

What good can health economics do?

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The answer:

Health economic information
can assist different stakeholders
within the health care system
making decisions
about use of resources

Health economics – a wide area of topics:

Topics:

Cost of illness

Economic evaluation:
Cost-effectiveness

Demand for and supply of treatment (waiting times)

Financing (fee-for-services, case-based, fixed)

Incentives (effect of financing system)

Productivity (cost per patient)

Health systems, national or regional (insurance versus tax based funding)

Private versus public ownership

Distribution and equity (equal access across age groups)

Behaviour of individuals (lifestyle, the production of health)

And more...

In this lecture:

Cost of illness:

- Cost of cancer, depression, behavioural problems

Cost-effectiveness:

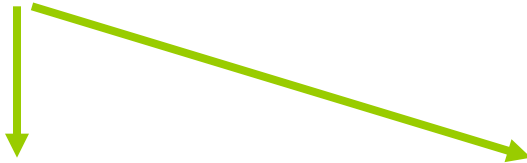
- Treatment of ADHD

Cost per patient - productivity:

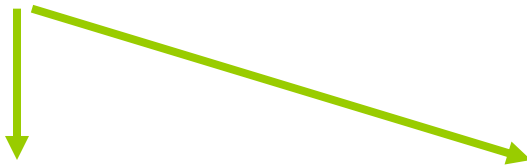
- Outpatient mental health services children and adolescents

Costs of illness:

Cost per capita



= cost per prevalence * prevalence per capita



= cost per treatment * treatment per prevalence *
prevalence per capita

Cost of illness: Cancer

Prevalence increase 2025

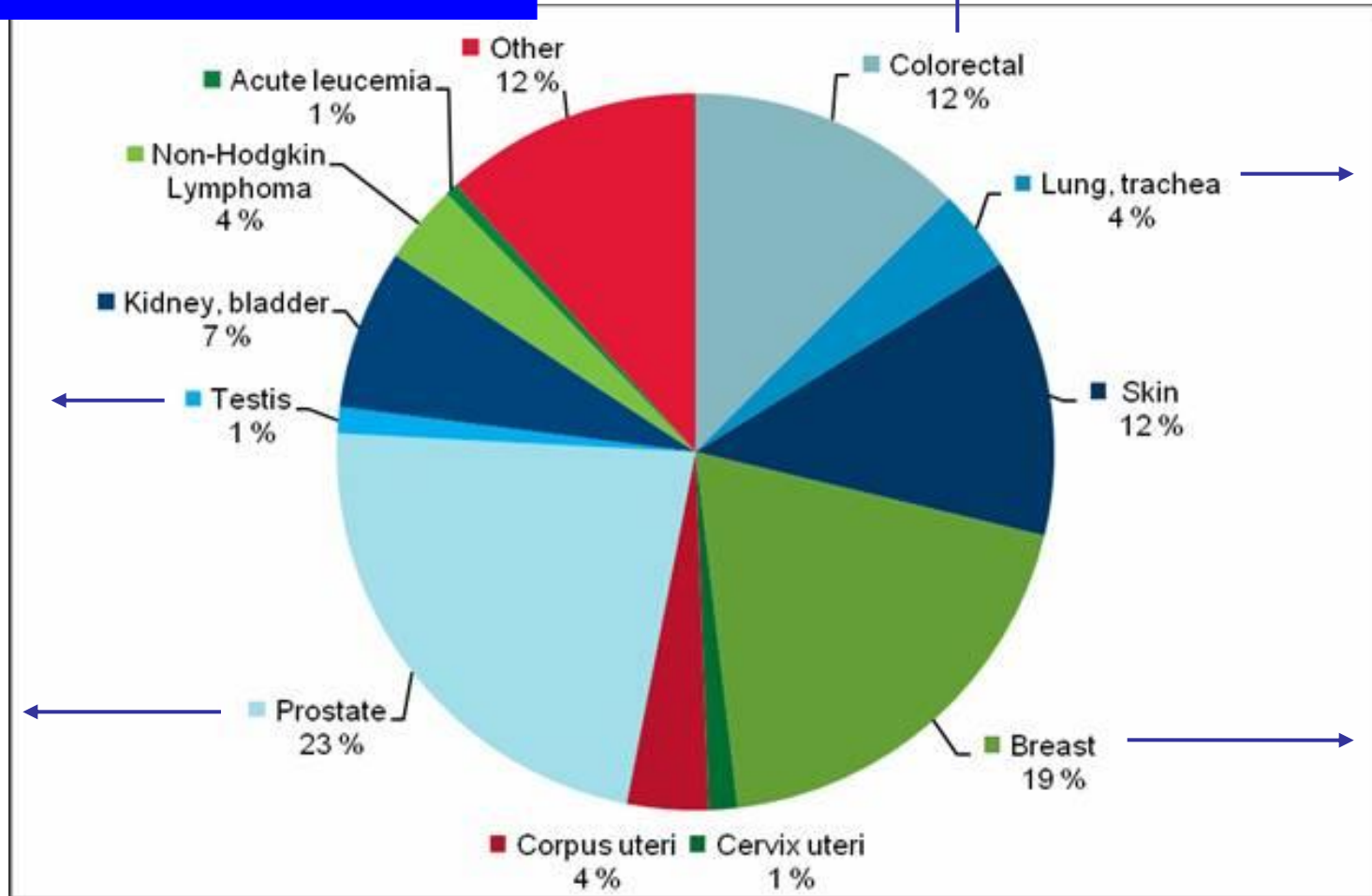


Figure: Five-year prevalence in the Nordic countries, 2007
(Ref: Association of Nordic Cancer Registers)

Identification of costs:

The incidence-based approach

or

the prevalence-based approach?

Which costs?

Expenditures:

- Screening
- Inpatient treatment
- Daypatient treatment
- Outpatient treatment
- Prescription of drugs
- Sickness benefits
- Disability pensions

Direct
expenditures

Indirect
expenditures

Who's perspective:

Hospital perspective

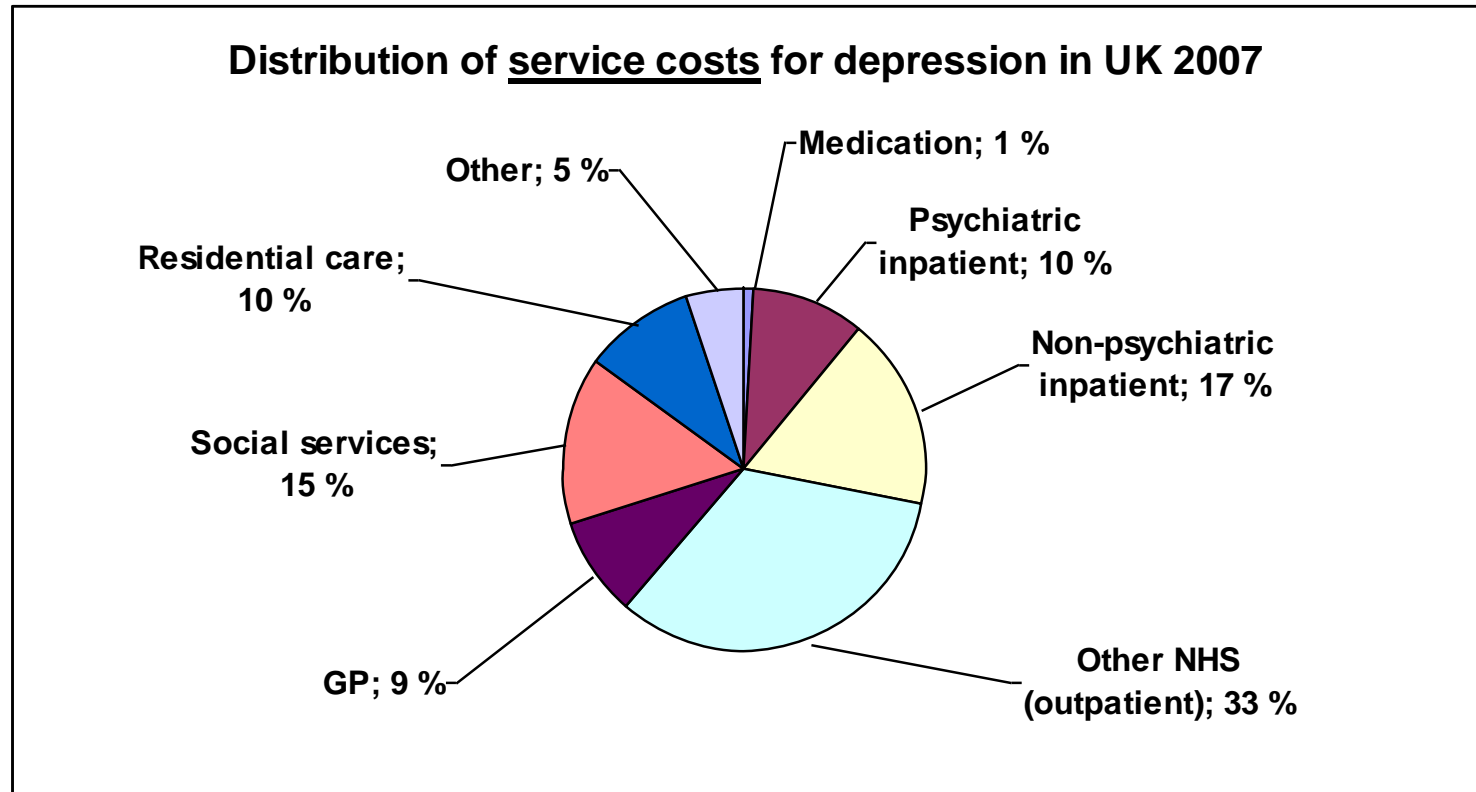
**Governmental
expenditure
perspective**

Other expenditures or costs:

- Primary care and GP expenditures
- Private costs: Out of pocket payments
- Premature mortality/lost employment

Societal perspective

The perspective is important:



But: Service costs accounted for 10-20 percent of total costs

Lost employment costs accounted for 80-90 percent of total costs!

Reference: National Institute for Health and Clinical Excellence (2009)

Costs of cancer in Nordic countries (2007):

Expenditures:

- Screening
- Inpatient treatment
- Daypatient treatment
- Outpatient treatment
- Prescription of drugs
- Sickness benefits
- Disability pensions

Direct
expenditures

Indirect
expenditures

Who's perspective:

**Governmental
expenditure
perspective**

*An ongoing project, SINTEF (Norway) project leader,
financed by the Nordic Cancer Union (NCU)*

Costs of cancer in Nordic countries (2007):

Costs differ between cancer sites:

- Prostate cancer
- Acute leucemia

Future costs of cancer in Nordic countries?

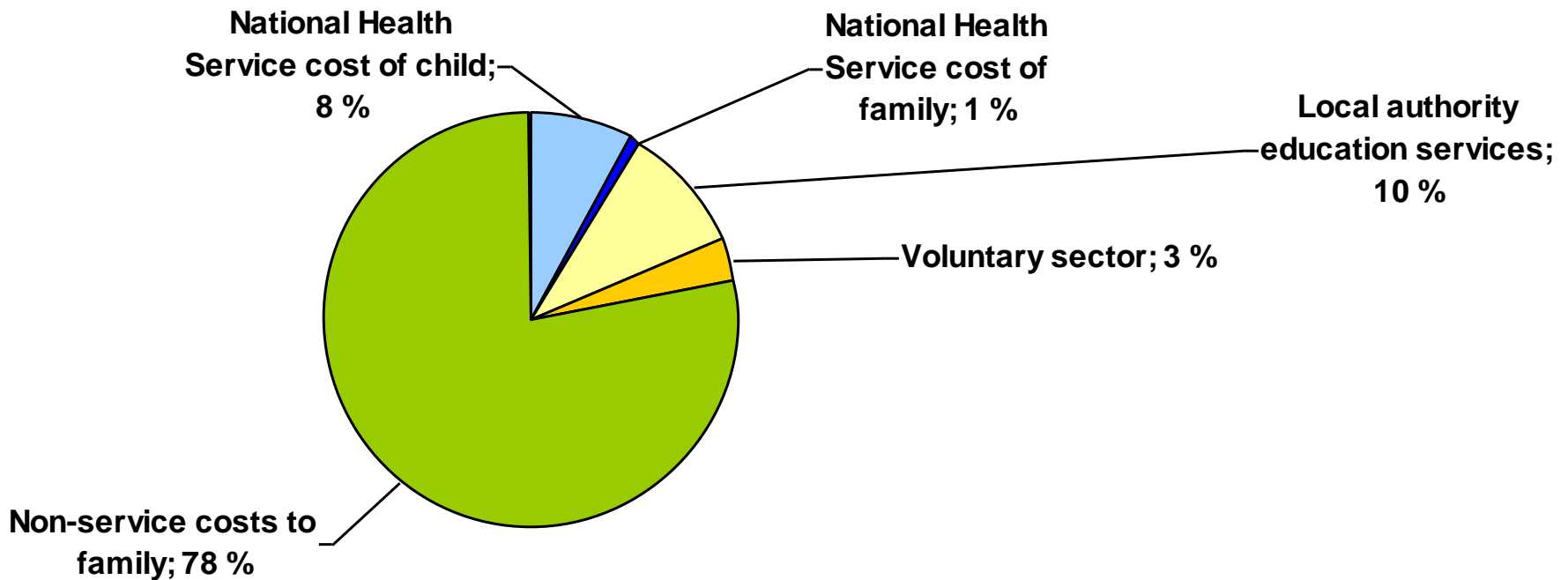
Taking differences between cancer sites

- in prevalence growth rate
- cost per prevalence

into account...

The costs of behavioural problems

Service and non-service annual costs for child and family



Romeo et al (2006):

“Economic cost of extreme antisocial behaviour in children – and who pays it”

Costs of behavioural problems:

Longitudinal aspects:

Unless behaviour is “corrected”, costs will persist
– and most probably increase

The potential effect of treatment:

Outcomes gained:

Quality of life improvement

Value of production (work)

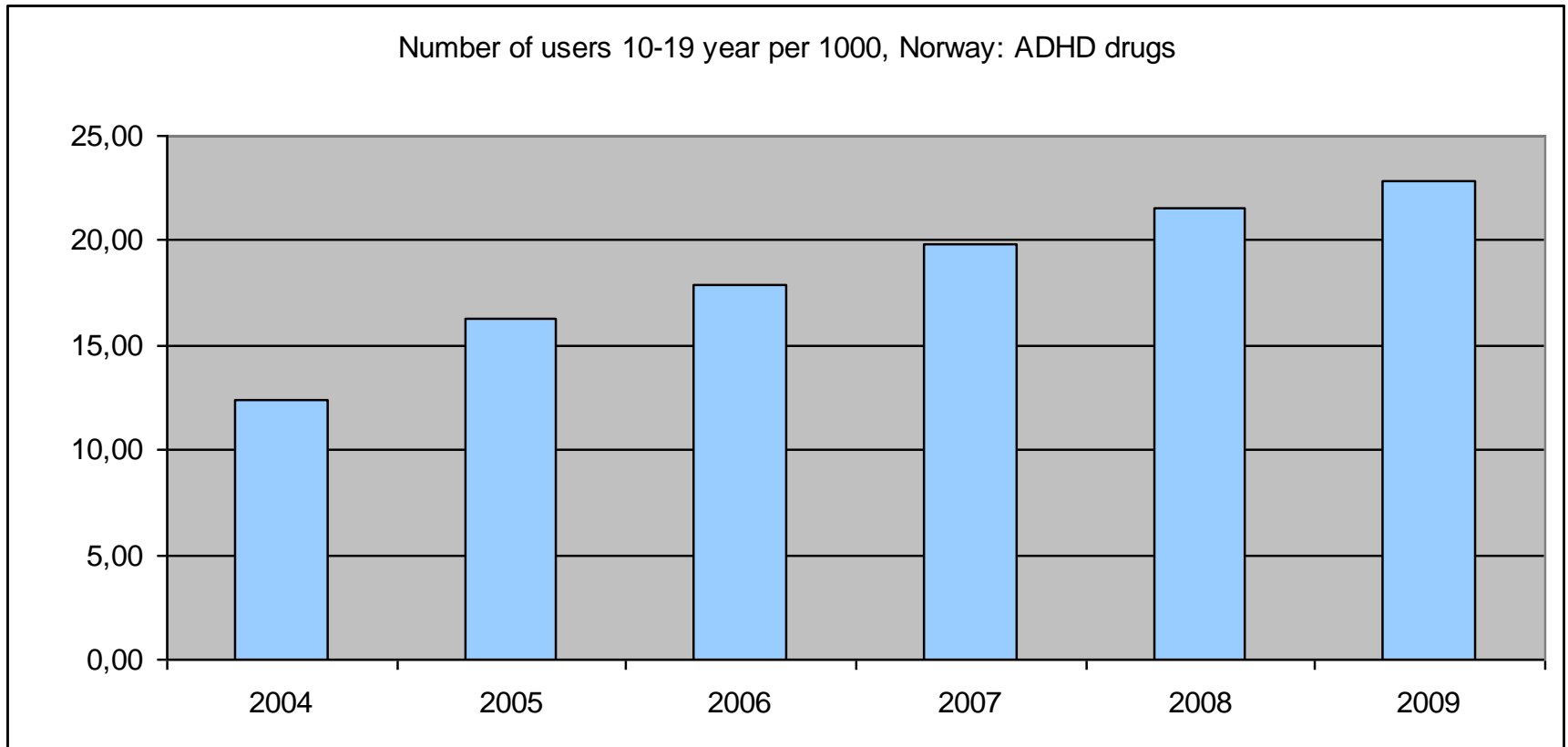
Costs saved:

Health services

Social services etc

The treatment of ADHD

The medication alternative:



A second alternative: Intensive behavioural treatment

The treatment of ADHD

Jensen et al: Cost-effectiveness of ADHD treatment: Findings from the Multimodal Treatment study of children with ADHD. Am J Psychiatry 162:9, September 2005.

	<u>Effect</u>	<u>“Normalized”</u>	<u>Cost per child</u>
Alt. A: 14 months medication management	X	56%	1 180
Alt. B: Intensive behavioural treatment		34%	6 988
Alt. C: Combined treatment	X	68%	7 827
Alt. D: Community care, “business as usual”		25%	1 071

How to identify the cost-effective alternative?

The incremental cost-effectiveness ratio

ICER:

$\text{Cost (new)} - \text{cost (usual)} / \text{Effect (new)} - \text{effect (usual)}$

- the cost per extra child brought to “normal” functioning

Community care as “usual care”:

ICER: Medication management 1) 360 dollar

ICER: Combined treatment 2) 55 000 dollar

ICER: Intensive behavioural treatment 3) 68 000 dollar

The question is: What are we willing to pay?

The cost of intensive behavioural treatment

In Norway: Services supplied by outpatient clinics

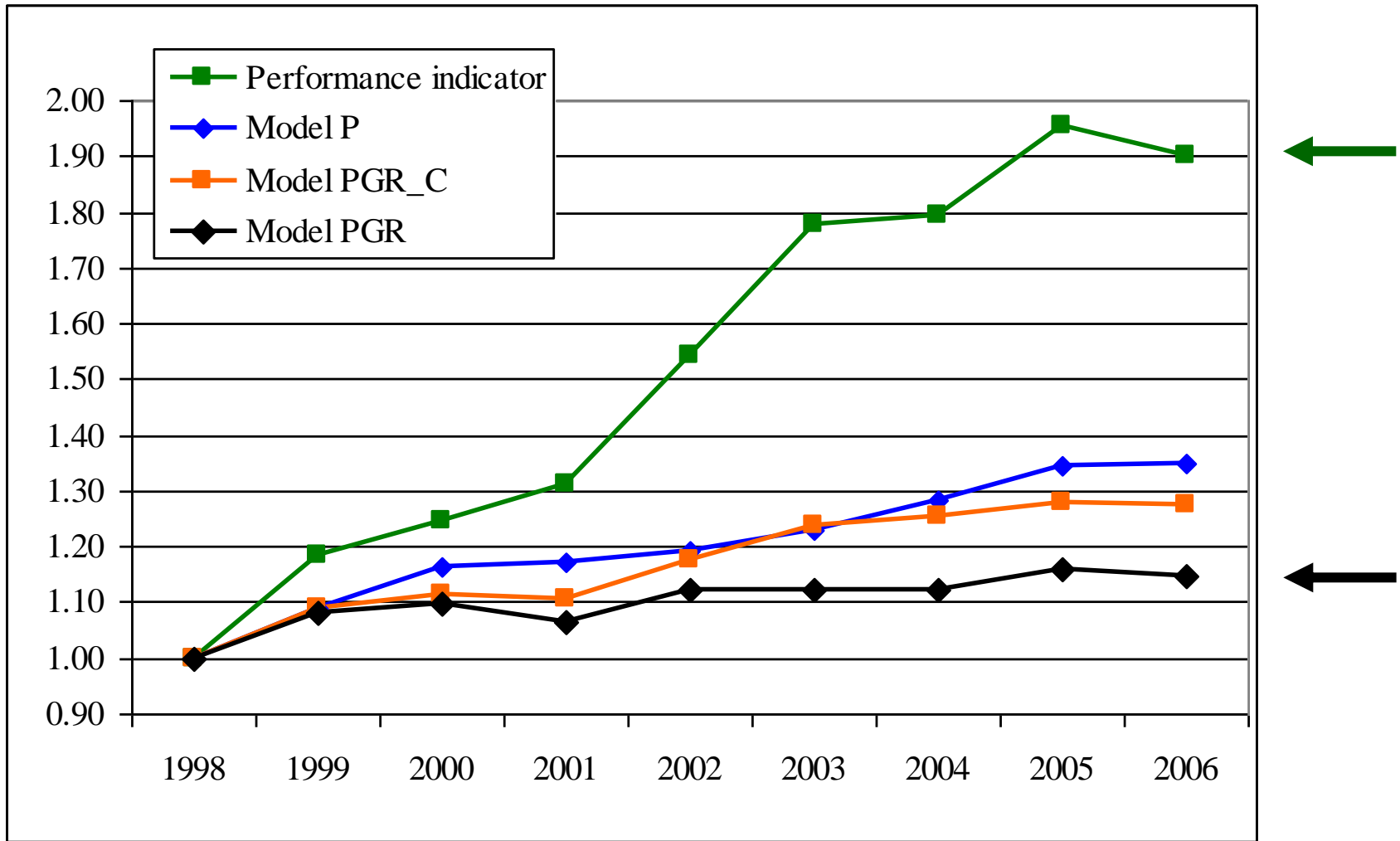
1996: Number of consultations per therapist per day was 1.1

Can productivity be increased, and reduce cost per patient?

Norwegian health policy 1999-2008:

Increase productivity 50 % - to increase access to services

Productivity improvement 1998-2006:



Halsteinli et al: Productivity growth in outpatient child and adolescent mental health services: The impact of case-mix adjustment. Social Science and Medicine 70, 439-446 2010.

Access to treatment?

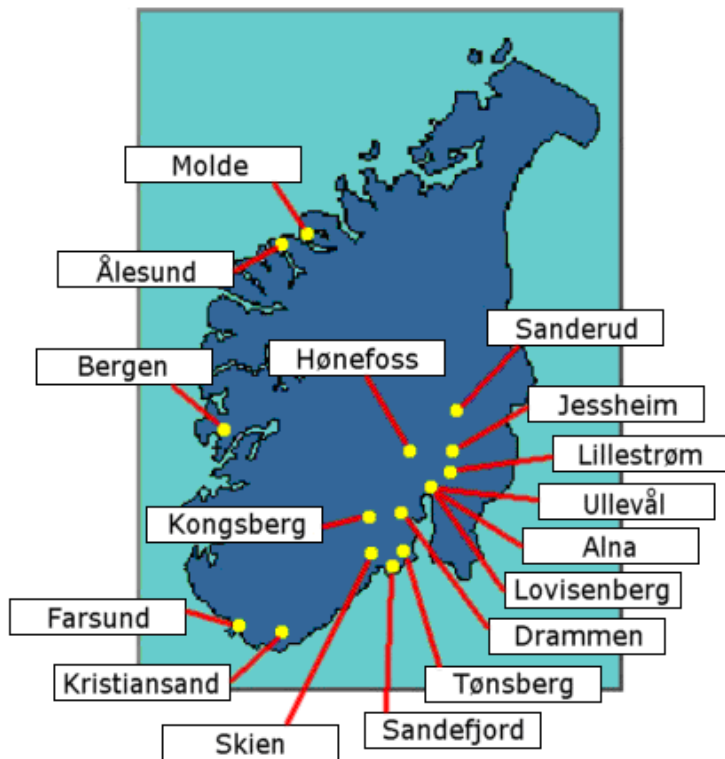
	<u>1998:</u>	<u>2006:</u>
Patients	20 000	47 000
Boys:	55%	56%
Age 13 years +	48%	55%
Behavioural problems	34%	43%

Increased access services

- partly because of increased productivity
- mainly because of increased number of therapists

When costs count: The impact of staff size and skill mix

The case of psychotherapeutic day treatment programs:



- Units forming the Network of Personality focused Treatment Programmes in Norway
- Patients with personality disorders
- First phase: Intensive day treatment
- Second phase: Long term outpatient treatment

Results:

Outcome measured by Global Assessment of Function scale, GAF-score rated by clinicians.

Staff size influenced outcome to a minor extent

Increased proportion of nurses or college educated personnel was associated with outcome improvement

Treatment intensity influenced outcome to a minor extent

Halsteinli et al: When Costs count: The Impact of Staff Size, Skill Mix and Treatment Intensity on Patient Outcome for Psychotherapeutic Day Treatment Programmes, Health Policy 86, 255-265 (2008)

Summary:

Cost-of-illness

- provide information about the importance of specific diseases and types of costs

Cost-effectiveness

- can assist the choice of treatment modality to supply

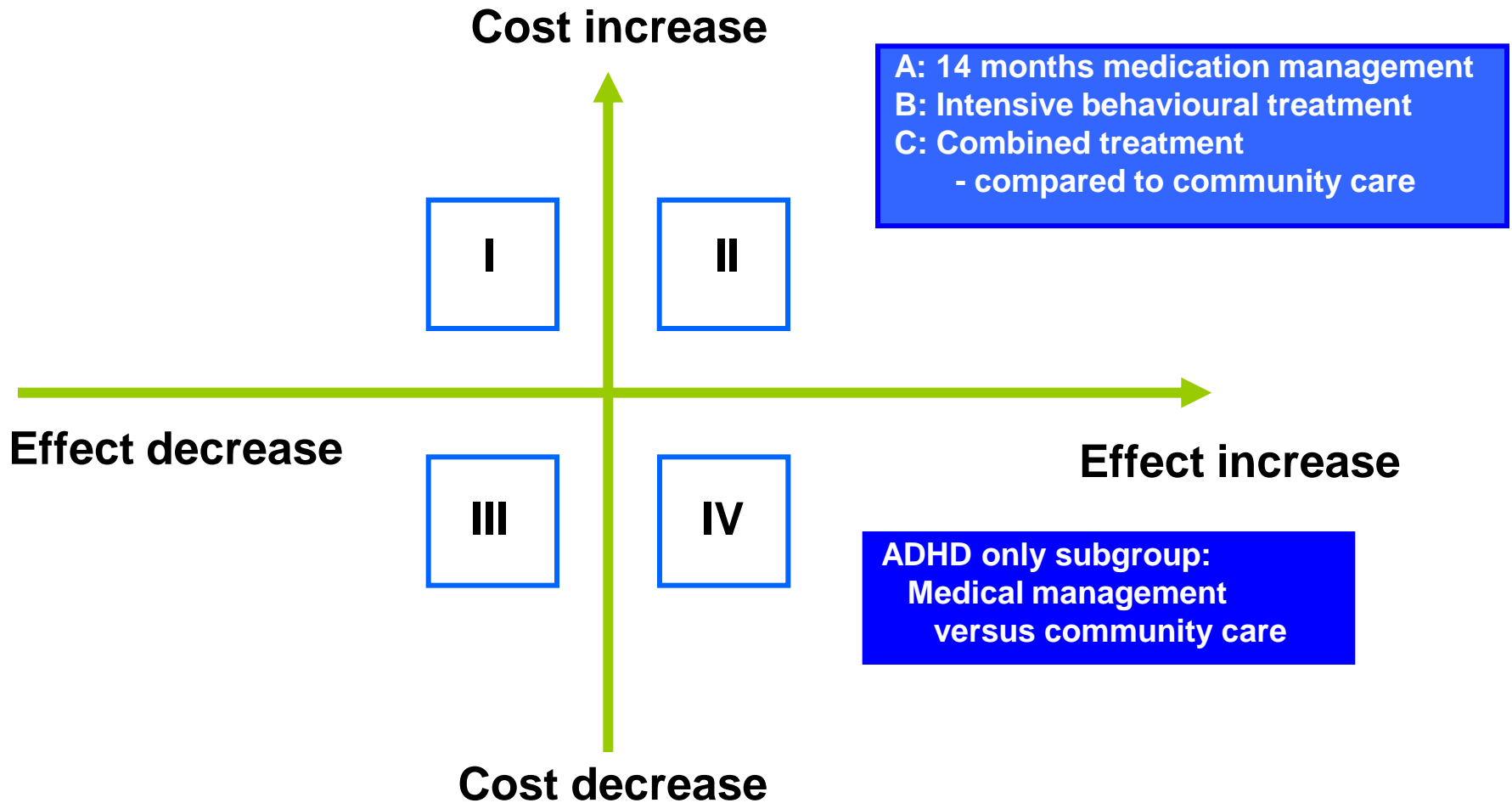
Cost-per-patient analysis

- can provide information about potential inefficiency

Health economic information
can assist different stakeholders
within the health care system
making decisions
about use of resources

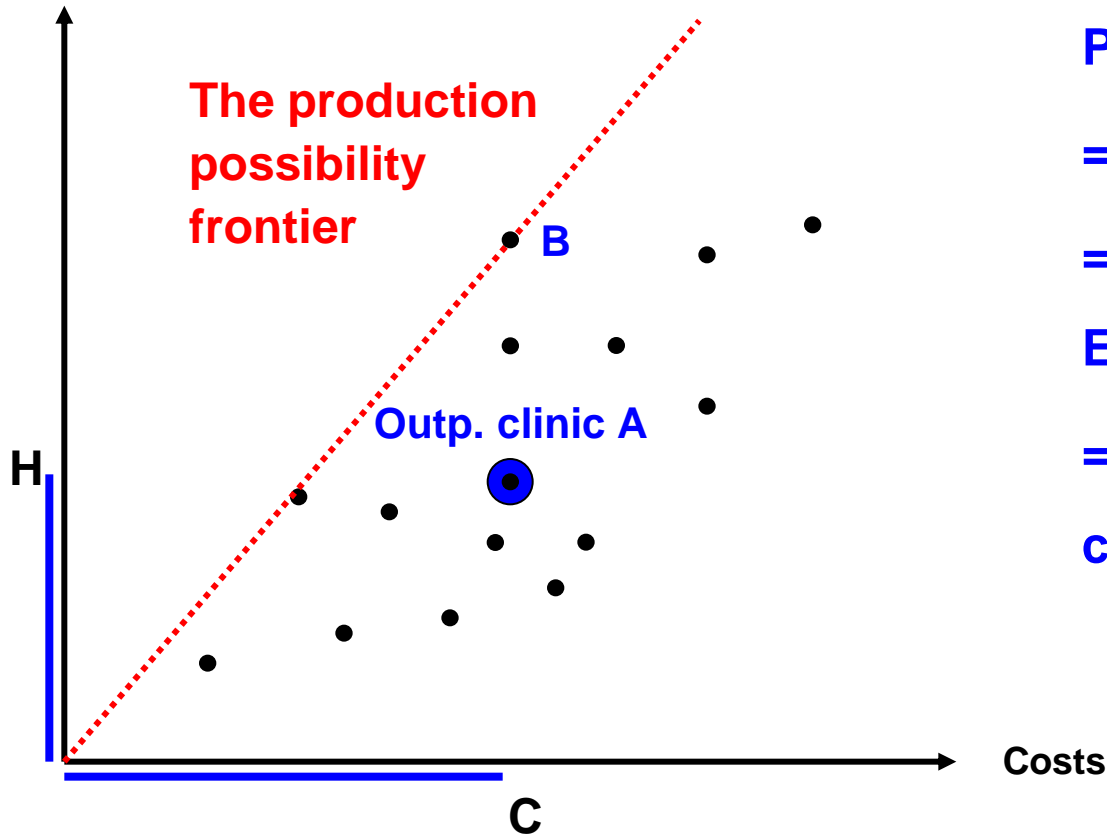
**In addition:
Interpretations of health economic information
should be carefully performed**

The cost-effectiveness plane



From production, to productivity, to efficiency:

Health improvement



Productivity

= Output per unit of input

= H / C

Efficiency

= Actual productivity (H / C)

compared with potential productivity