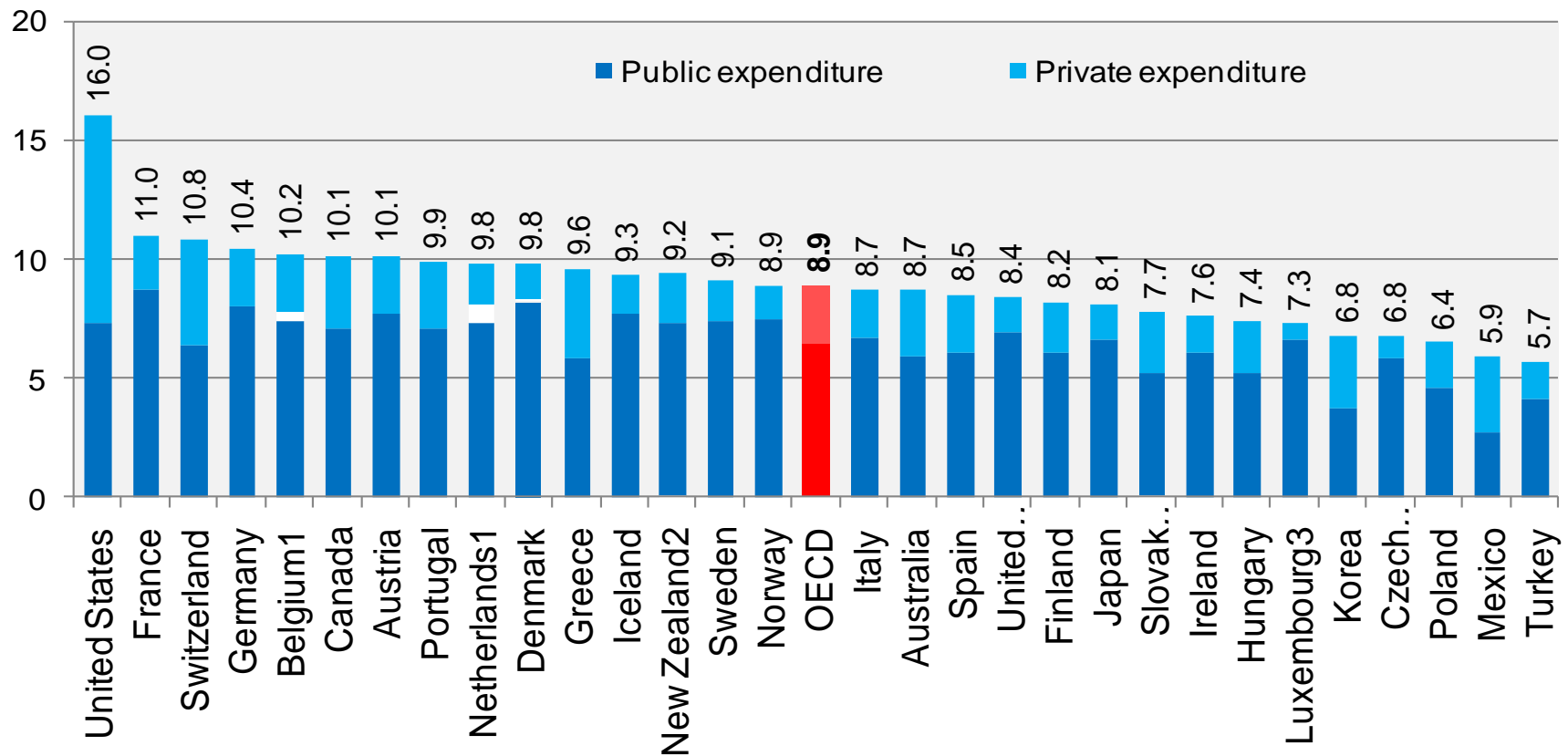


The public sector is the main source of financing in most OECD countries. Only in the United States and Mexico do public sources account for less than 50% of health financing

How much do we pay in \$(US)?



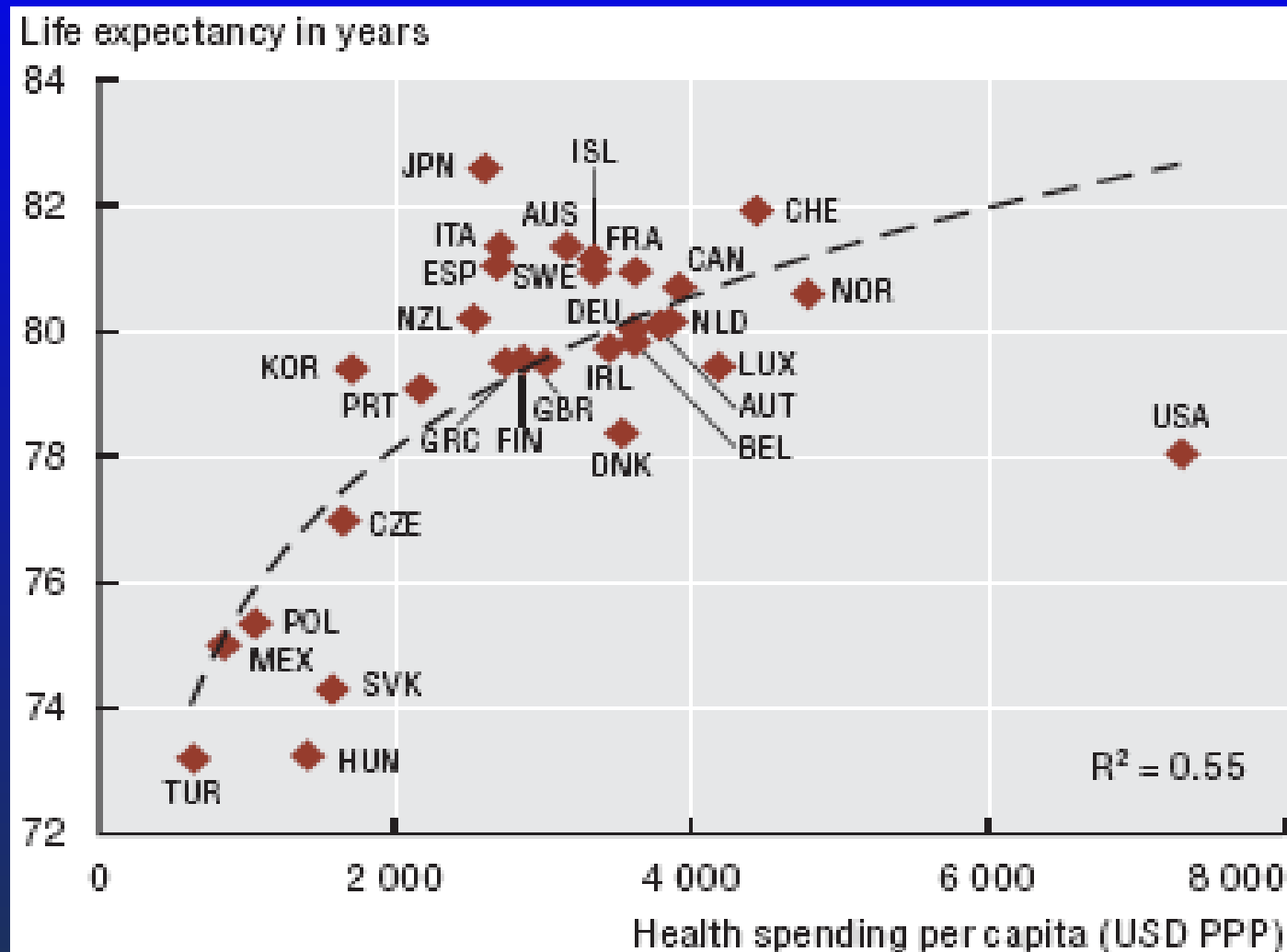
How much do we pay in GDP?



1. Public and private expenditures are current expenditures (excluding investments).
2. Current health expenditure..
3. Health expenditure is for the insured population rather than resident population.

Life expectancy versus spending?

2007 (or latest year available)



Is Outcome Important for Setting Priorities in Health Care?

Effectiveness and Efficiency

Effectiveness – we have an effective procedure, we want it to be provided, and we do not want to wait for it

Efficiency – benefits provided by the treatment in a cost-effective way

Efficacy – best possible outcome from a procedure under optimal conditions

Can we measure system performance?

Is mortality a measure of healthcare quality ?

Yes it can be

Mortality amenable to health care

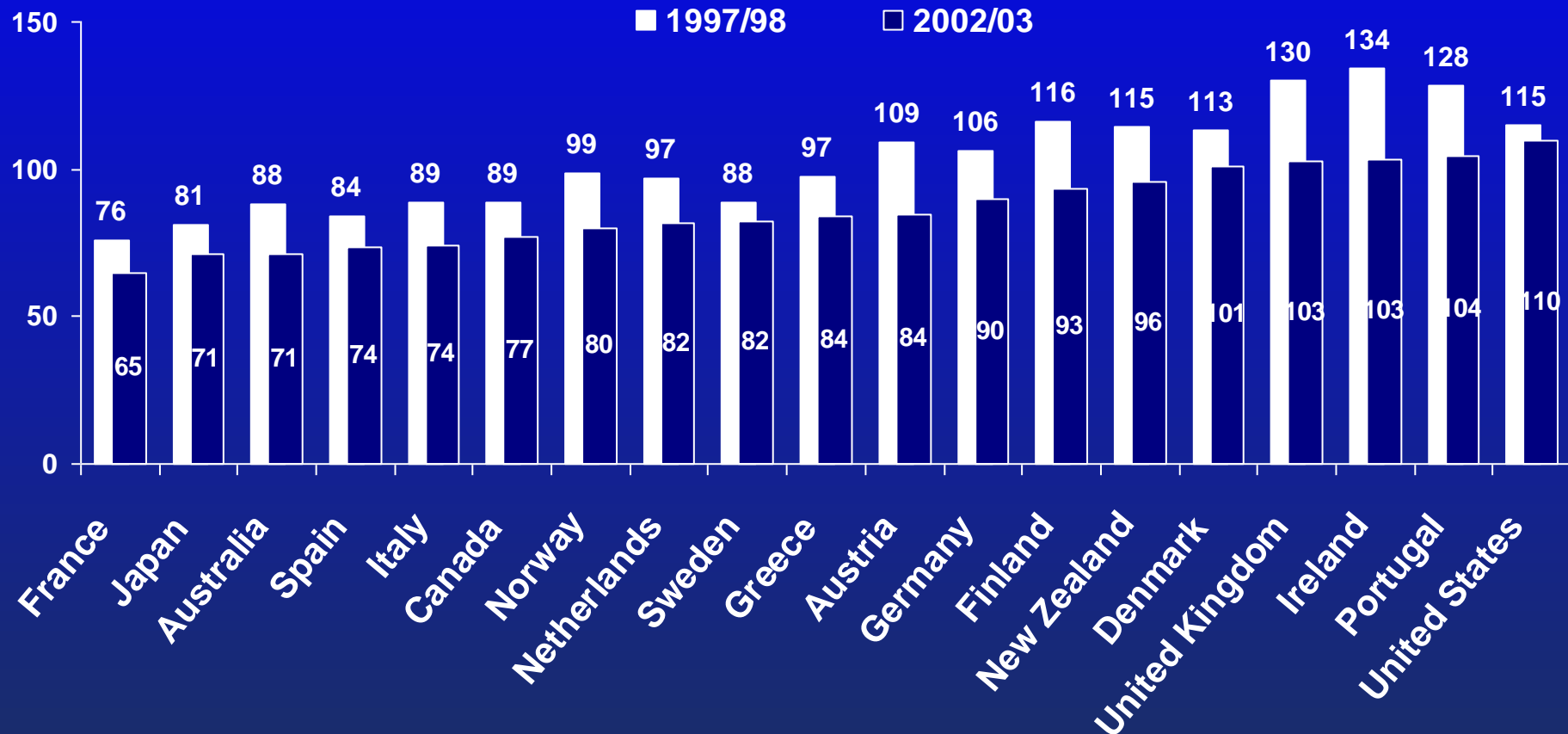
But as allways there is pro and cons.

- Nolte E, McKee M. Measuring the health of nations: analysis of mortality amenable to health care. BMJ 2003;327(7424):1129-0.
- Nolte E, McKee M. Does Healthcare Save Lives. London, UK: The Nuffield Trust; 2004.
- Shahian DM, Wolf RE, Iezzoni LI, Kirle L, Normand SL. Variability in the Measurement of Hospital-wide Mortality Rates. New England Journal of Medicine 2010;363(26):2530-2539.

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Can we measure system performance?

Deaths per 100,000 population*



* *Countries' age-standardized death rates before age 75; including ischemic heart disease, diabetes, stroke, and bacterial infections. Data: E. Nolte and C. M. McKee, London School of Hygiene and Tropical Medicine analysis of World Health Organization mortality files (Nolte and McKee, *Health Affairs* 2008).*

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008.

Payment methods does matter

Experts Believe That Global Payment Benefits Patients

Does it influence how we design organizations?
Drive need for reforms?

Patients get better care: Global payment enables financial support for care management services of all kinds. Fee-for-service medicine does not pay for services that are required for care coordination.

Costs are better managed: Global payment encourages the right care at the right time for patients. Fee-for-service drives up costs by encouraging service volume without consideration of value.

Innovation in care delivery is possible: Global payment enables an emphasis on what works, not just what pays.

Robinow A. The potential of global payment - Insight from the field. The Commonwealth Fund, 2010 no 1373.

Costs

Cost always have to be weighed against benefits

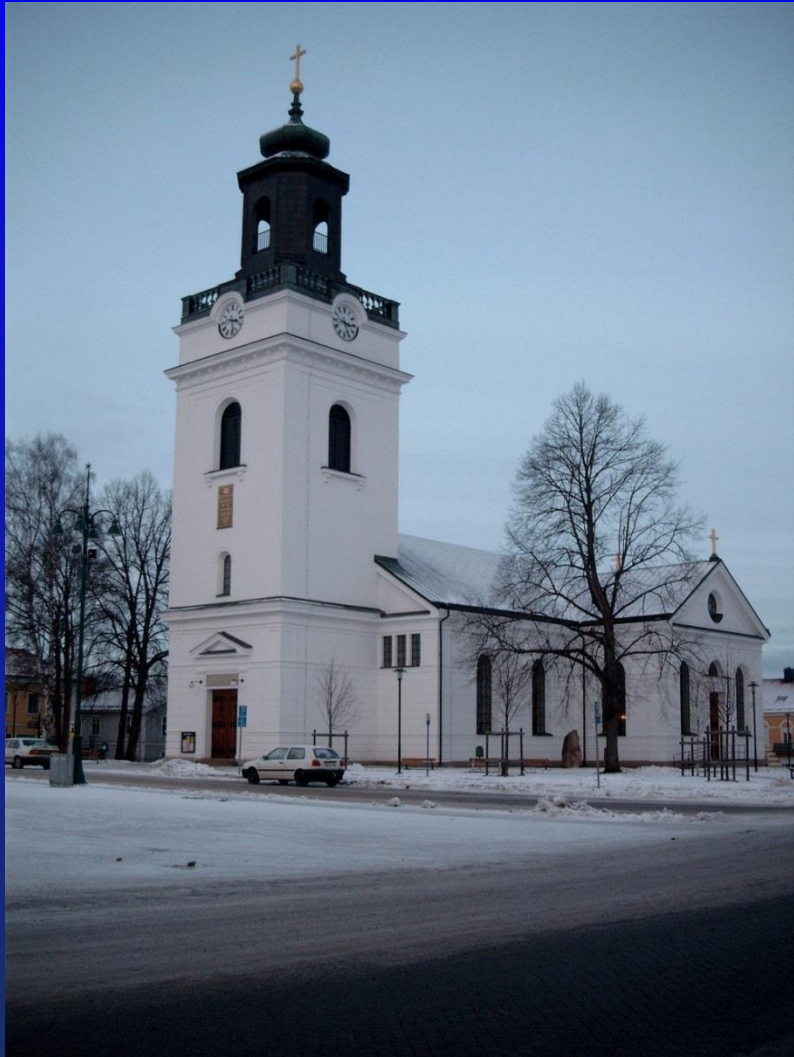
All interventions have a cost

My message:

Talking of organizational structure without discussing their cost-effectiveness is rubbish

- Department of Health Systems Financing Health Systems and Services. WHO guide to identifying the economic consequences of disease and injury. Geneva, Switzerland: World Health Organization; 2009.
- Tengs TO, Adams ME, Pliskin JS et al. Five-hundred life-saving interventions and their cost-effectiveness. Risk Anal 1995;15(3):369-390.

Terms you should remember



- Diseconomies of scale
- Moral Hazard
- Adverse Selection
- Externalities
- Asymmetry of Information

The Economic Basics for Health Care Management

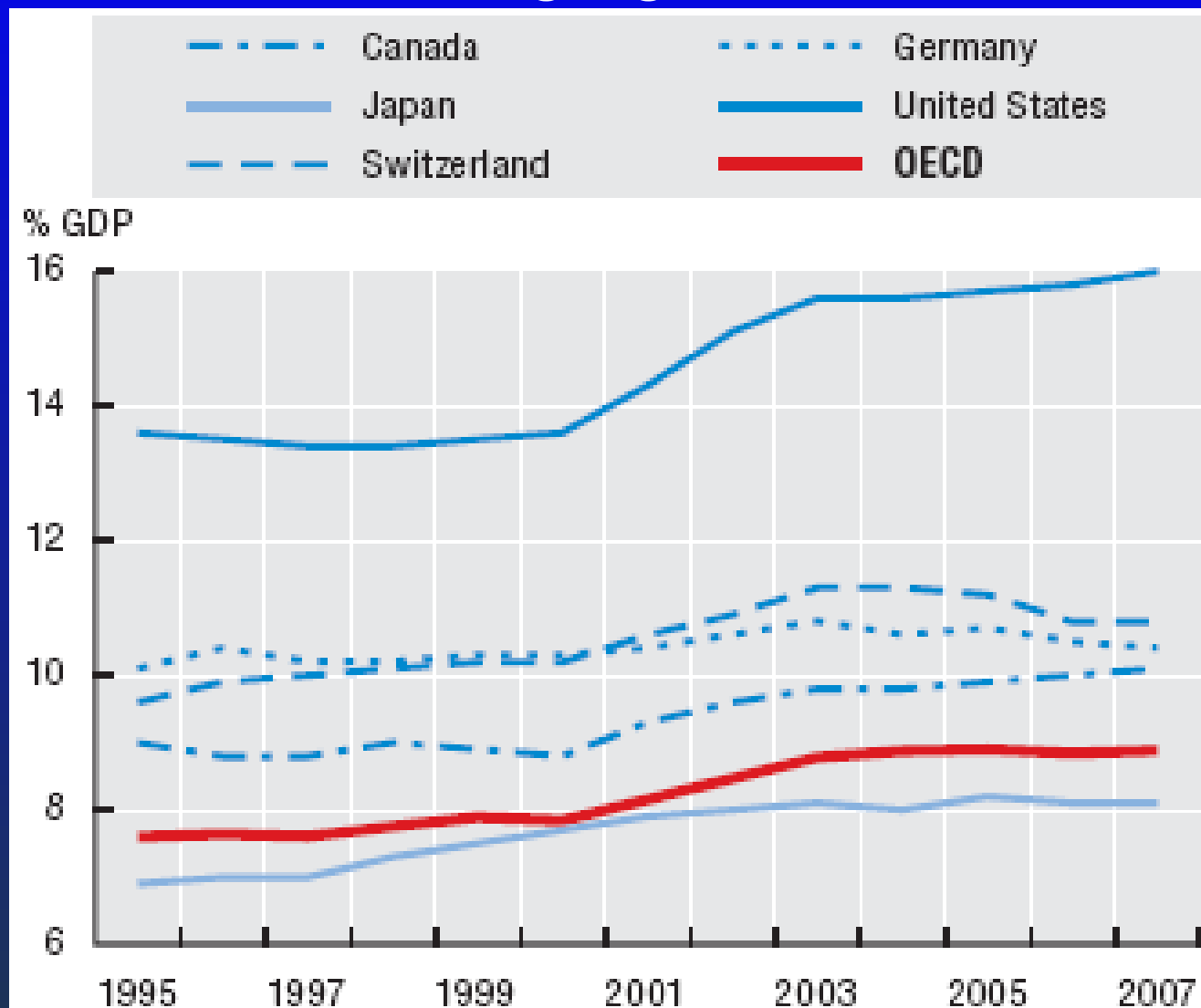
1. Resources for health care must be taken from the society's common financial basis regardless of the name or nature of the immediate payer
2. There will never be enough resources to meet every demand on health care sector. Therefore, the use of any such resource must be weighed against other needs within or outside the health care sector

(This choice is based on opinions on what are the most urgent and commonly accepted goals. This opinion is seldom based on facts.)

Introduction

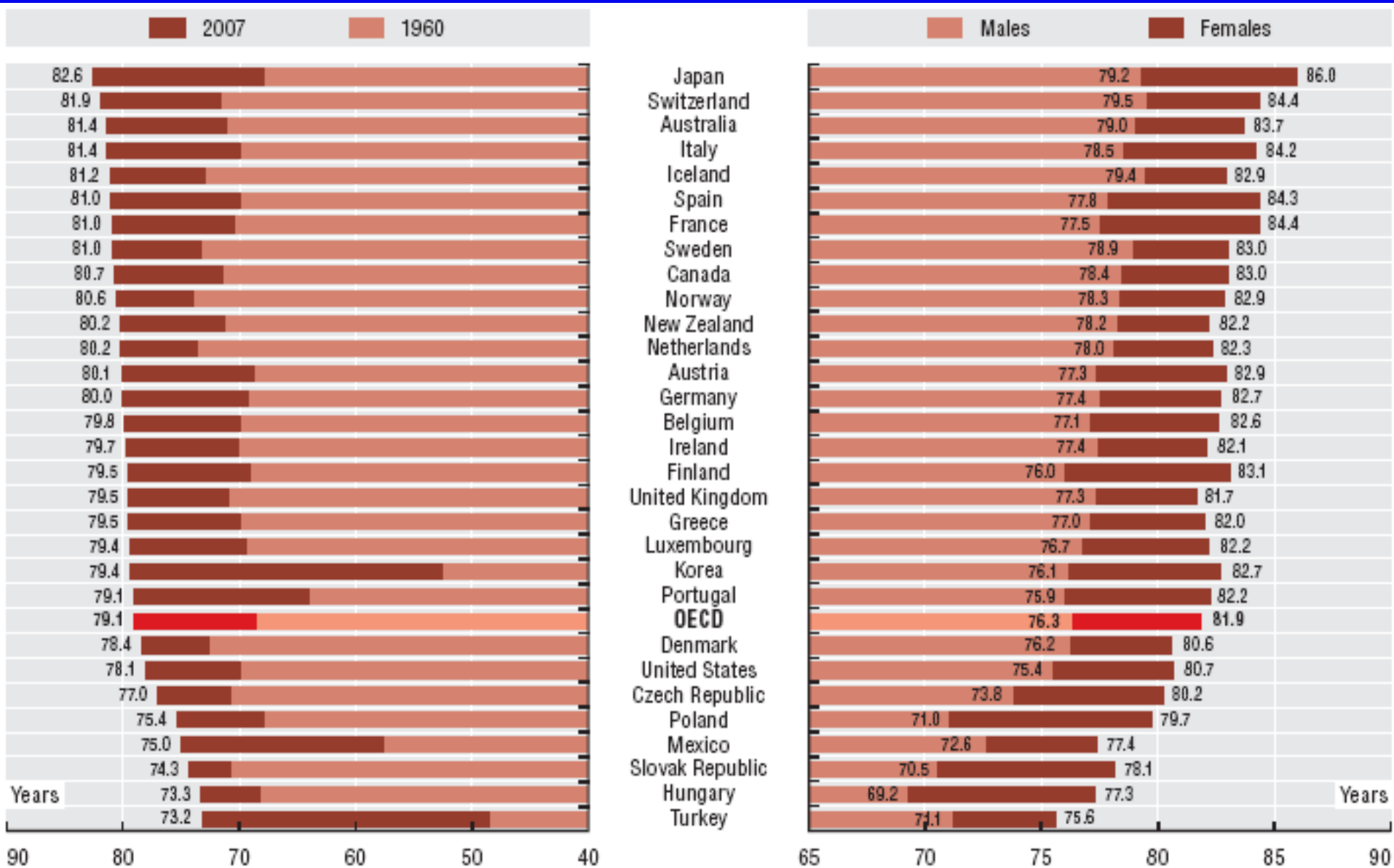
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- Health Care the ‘Expanding Industry’

The share of GDP allocated to health is increasing in all OECD countries, mostly due to new medical technologies and population ageing



Source: OECD Health Data 2009, OECD (<http://www.oecd.org/health/healthdata>).

Life expectancy at birth has increased by more than 10 years in OECD countries since 1960, reflecting a sharp decrease in mortality rates at all ages



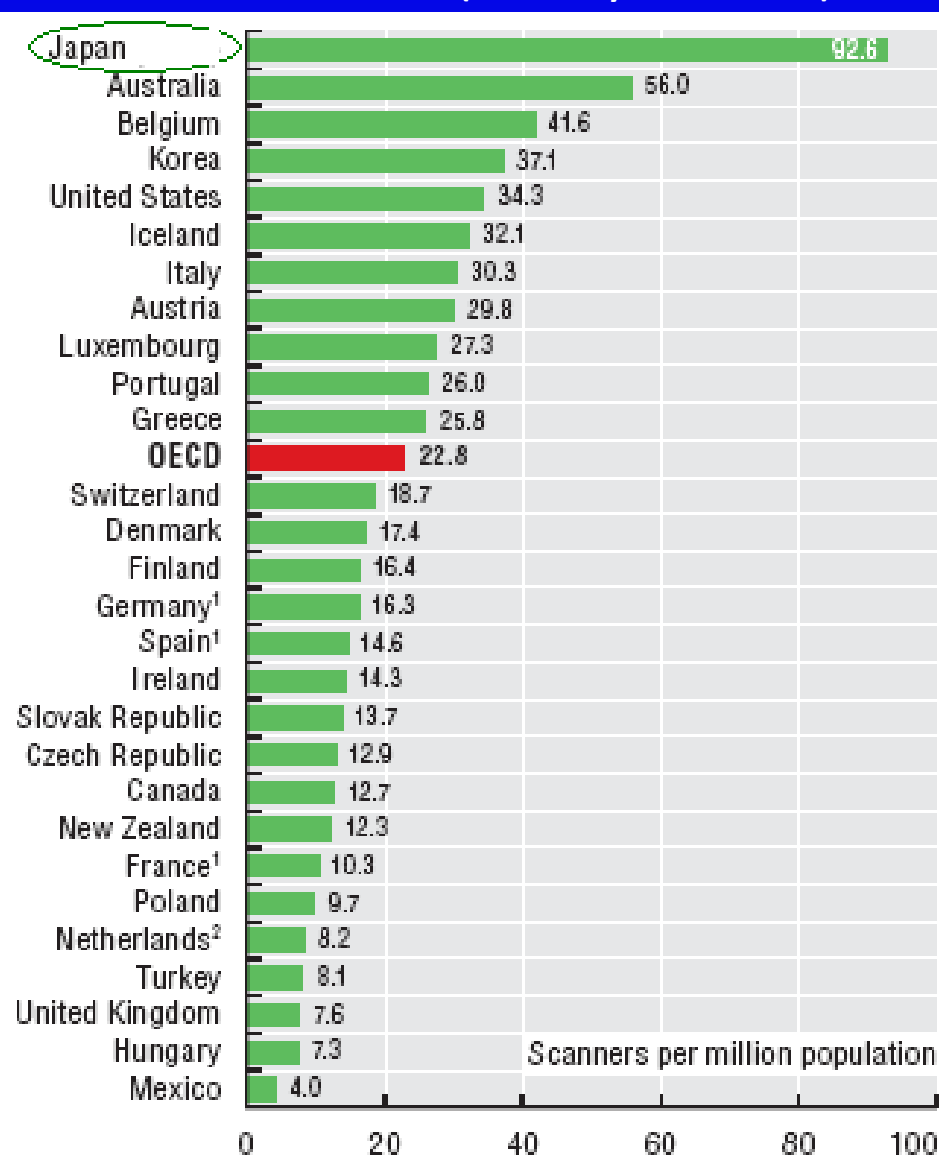
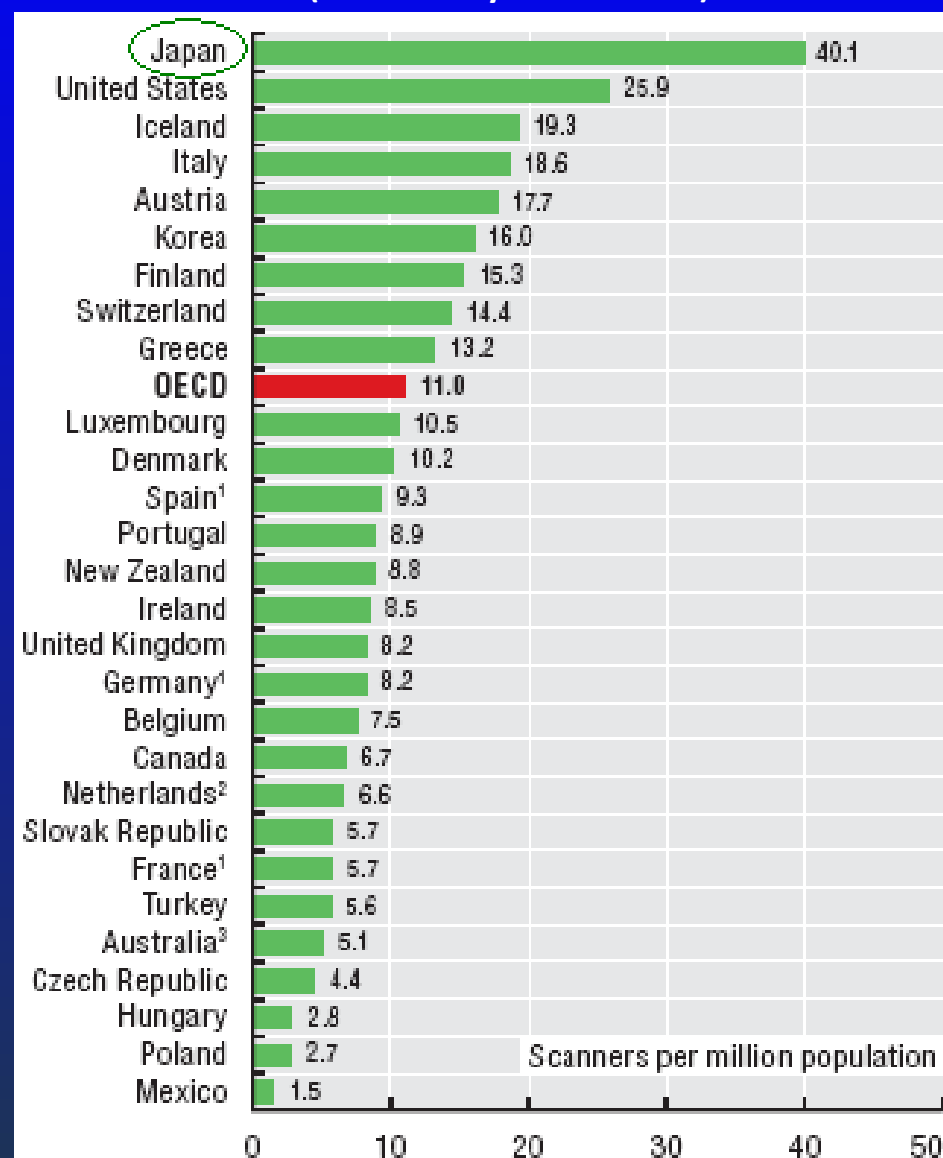
Source: OECD Health Data 2009, OECD (<http://www.oecd.org/health/healthdata>).

The number of MRI units and CT scanners is increasing in all OECD countries.

Japan has the highest number per capita

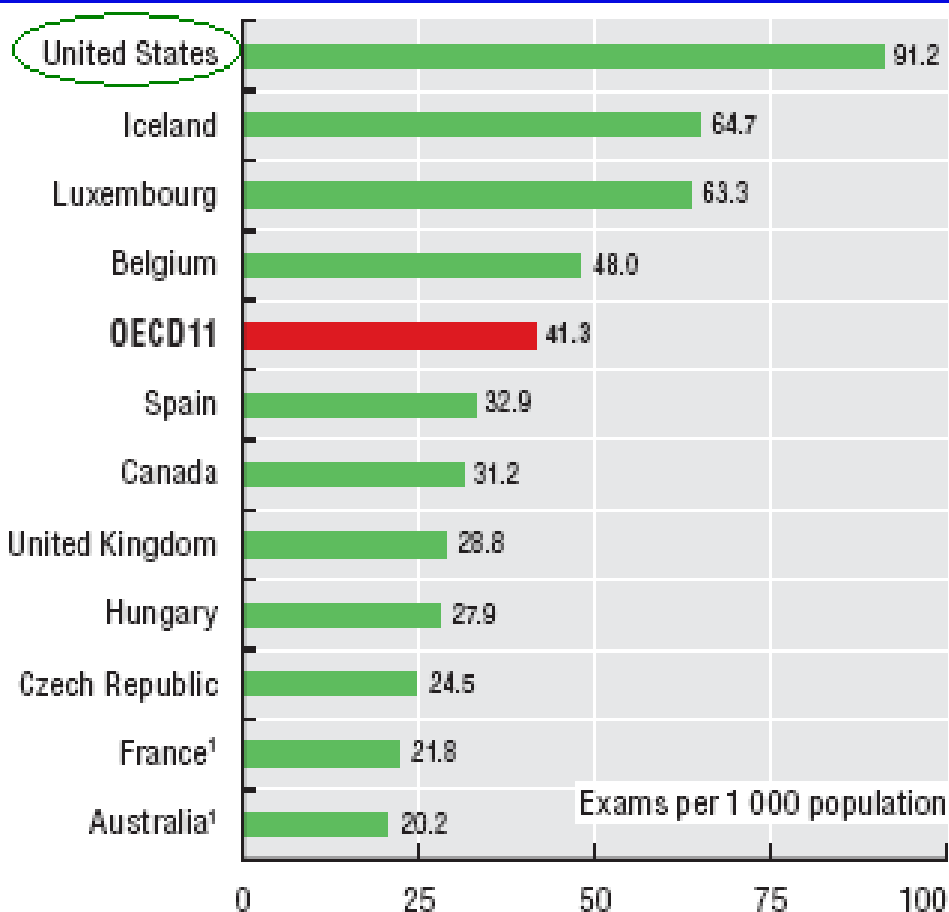
2000 (or nearest year available)

2007 (or latest year available)

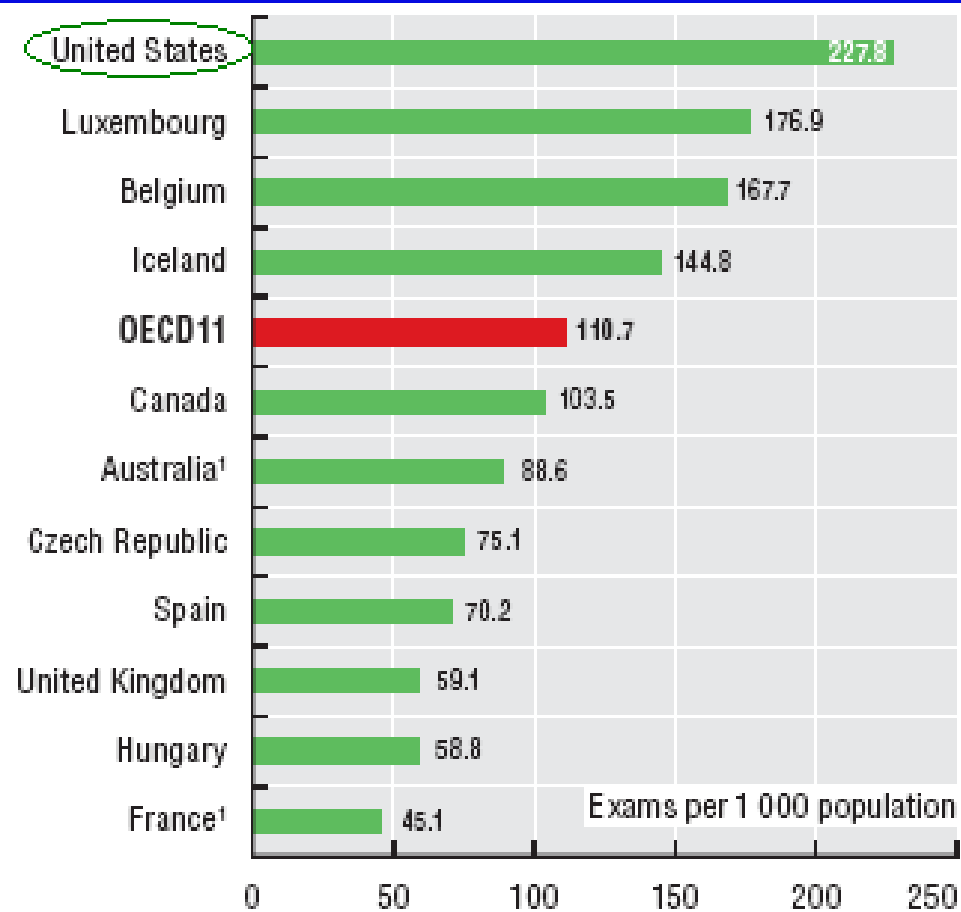


The United States has the highest number of MRI and CT exams per capita, followed by Luxembourg, Belgium and Iceland

2000 (or nearest year available)



2007 (or latest year available)



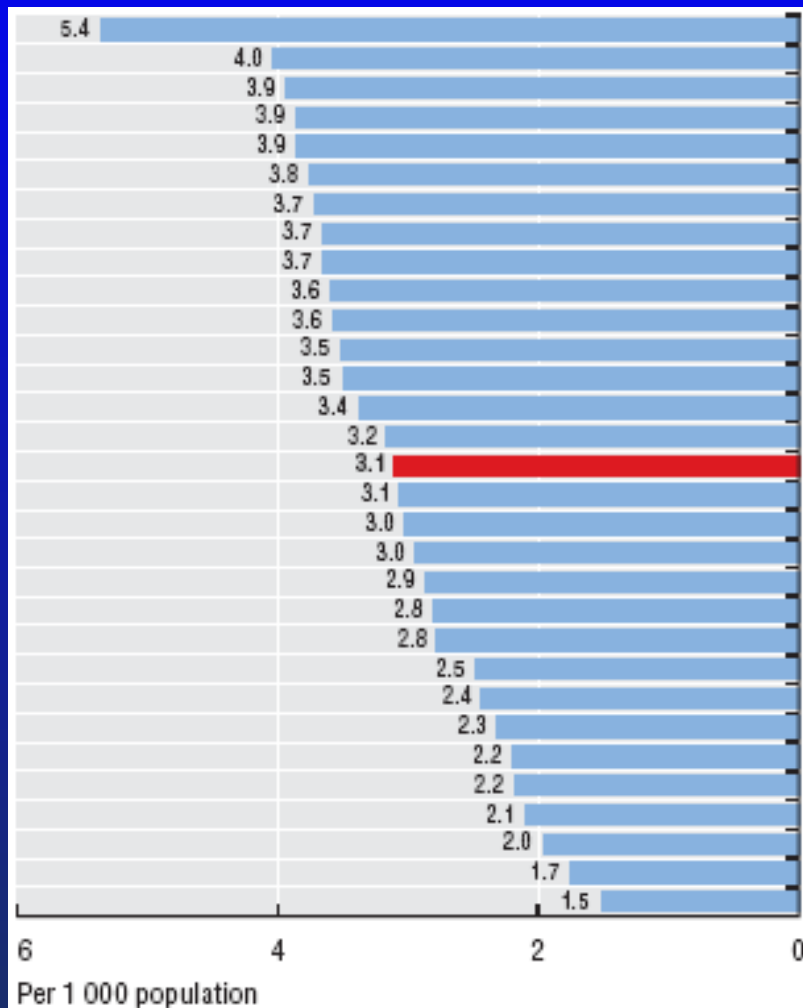
1. Only include exams for out-patients and private in-patients (excluding exams in public hospitals).

Note: Several countries, including Japan, have not provided any data.

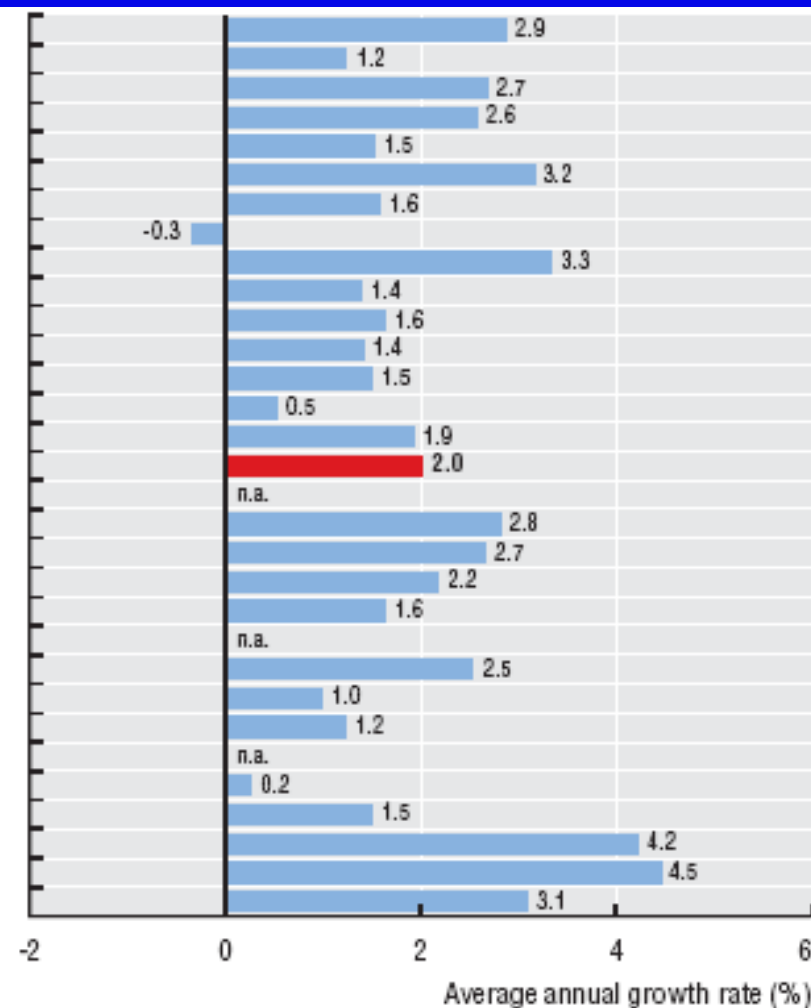
Source: OECD Health Data 2009, OECD (<http://www.oecd.org/health/healthdata>).

The number of physicians per capita has increased in all OECD countries since 1990, except in Italy

2007 (or latest year available)



1990-2007 (or nearest year)



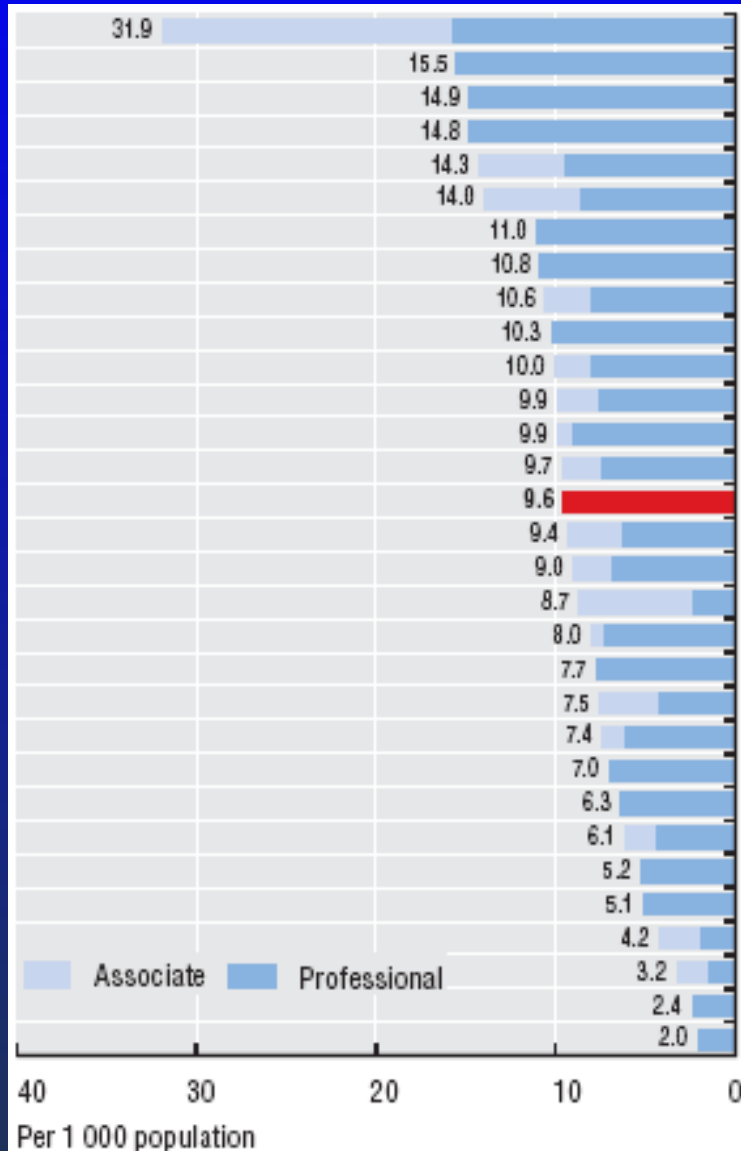
1. Ireland, the Netherlands, New Zealand and Portugal provide the number of all physicians entitled to practise rather than only those practising.

2. Data for Spain include dentists and stomatologists.

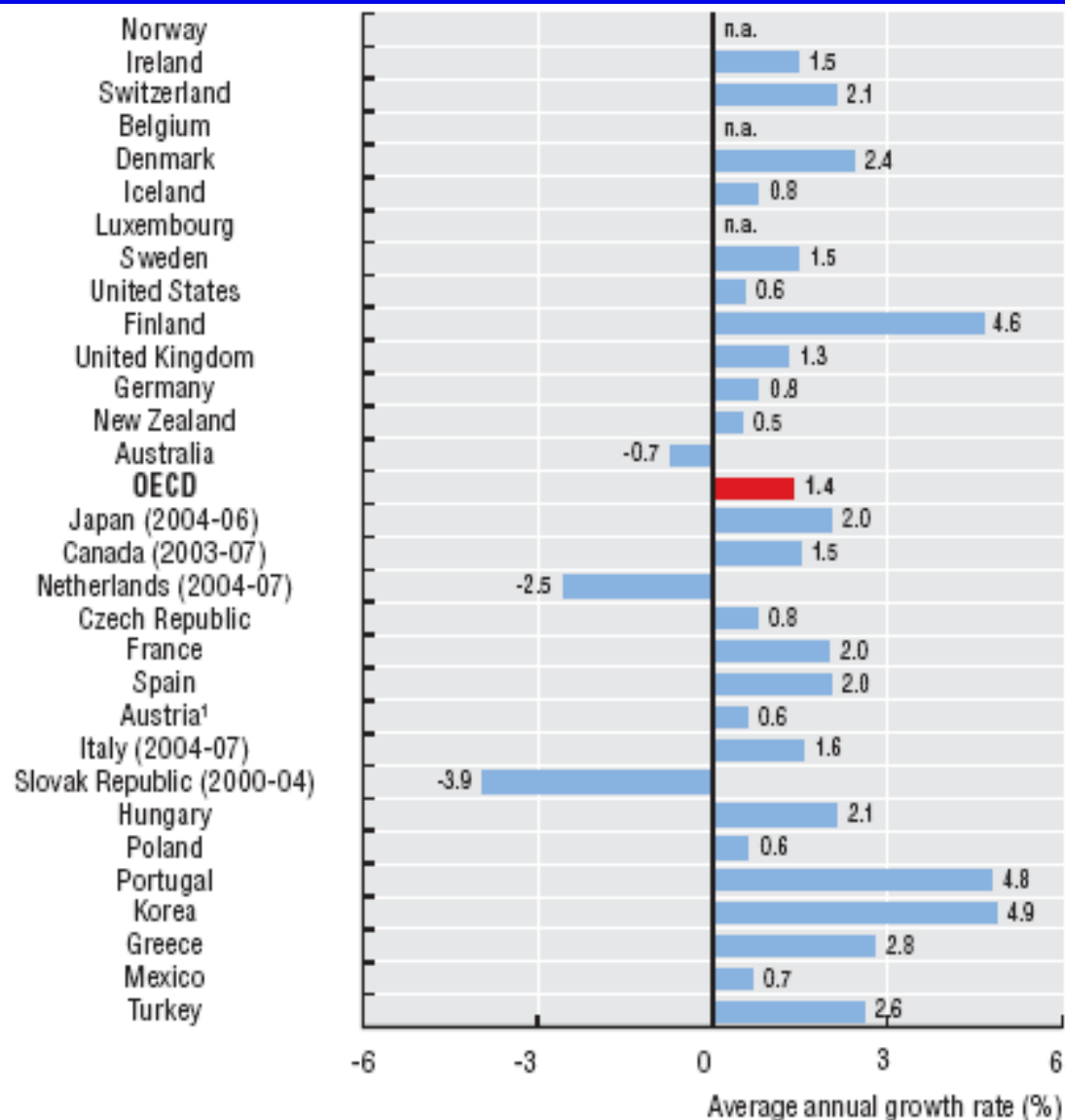
Source: OECD Health Data 2009, OECD (<http://www.oecd.org/health/healthdata>).

The number of nurses per capita has increased in all OECD countries since 2000, except in Australia, the Netherlands and the Slovak Republic

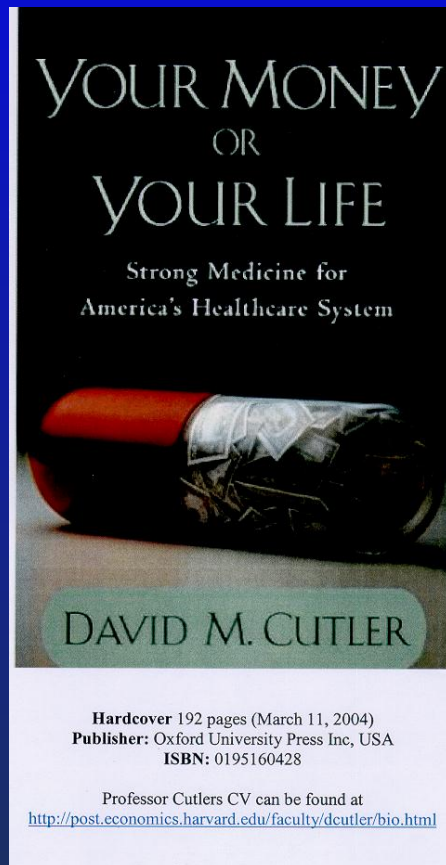
2007 (or latest year available)



2000-2007



Have we reached the limits for health care spending ?



The Value of Life and the Rise in Health Spending

Robert E. Hall

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<http://stanford.edu/~rehall>

and

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Department of Economics, U.C. Berkeley and NBER

E-mail: chad@econ.berkeley.edu
<http://elsa.berkeley.edu/~chad>

August 20, 2004 — Version 1.0

Health care extends life. Over the past half century, Americans have spent a rising share of total economic resources on health and have enjoyed substantially longer lives as a result. Debate on health policy often focuses on limiting the growth of health spending. We investigate an issue central to this debate: can we understand the growth of health spending as the rational response to changing economic conditions—notably the growth of income per person? We estimate parameters of the technology that relates health spending to improved health, measured as increased longevity. We also estimate parameters of social preferences about longevity and the consumption of non-health goods and services. The story of rising health spending that emerges is that the diminishing marginal utility of non-health consumption combined with a rising value of life causes the nation to move up the marginal-cost schedule of life extension. The health share continues to grow as long as income grows. In projections based on our parameter estimates, the health share reaches 33 percent by the middle of the century.

*We are grateful to Ron Lee and participants at the Summer Institute meeting of the NBER's Health and Aging Program for helpful comments. Jones thanks the Center for Economic Demography and Aging at Berkeley for financial support.

1

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- Quality

Treatment for chronic diseases is not optimal. Too many persons are admitted to hospitals for asthma ...

Asthma admission rates, population aged 15 and over, 2007

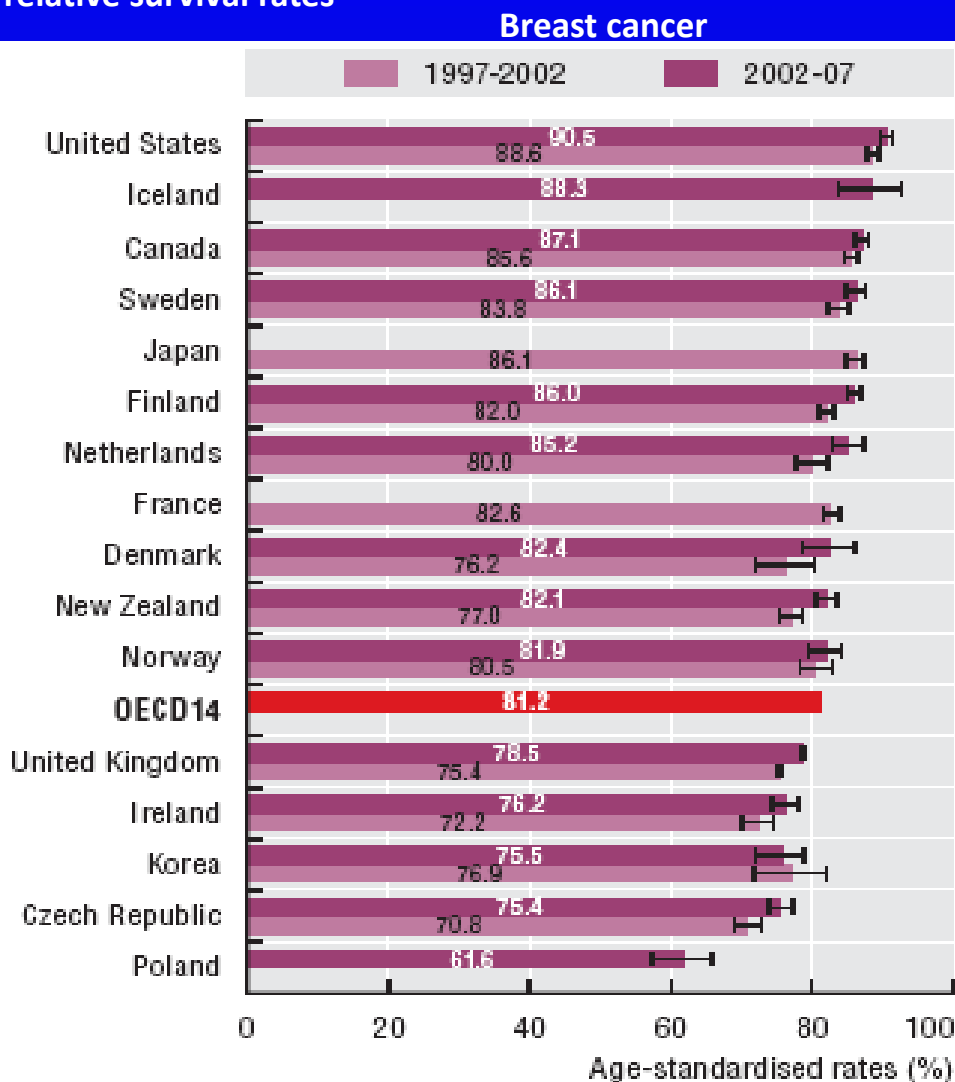
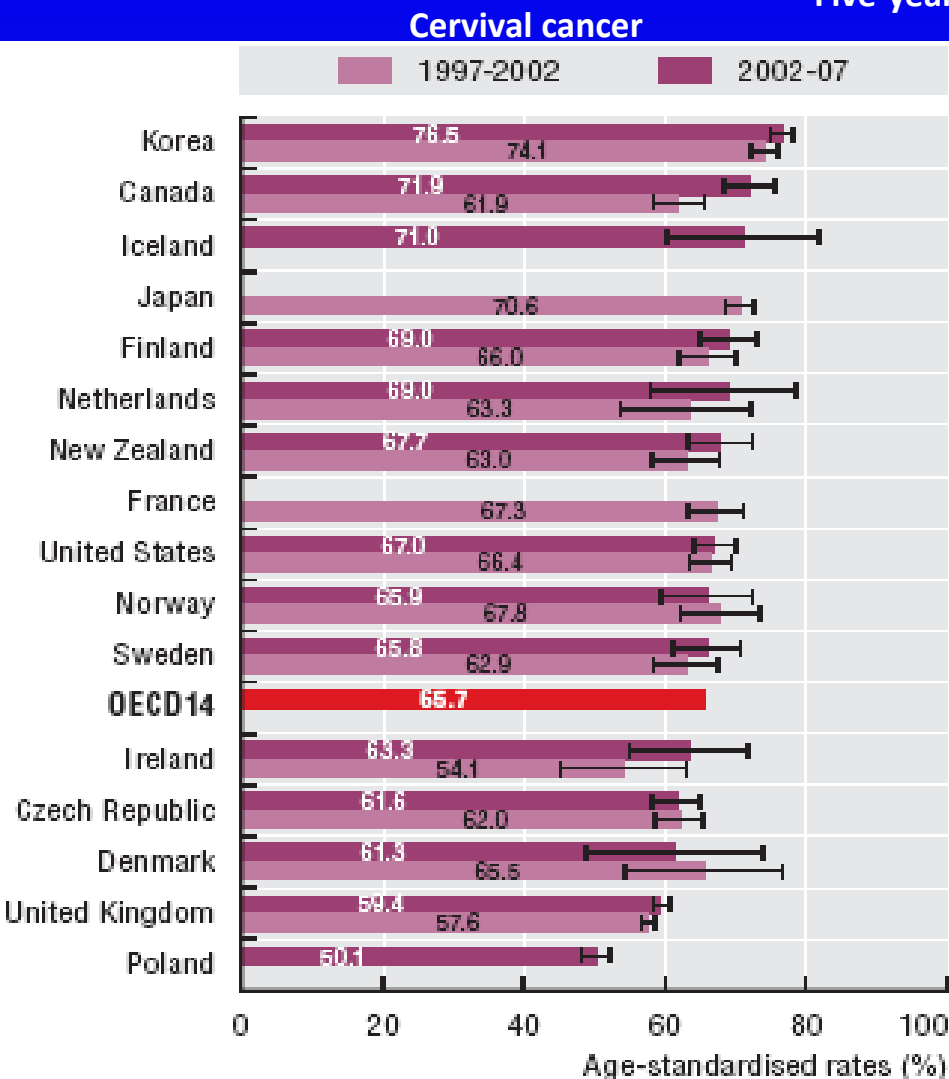


1. Does not fully exclude day cases.
2. Includes transfers from other hospital units, which marginally elevates rates.

Source: OECD Health Care Quality Indicators Data 2009 (OECD).

Cancer survival rates are increasing in all OECD countries

Five-year relative survival rates

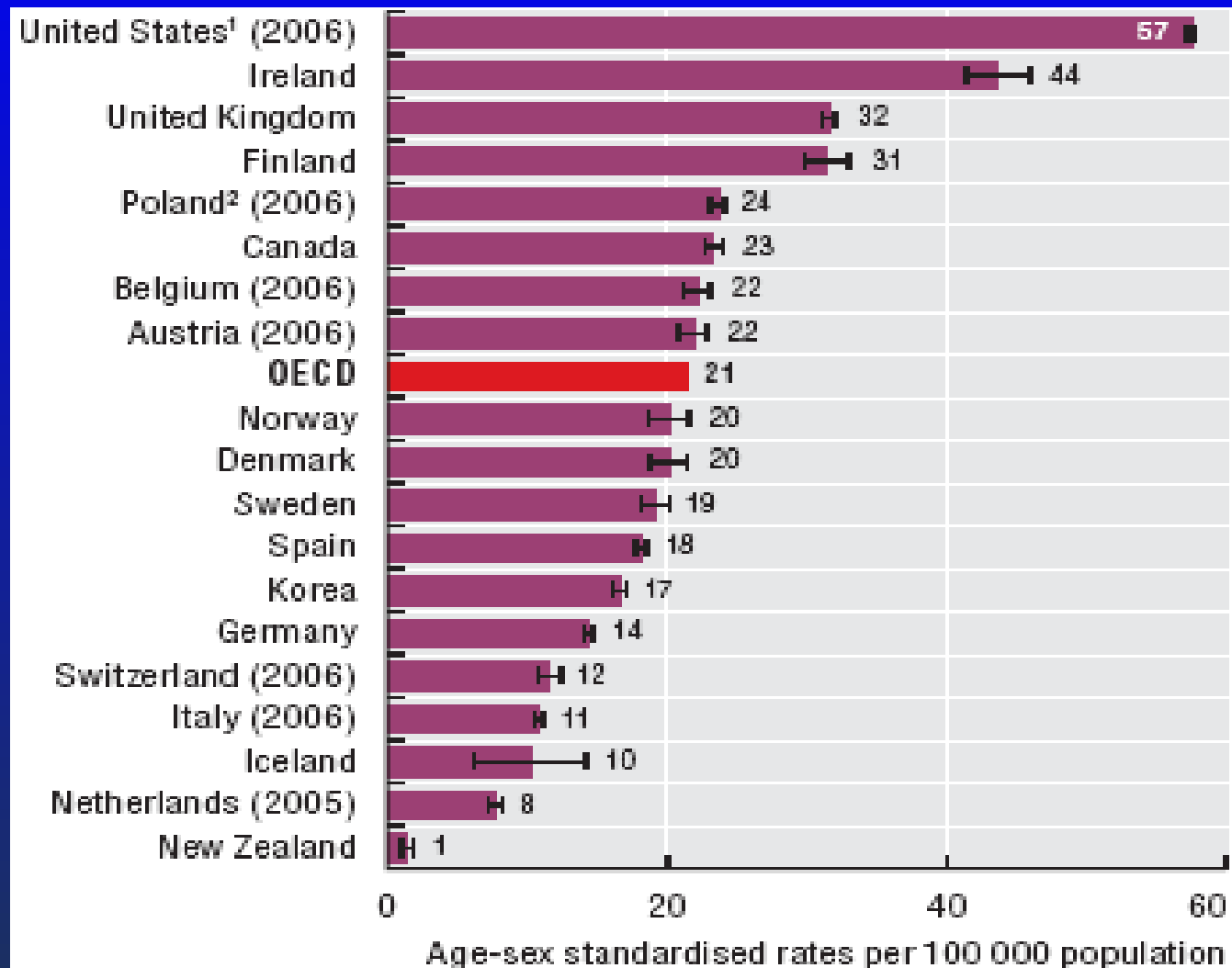


Note: Survival rates are age standardised to the International Cancer Survival Standards Population. 95% confidence intervals are represented by H in the relevant figures.

Source: OECD Health Care Quality Indicators Data 2009 (OECD).

... too many persons are admitted to hospitals for diabetes complications, highlighting the need to improve primary care

Diabetes acute complications admission rates, population aged 15 and over, 2007



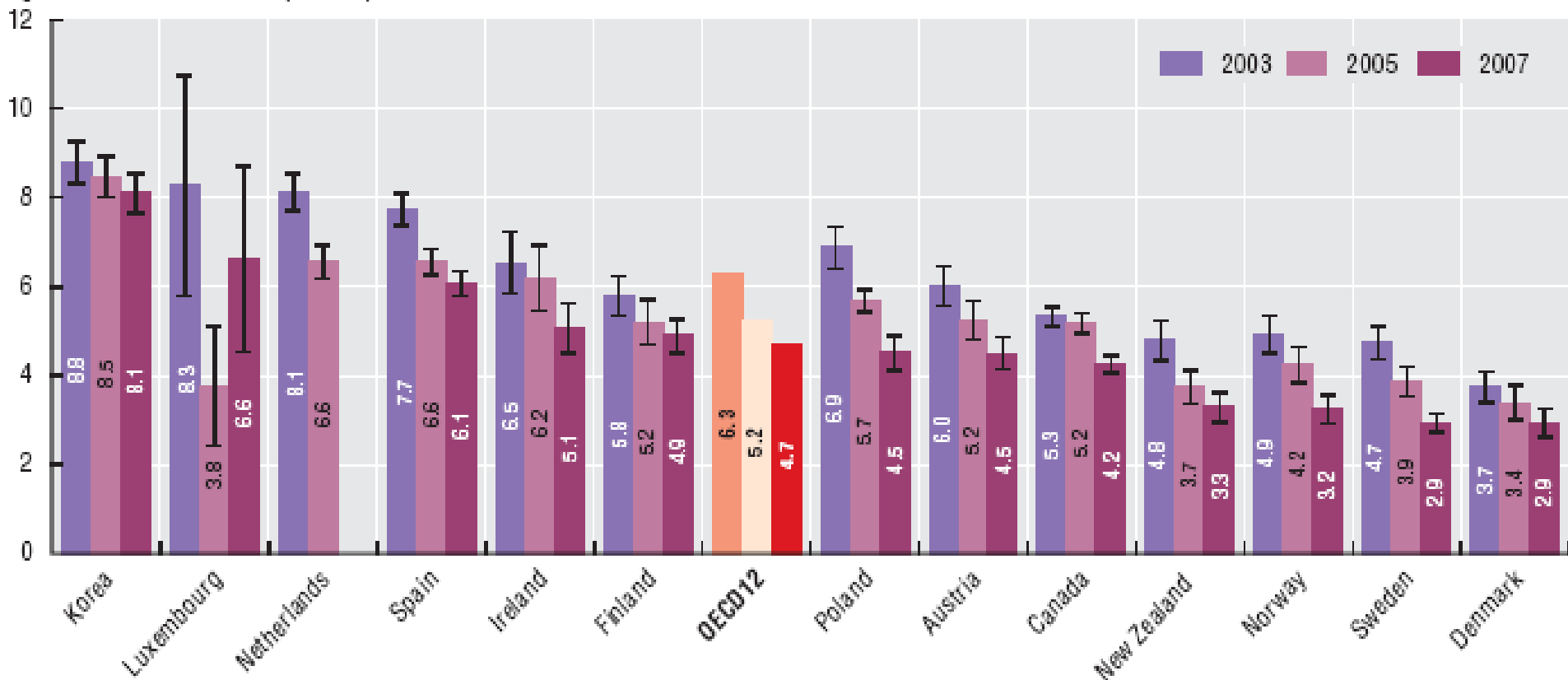
1. Does not fully exclude day cases.

2. Includes transfers from other hospital units, which marginally elevates rates.

Source: OECD Health Care Quality Indicators Data 2009 (OECD).

In-hospital mortality rates following heart attack are decreasing in all OECD countries

Age-sex standardised rates per 100 patients

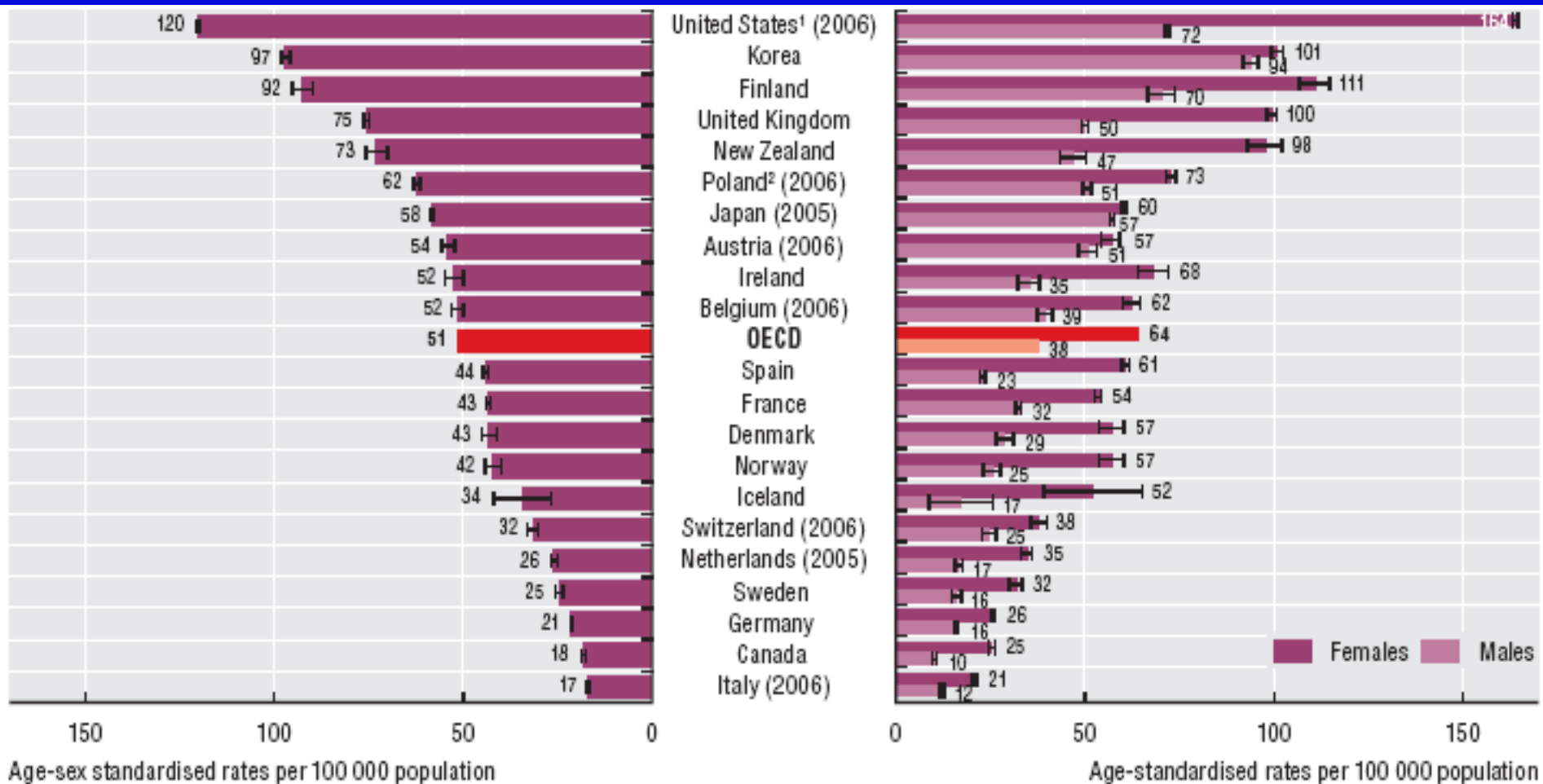


Note: Rates are age-sex standardised to 2005 OECD population (45+). 95% confidence intervals are represented by H.

Source: OECD Health Care Quality Indicators Data 2009 (OECD).

Treatment for chronic diseases is not optimal. Too many persons are admitted to hospitals for asthma ...

Asthma admission rates, population aged 15 and over, 2007



1. Does not fully exclude day cases.
2. Includes transfers from other hospital units, which marginally elevates rates.

Source: OECD Health Care Quality Indicators Data 2009 (OECD).

The average length of stay for acute care has fallen in nearly all OECD countries

Average length of stay for acute care

