

# Anforderungen an das Gesundheitssystem angesichts der sich verändernden Epidemiologie

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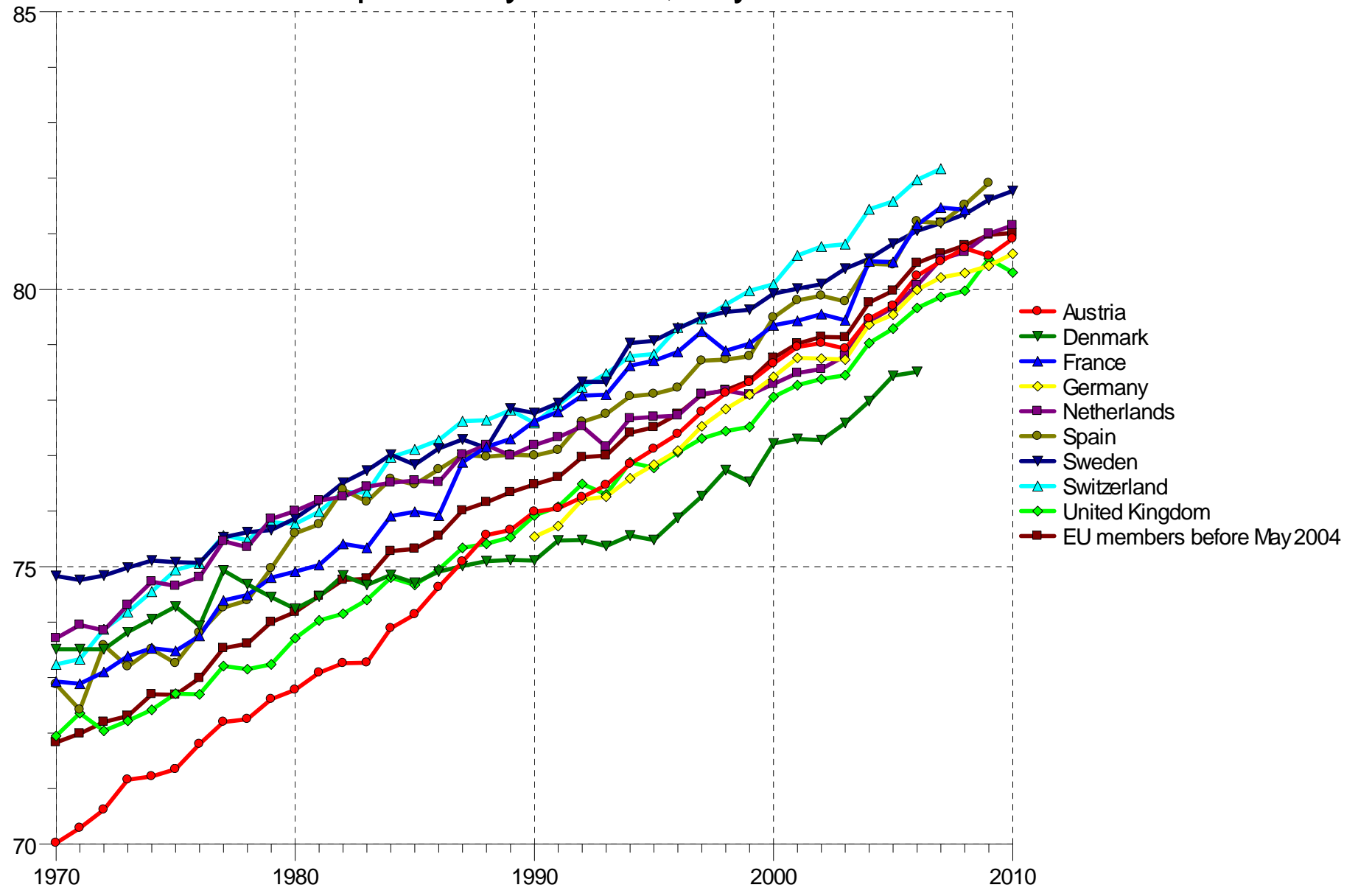


# Agenda

- Alt-Sein = Krank-Sein?
- Herausforderungen an Gesundheitssysteme (mit Schwerpunkt auf chronische Krankheit)
- Strategien gegen chronische Krankheit (Prävention, neue Professionen & Settings, DMPs, Integrierte Versorgung [CCM])
- Managementdimensionen (Vergütung, I&K-Technologien, Koordination, Evaluation)

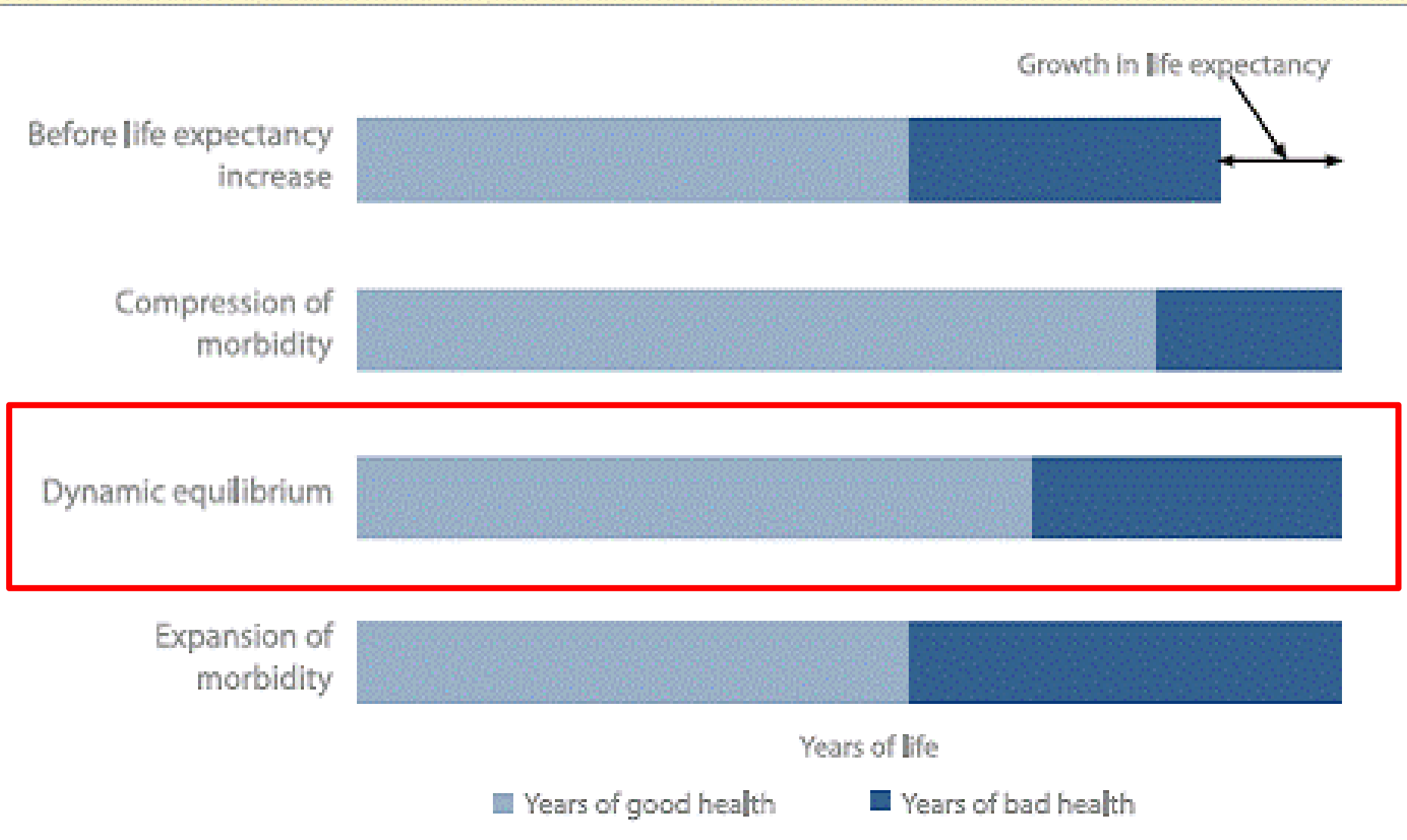
# Gute Nachricht oder schlechte?

Life expectancy at birth, in years

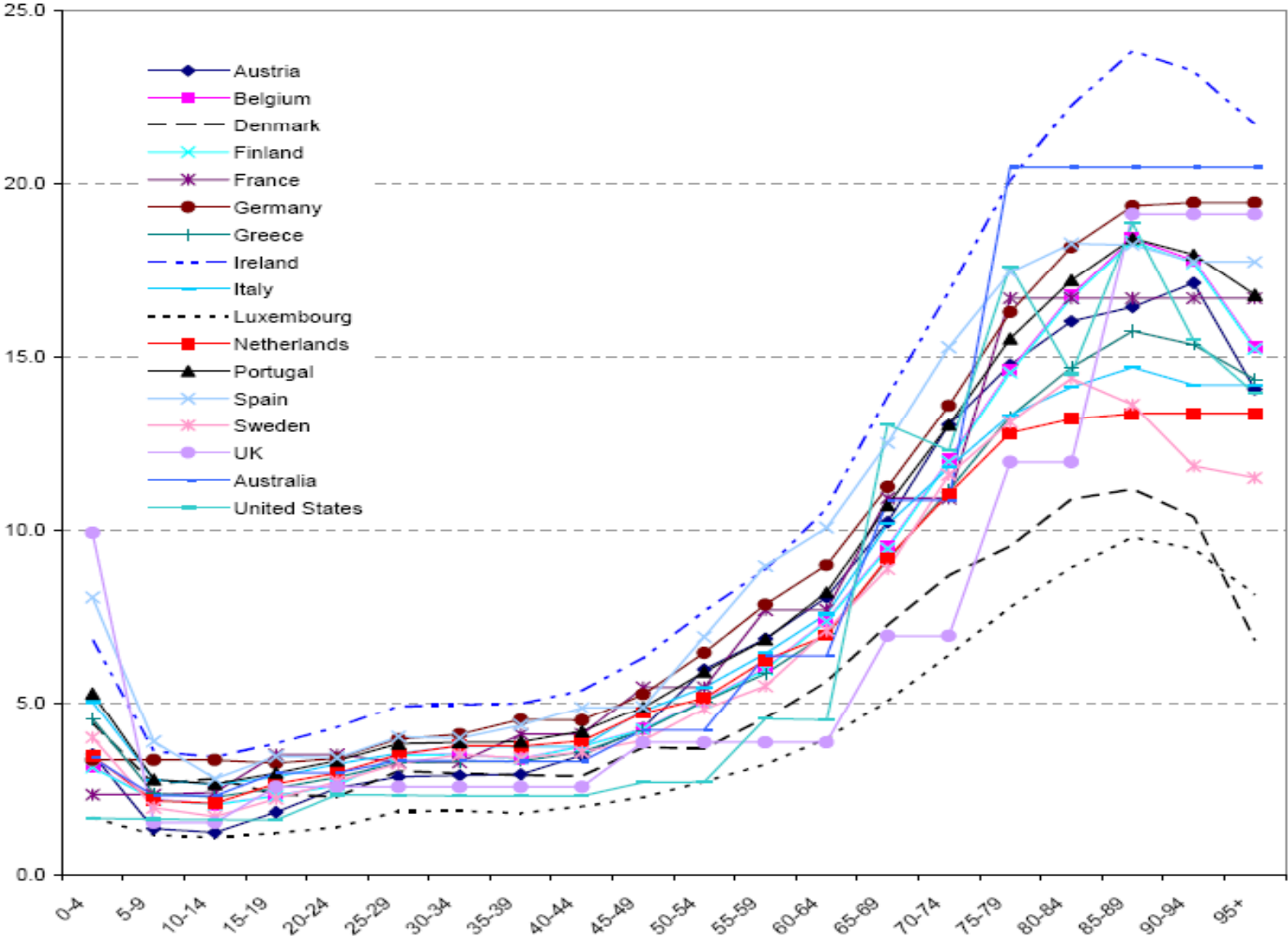


# Die gute Nachricht: Wir werden älter, weil wir gesünder sind (trotz einigen Zweiflern)

Figure 6.3: Possible future health states in years of life

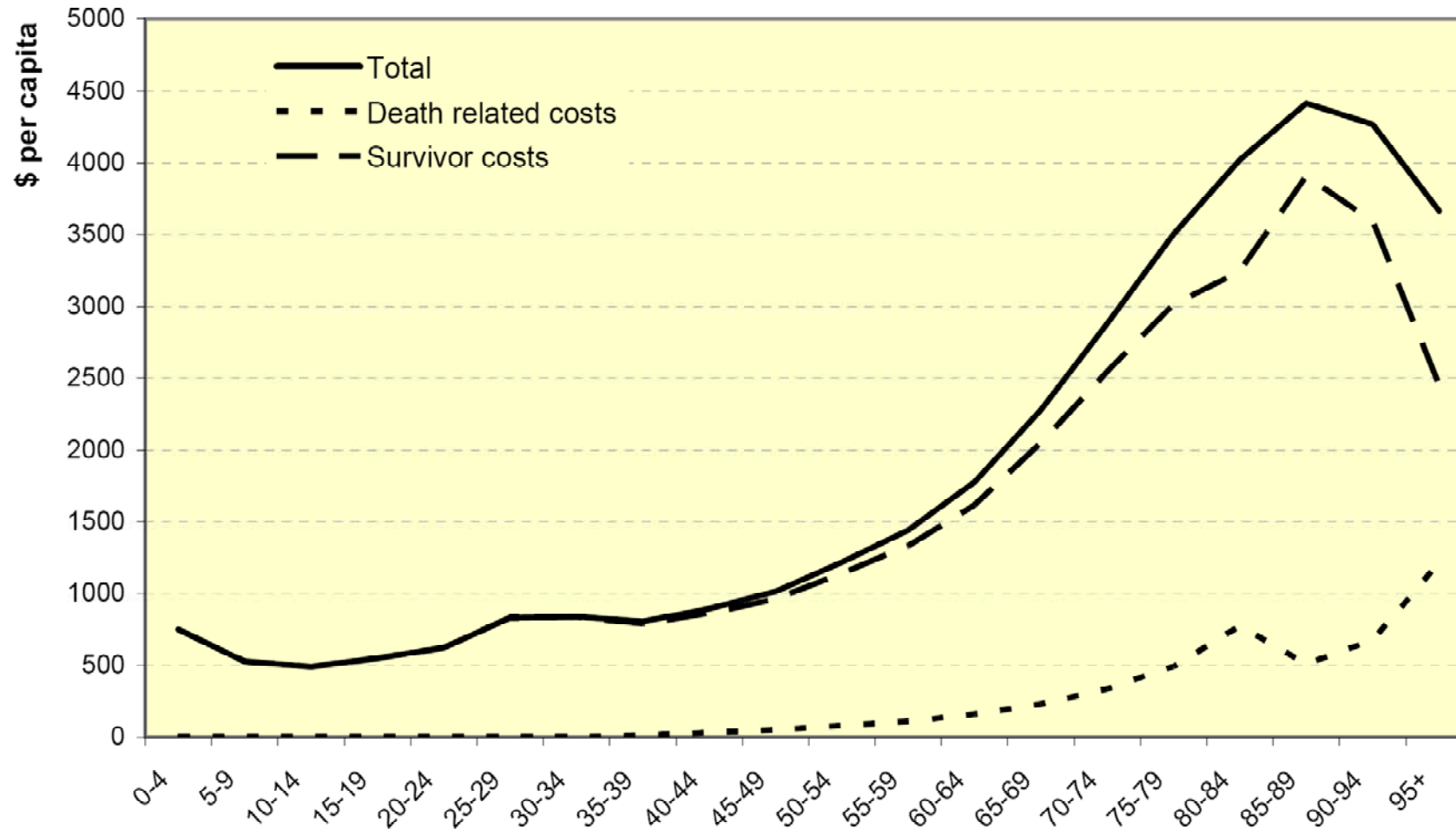


# Und was ist die schlechte? Die Kosten, hier öffentliche Ausgaben pro Altersgruppe in % des BIP/ Kopf



Source: OECD

# Die Separierung der (hohen) Kosten des Sterbens zeigt ein moderateres Bild

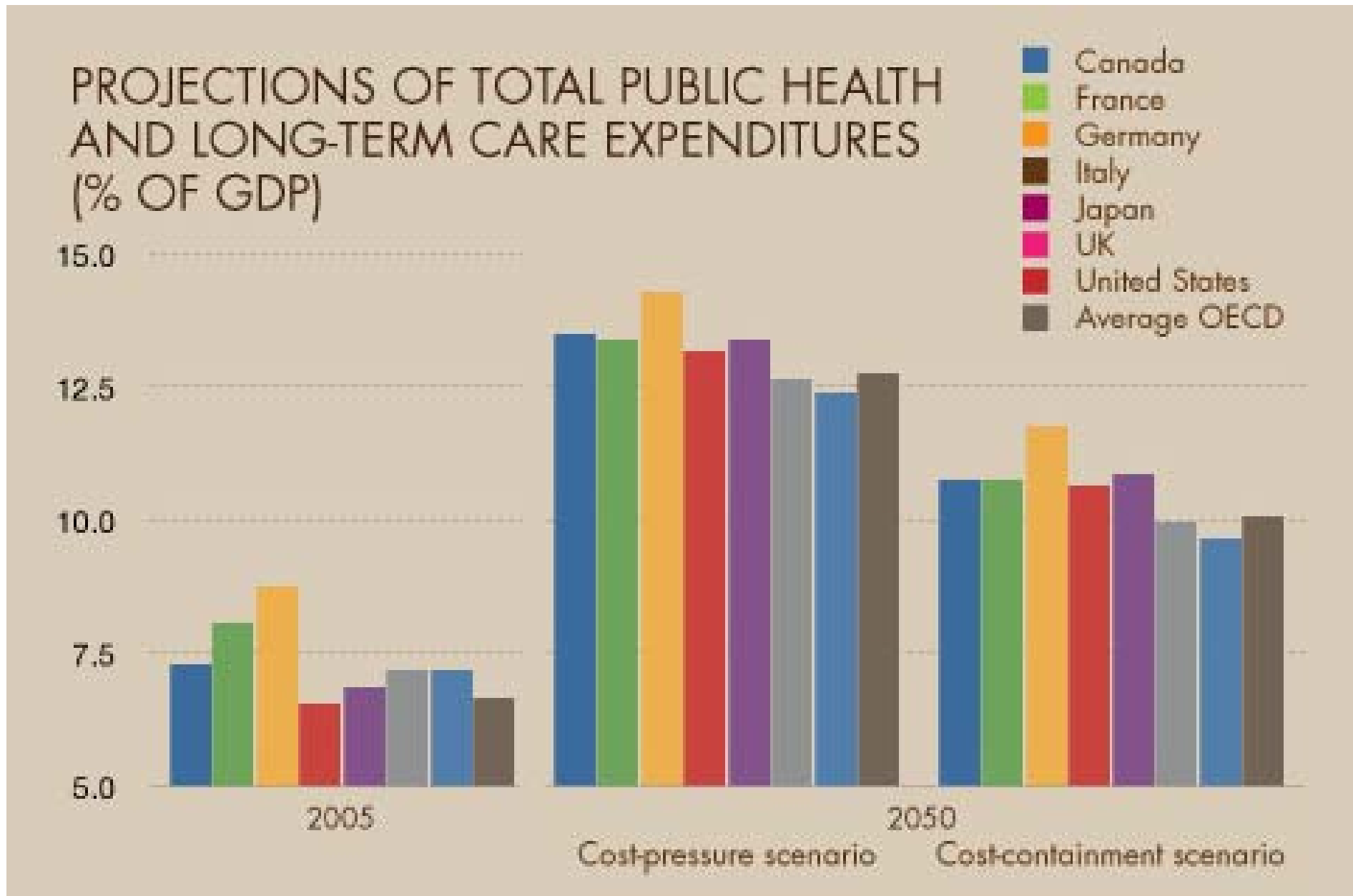


<b>Decomposing growth in public health spending: avg expenditure growth rates per year 1971-2002 [* 1981-2002]</b>	<b>Age effect</b>	<b>Income effect<sup>3</sup></b>	<b>Residual, i.e. other factors</b>	<b>Total spending</b>
Australia (to 2001 only)	0.5	1.7	1.7 (1.4)*	4.0 (3.6)*
Austria	0.2	2.5	1.5 (0.0)*	4.2 (2.2)*
Belgium (from 1995 only)	0.4	2.2	0.6	2.9
Canada	0.6	2.1	0.4 (0.6)*	3.1 (2.6)*
Denmark	0.2	1.6	0.1 (-0.5)*	1.9 (1.3)*
Finland	0.6	2.4	0.5 (0.2)*	3.4 (2.6)*
France	0.3	1.9	1.6 (1.0)*	3.9 (2.8)*
Germany	0.3	1.6	1.9 (1.0)*	3.7 (2.2)*
Greece (from 1987 only)	0.4	2.1	0.8	3.4
Ireland	0.0	4.4	0.9 (-1.0)*	5.3 (3.9)*
Italy (from 1988 only)	0.7	2.2	-0.1	2.1
Japan (to 2001 only)	0.6	2.6	1.8 (1.1)*	4.9 (3.8)*
Luxembourg (from 1975 only)	0.0	3.3	0.7 (-0.1)*	4.2 (3.8)*
Netherlands (from 1972 only)	0.4	2.0	0.9 (0.3)*	3.3 (2.6)*
New Zealand	0.2	1.2	1.4 (1.0)*	2.9 (2.7)*
Norway	0.1	3.0	2.2 (1.5)*	5.4 (4.0)*
Portugal	0.5	2.9	4.4 (2.8)*	8.0 (5.9)*
Spain	0.4	2.4	2.5 (0.8)*	5.4 (3.4)*
Sweden	0.3		0.7 (-0.4)*	2.5 (1.5)*
Switzerland (from 1985 only)	0.2		2.9	3.8
United Kingdom	0.1		0.5 (1.0)*	3.8 (3.4)*
United States	0.3		0.7 (2.6)*	5.1 (4.7)*
<b>Average</b>	<b>0.4 (0.3)*</b>	<b>2.5 (2.3)*</b>	<b>1.5 (1.0)*</b>	<b>4.3 (3.6)*</b>

**1/10th**

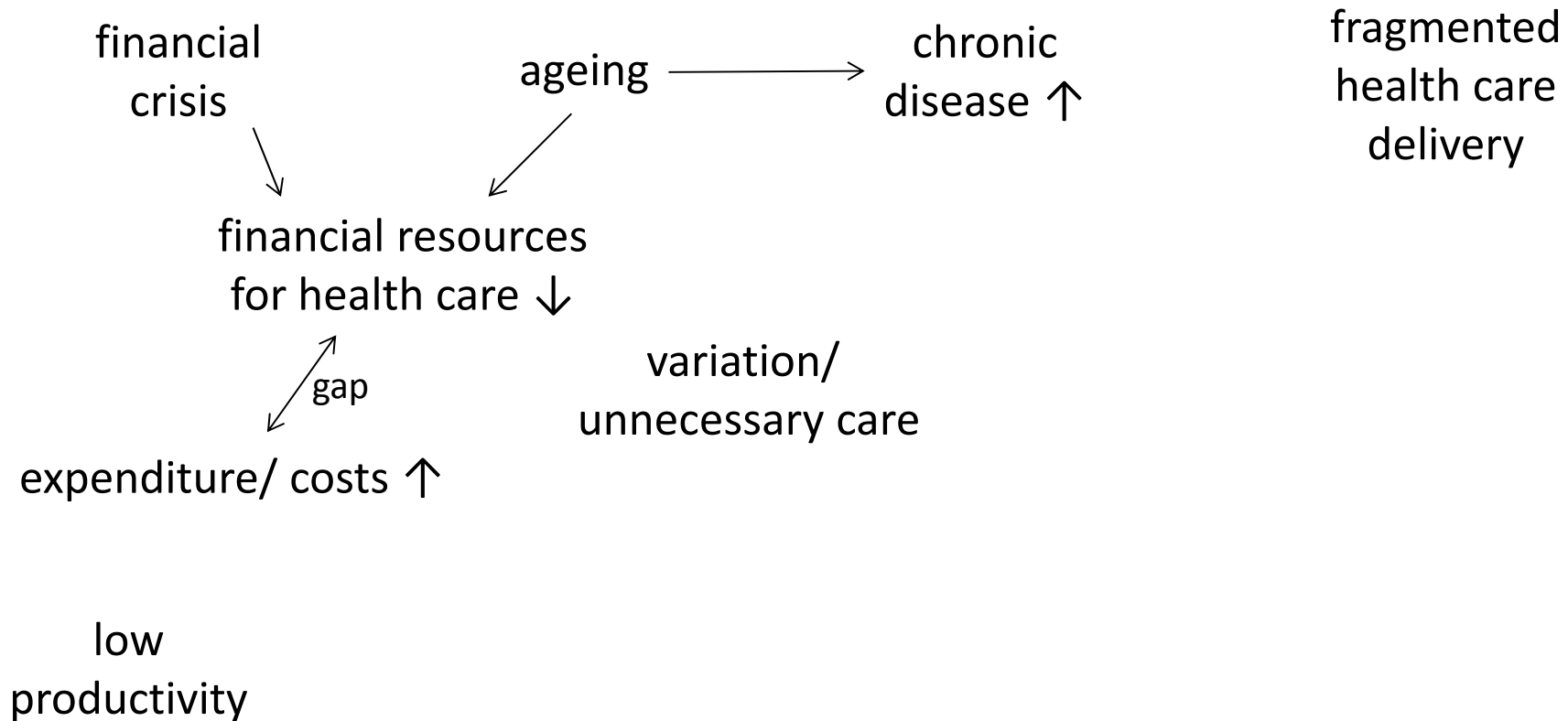
**1/3rd and modifiable**

**Es ist wichtig, sich auf die modifizierbare Proportion zu konzentrieren → Prävention, neue Settings, DMPs etc.**

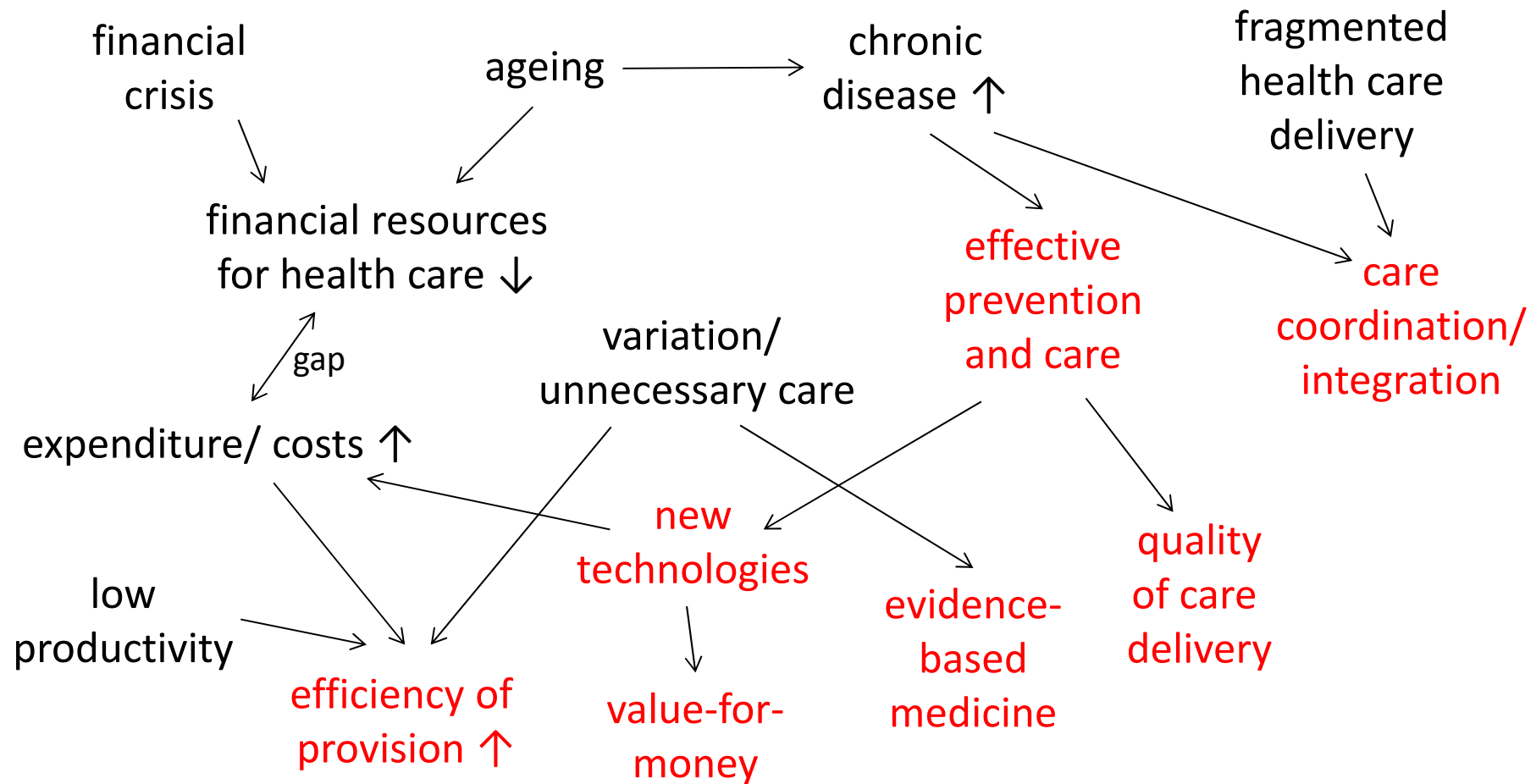




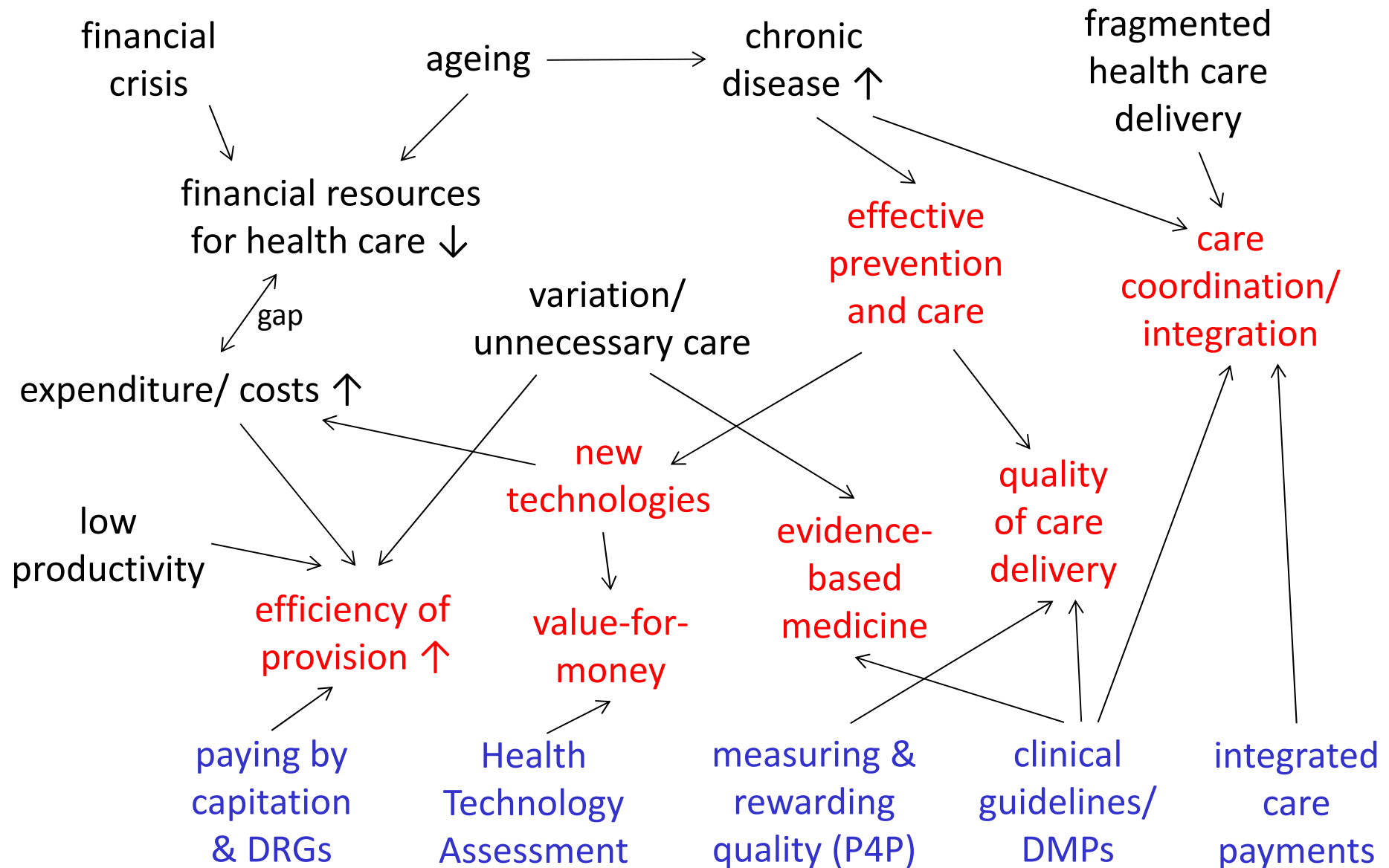
# Eine integrierte Sichtweise auf Herausforderungen, Lösungsansätze und Instrumente



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# **Das Management chronischer Krankheiten –**

**the “ongoing management of conditions over a  
period of years or decades”,**

which goes beyond CVD/cerebrovascular disease,  
diabetes and asthma/COPD to include cancer and  
HIV/AIDS (as survival rates and times have visibly  
improved), mental disorders (depression,  
schizophrenia, dementia/ Alzheimer’s...) as well as  
certain disabilities (sight impairment, arthroses ...) –

**ist vermutlich die größte Herausforderung für  
unsere Gesundheitssysteme!**

# Krankheitslast und Todesfälle

## in der WHO Europäische Region nach Ursache (2005)

Groups of causes	Disease Burden		Deaths	
	DALYs (million)	Proportion from all causes (%)	Number (million)	Proportion from all causes (%)
<b>Selected noncommunicable diseases</b>				
<b>Cardiovascular diseases</b>	<b>34.4</b>	<b>23</b>	<b>5.1</b>	<b>52</b>
<b>Neuropsychiatric conditions</b>	<b>29.4</b>	<b>20</b>	0.3	3
<b>Cancer (malignant neoplasms)</b>	17.0	11	<b>1.9</b>	<b>19</b>
Digestive diseases	7.2	5	0.4	4
Respiratory diseases	6.8	5	0.4	4
Sense organ diseases	6.3	4	0	0
Musculoskeletal diseases	5.7	4	<0.1	0
Diabetes mellitus	2.3	2	0.2	2
Oral conditions	1.0	1	0	2
<b>All noncommunicable diseases</b>	<b>115.3</b>	<b>77</b>	<b>8.2</b>	<b>86</b>
<b>All causes</b>	<b>150.3</b>	<b>100</b>	<b>9.6</b>	<b>100</b>

# Epidemiologie und Krankheitslast – Vorausschätzungen

- Predictions vary: WHO (2008) has projected fewer deaths and DALYs from **stroke** for both sexes and all ages by 2030. But Carandang et al. (2006) have estimated more strokes and a greater burden of disease.
- Deaths directly attributable to **diabetes**: 166,000 (2008) → 209,000 (2030) as a result of rising obesity levels, especially among children.
- Deaths from **COPD**: 248,000 (2008) → 300,000 (2030) – but the burden of COPD is projected to fall.
- Persons with **dementia**: 7.7 (2001) → 10.8 million (2020). Without effective prevention and treatment → 15.9 million (2040).

# Ökonomische Konsequenzen von chronischer Krankheit

**Microeconomic:** chronic diseases negatively affect wages, earnings, workforce participation and hours worked, lead to early retirement, high job turnover and disability [*many studies in US settings*]

**Macroeconomic:** chronic disease is costly to health system *AND* impairs economic growth (→ double burden)

# Strategien gegen chronische Krankheit: was wird unternommen?

- Prevention and early detection: at least regarding tobacco now taken seriously, obesity recognised but not tackled comprehensively (conflict health / agricultural/ industry policy), cancer screening on the rise (e.g. mammography)
- Treatment interventions: important for cancer, HIV, dementia but well-established drugs for diabetes and hypertension (issue is to manage cost-ineffective new drugs)

→ main focus on

Service provision and coordination issues

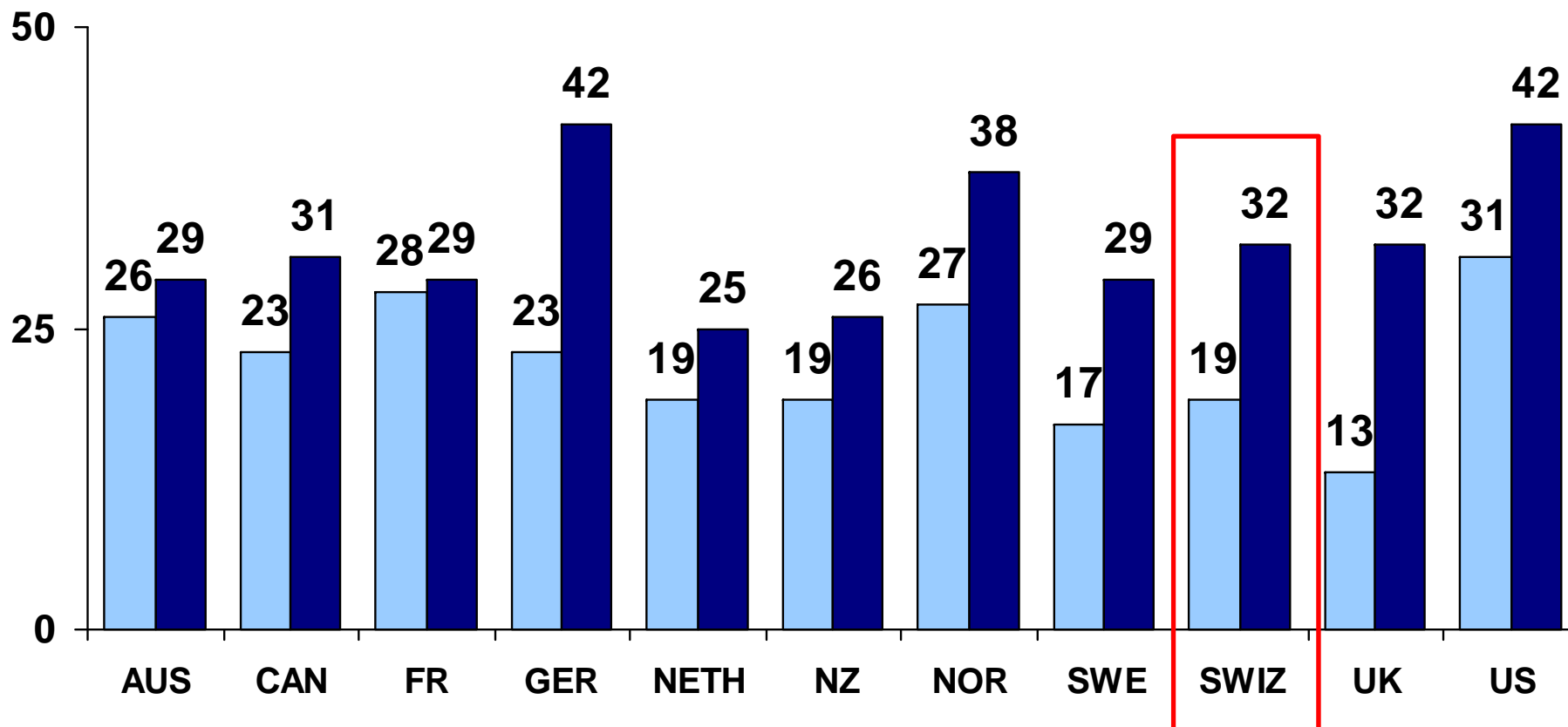


# Koordinierung ist ein Problem ... insb. bei chronisch Kranken

## Coordination Problems in the Past Two Years, by Number of Chronic Conditions

Percent experienced *any of three* coordination problems\*

■ No chronic conditions  
■ 2 or more chronic conditions



\* Test results/records not available at time of appointment, received conflicting information from different health professionals, and/or doctors ordered test that had already been done.

Source: 2010 Commonwealth Fund International Health Policy Survey in Eleven Countries.



# Neue Leistungserbringer und Settings

- Focus on developing highly-qualified nurses (no standard name yet)
- Nurse-led clinics in Sweden
- Nurse practitioners in the Netherlands
- Community matrons as case managers in England
- Nurses as extended arms of GPs in Germany

**Autonomy**



# **Disease Management Programme: Schlüsselemente**

- comprehensive care: multidisciplinary care for entire disease cycle
- care continuum, i.e. coordination of the different components
- population orientation (defined by a specific condition)
- active client-patient management tools (health education, empowerment, self-care)
- evidence-based guidelines, protocols, care pathways
- information technology
- continuous quality improvement

# Strategien gegen chronische Krankheit: wie effektiv?

- *Crucial and weak point!*
- Most publications report on relatively small-scale interventions without control group or inadequate control (e.g. no randomization, no risk adjustment)
- (As for pharmaceuticals etc. :) the weaker the study design, the larger the published effects
- Logic of Evidence-based Medicine applies: best available evidence counts

# Effects of anti-smoking measures on smoker prevalence

Measure	Effect on smoker prevalence
Price increase by 10 percent	Decline by 4 percentage points in countries with high per capita income
Ban on smoking at work	Decline by 5-10 percentage points
Bans on smoking in pubs, restaurants and other public places	Decline by 2-4 percentage points
Advertising ban	Decline by 6 percentage points if ban is absolute
Health warning on cigarette packs	In the Netherlands, 28 percent of all 13- to 18-year-olds said they smoked less as a result of the health warnings; in Belgium, 8 percent of those asked said they smoked less because of warnings.
Media campaigns	Percentage of smokers declines by 5-10 percentage points, depending on how the campaigns are targeted at specific groups
Withdrawal measures; subsidies for treatment	Decline by 1-2 percentage points after 2 years, depending on the spectrum of people registered

Source: European Network for Smoking Prevention. Effective tobacco control in 28 European countries, October 2004.

[www.ensp.org/files/effectivefinal2.pdf](http://www.ensp.org/files/effectivefinal2.pdf)

# Wie effektiv sind Disease Management Programme?

Disease	Clinical Processes	Health-related Changes in Behaviors	Disease Control	Clinical Outcomes	Healthcare Utilization	Financial Outcomes	Patient Experience Satisfaction, Quality of Life, Etc
	Adherence to Evidence-based Guidelines		Changes in Intermediate Measures		Changes in Utilization of Services		
<b>CHF</b>	<b>Improved</b>	Inconclusive evidence	<b>Improved</b>	Inconclusive evidence	<b>Reduced hospital admission rates</b>	Inconclusive evidence	<b>Improved</b>
<b>CAD</b>	<b>Improved</b>	Evidence for no effect	<b>Improved</b>	Evidence for no effect	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence
<b>Diabetes</b>	<b>Improved</b>	Evidence for no effect	<b>Improved</b>	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence
<b>Asthma</b>	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Evidence for no effect	Inconclusive evidence	Evidence for no effect	Inconclusive evidence
<b>COPD</b>	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence	Inconclusive evidence
<b>Depression</b>	<b>Improved</b>	N/A	<b>Improved</b>	Inconclusive evidence	Increased utilization	Increased cost	<b>Improved</b>

Codes: N/A: not applicable, as no relevant health-related behaviors for depression exist.

Disease-end point combinations in which disease management seems to achieve the intended result are shaded.

Source: RAND analysis using identified articles.

CHF indicates congestive heart failure; CAD, coronary artery disease; COPD, chronic obstructive pulmonary disease.

# Strategien gegen chronische Krankheit: wie teuer und wie kosten-effektiv?

- Even less published evidence; if costs are reported in evaluations, the methodology is usually flawed!
- On macro-economic implications, we have to rely on models and projections!
- Managing chronic disease costs additional money (→ not effective for cost-containment in short run), but may be cost-effective (data missing!).

## Cost per Quality-Adjusted Life Year (QALY) saved by interventions to reduce or prevent obesity

Intervention	Target population	Estimated cost per QALY, US\$	Source
Planet health (a school-based intervention to improve nutrition and increase physical activity)	Middle-school children	<b>In girls, 4,305</b>	(Wang et al., 2003)
Orlistat (a pharmaceutical intervention)	Overweight and obese patients with type 2 diabetes mellitus	<b>8,327</b>	(Maetzel et al., 2003)
Bariatric surgery	Middle-aged men and women who are morbidly obese	<b>Women: 5,400-16,100</b>	(Craig & Tseng, 2002)
		<b>Men: 10,000-35,600</b>	
Diet, exercise, and behaviour modification	Adult women	<b>12,640</b>	(Roux et al., 2006)



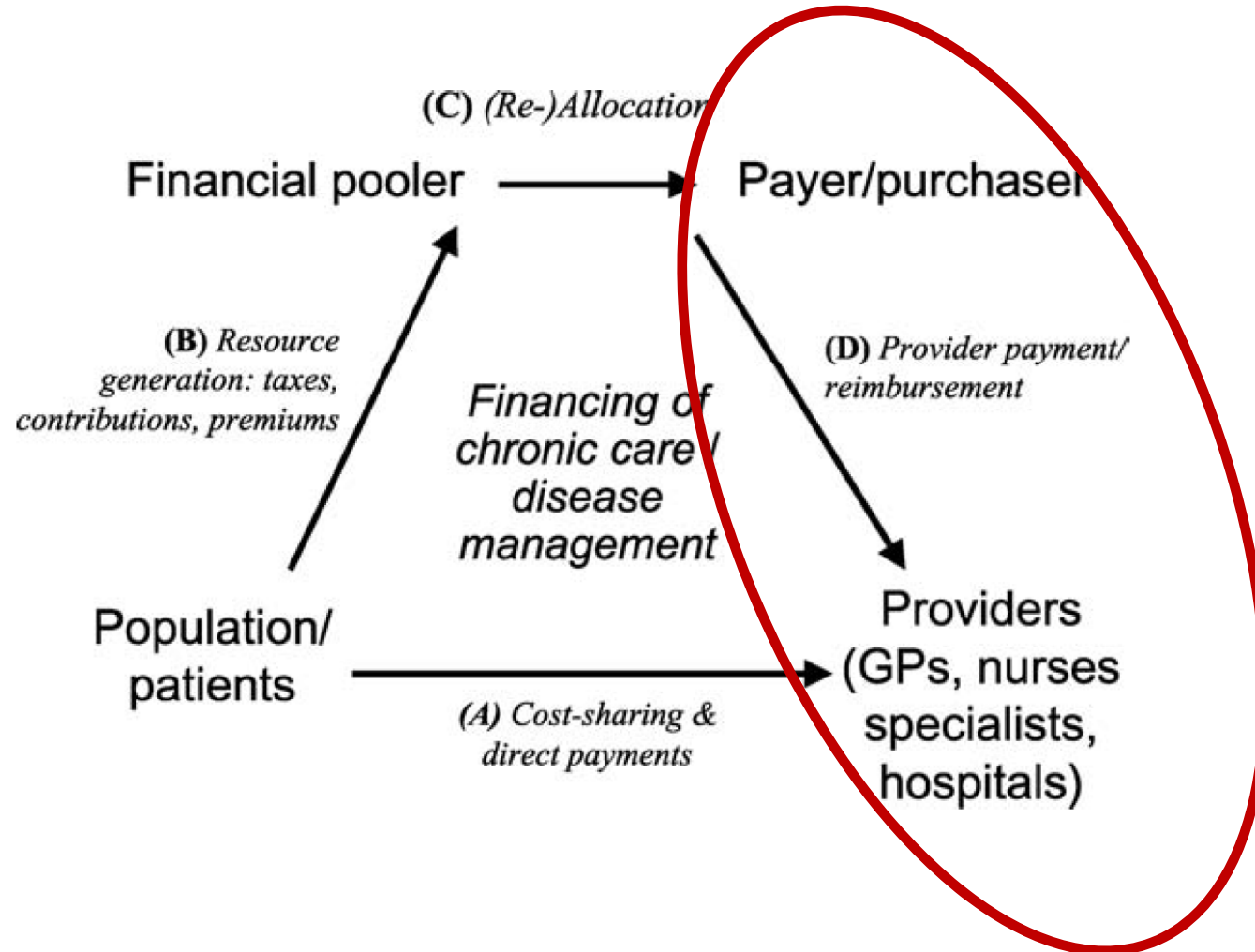
# Die Evidenz über die vier Strategien ...

- Relatively good evidence on **preventive “technologies”** to reduce risk factors (tobacco, obesity ...) – best in comprehensive approaches, which however are nowhere fully utilised; prevention also cost-effective (but may require resources in the order of curative technologies)
- Developing **new professions** promising but evidence limited to certain country examples
- **DMPs** improve processes but evidence on outcomes still to come; no cost savings but possibly cost-effective
- Integrated care (**CCM**): sounds necessary and promising, but hardly any solid evidence beyond some individual components

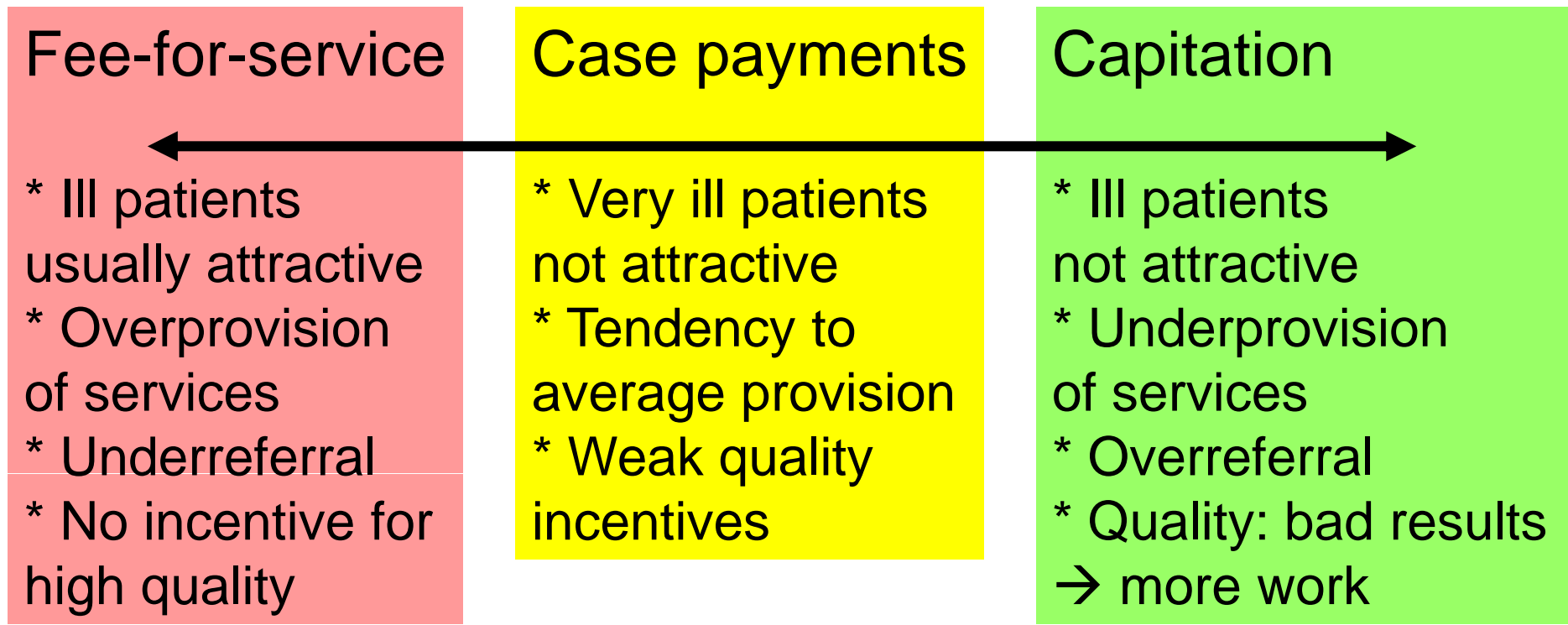
# Management-Herausforderungen: nochmal vier Dimensionen

- Right mix of financial incentives very important (for insured/ patients, payers, providers ...)
- Strengthen coordination (in access, orientation, provision of information, continuity/ coordination/ communication among professionals)
- Elaborated information and communication technologies crucial, but agreement on international technical standards necessary, and ICT have to meet needs of patients and health professionals
- Establish evaluation culture without exceptions

# Die richtige Mischung finanzieller Anreize



# Hintergrund: die Schwächen traditioneller Vergütungsmethoden



\* No incentives for appropriate continuity of care across providers

# Beispiele für neue Vergütungsmethoden

- ‘year of care’ payment for the complete service package required by individuals with chronic conditions (DK)
- Per patient bonus for physicians for acting as gatekeepers for chronic patients and for setting care protocols (F)
- bonus for DMP recruitment and documentation (D)
- 1% of overall health budget available for integrated care (D)
- bonuses for reaching structural, process and outcome targets (UK)
- ‘pay-for-performance‘ bonuses (US)

*Das Original: Qualitätsboni für Hausärzte in Großbritannien  
(initial insg. 1050 Punkte; Bonus/ Praxis im Mittel € 150.000)*

**Examples of indicators, targets and point values in the GP contract**

Type	Indicator	Points	Target Range
Structural	Patients are able to access a receptionist via telephone and face to face in the practice, for at least 45 hours over 5 days, Monday to Friday.	1.5	yes/no
Structural	The practice establish a register for patients with stroke or TIA	4	yes/no
Process	The percentage of patients with history of myocardial infarction who are currently treated with an ACE inhibitor.	7	25%-70%
Process	Patient Survey: The practice will have undertaken an approved patient survey each year	40	yes/no
Outcome	The percentage of patients with diabetes in whom the last blood pressure is 145/85 or less.	17	25%-55%
Outcome	The percentage of patients age 16 and over on drug treatment for epilepsy who have been convulsion-free for last 12 months recorded in last 15 months	6	25%-70%

# Qualitätsboni für englische Hausärzte → Verringerung der Qualitätsunterschiede

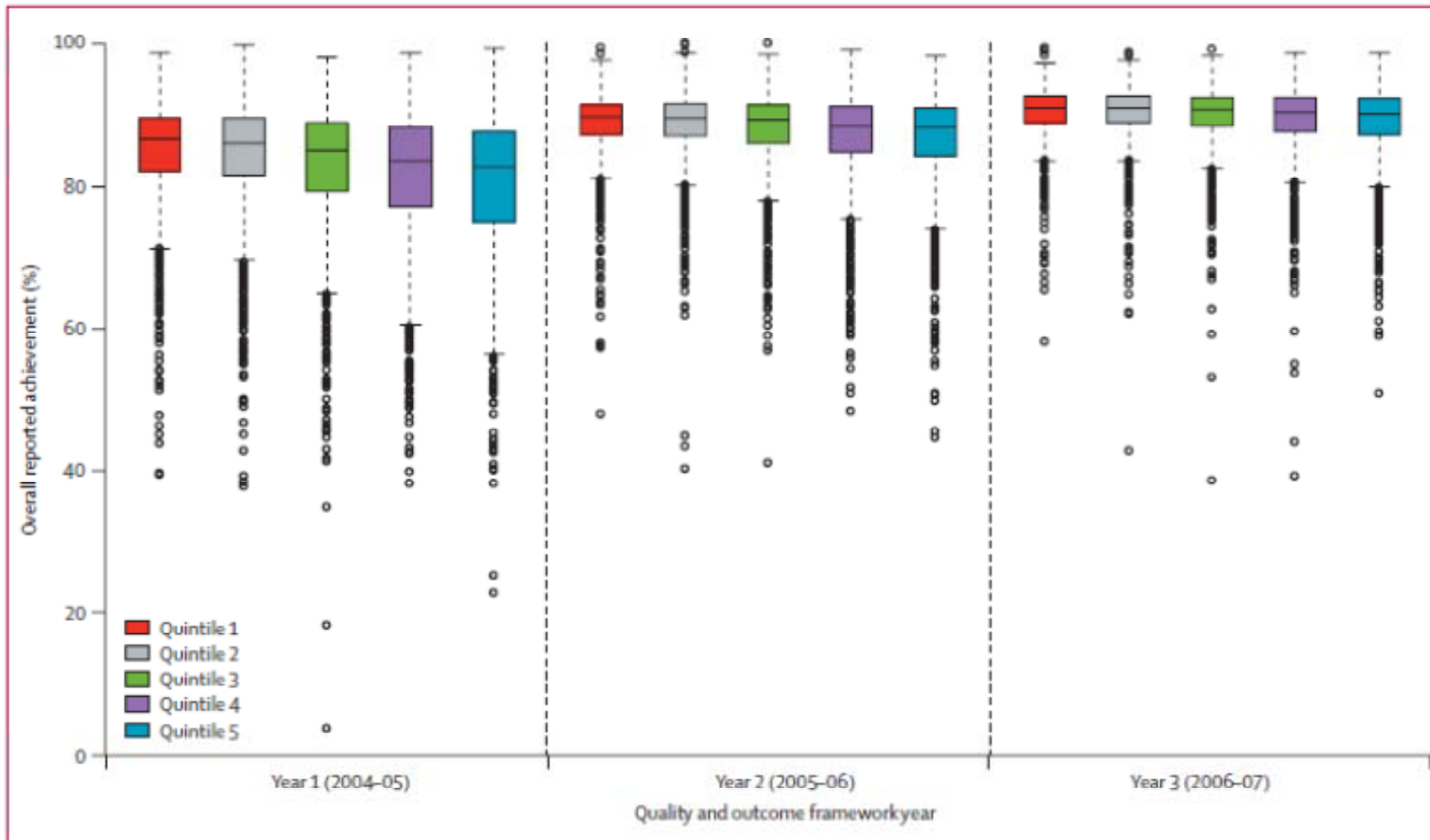


Figure 1: Distribution of scores for overall reported achievement by deprivation quintile for year 1 (2004-05) to year 3 (2006-07)

Central line shows median achievement and box shows interquartile range; whiskers represent range of achievement scores. Circles represent statistical outliers—ie, individual practices with achievement scores outside the range: first quartile- $(1.5 \times IQR)$  to third quartile+ $(1.5 \times IQR)$ .

## *Nachgemacht, aber ebenfalls wirksam: CAPI in Frankreich*

- The bonus: capitation by registered patient (7 € for a GP who would meet 100% of all the targets)
- For an average GP (800 patients registered) = 5600€ (GP turnover = 130 000 €, income = 75 000 €)
- The fields are weighted (60% prevention and quality of care, 40% efficiency of drug prescription),
- both the level achieved and the progression are taken into account
- In practice after 1 year, 2/3rds of contracting GPs have received a bonus (3100 € on average)

**The global financial impact: savings on prescription finance the extra costs for screening or tests and drugs and the additional remuneration**



# Strukturelle Barrieren für Koordination

- Competing operation cultures and management approaches in different sectors
- Different ownership structures
- Separate and competing providers with no incentives to cooperate
- Rivalries between professional groups
- Lack of clarity about competencies and accountability

**→ Policy-makers must recognise that well-organised interests tend to benefit from fragmented care, so reforms aimed at improving coordination should be well-prepared, and supported by strong political will.**

## Notwendig: Evaluationskultur

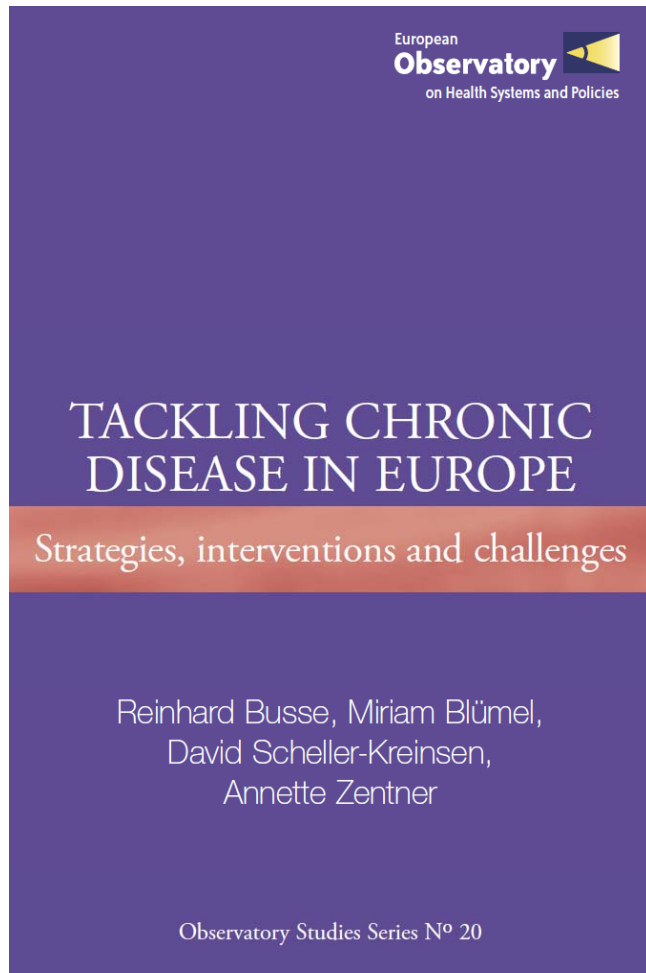
- Many aspects of managing chronic disease are not properly *evaluated* -> effectiveness and cost-effectiveness of various prevention and treatment interventions not well established.
- Policy-makers are therefore not best equipped to make informed decisions.

**→ Policy-makers must ensure that evaluation based on rigorous methodology is an integral part of all strategies.**

**Existing data should be made available for research and review across different technologies, settings and providers.**

# Schlussfolgerungen

- Die Herausforderung, chronische Krankheit besser zu managen, ist eine große
- Der „Beweis“ für die Wirksamkeit vieler Strategien im Sinne von gesundheitlicher Verbesserung steht noch aus → eingebaute Evaluation notwendig
- Zusammenhängende Abwägung der verschiedenen Strategien und Managementdimensionen wichtig
- aber: „one size will not fit all“  
→ lokale Implementation
- *Das Management chronischer Krankheit wird nicht sofort Kosten sparen, aber bessere Gesundheit (sofern der Fall) → Wirtschaftswachstum → mehr Geld für das Gesundheitssystem*



Präsentation,  
Literatur zum Thema  
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