

# Health care purchasing and payment systems in Germany



**PD. Dr. med Wilm Quentin, MSc HPPF**

Department of Health Care Management

Technische Universität Berlin

WHO Collaborating Centre for Health Systems Research and Management

European Observatory on Health Systems and Policies








## European Observatory on Health Systems and Policies

- [News](#)
- [Events](#)
- [Publications](#)
- [Video gallery](#)
- [Health Systems and Policy Monitor \(HSPM\)](#)
- [Health and financial crisis monitor \(HFCM\)](#)
- [Observatory e-Bulletin](#)
- [Activities](#)
- [About us](#)

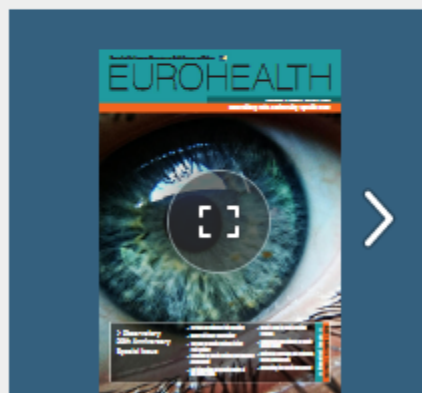


### Celebrating the Observatory's 20th anniversary!

The European Observatory on Health Systems and Policies has been supporting and promoting evidence-based health policy-making for 20 years. To mark this anniversary year, the Observatory is planning a series of exciting activities with its partners and networks.

[Read more](#)

### Top story



### News

We are recruiting a Communications Officer to help us further strengthen our knowledge brokering function and improve dissemination of our outputs

16-11-2018

Do you have high level expertise on health systems? Join our expert roster

16-11-2018

### Latest publications



Connecting food systems for co-benefits: how can food systems combine diet-related health with environmental and economic policy goals?

28-11-2018

The organization and delivery of vaccination services in the

# Germany

## Health system review

Reinhard Busse • Miriam Blümel



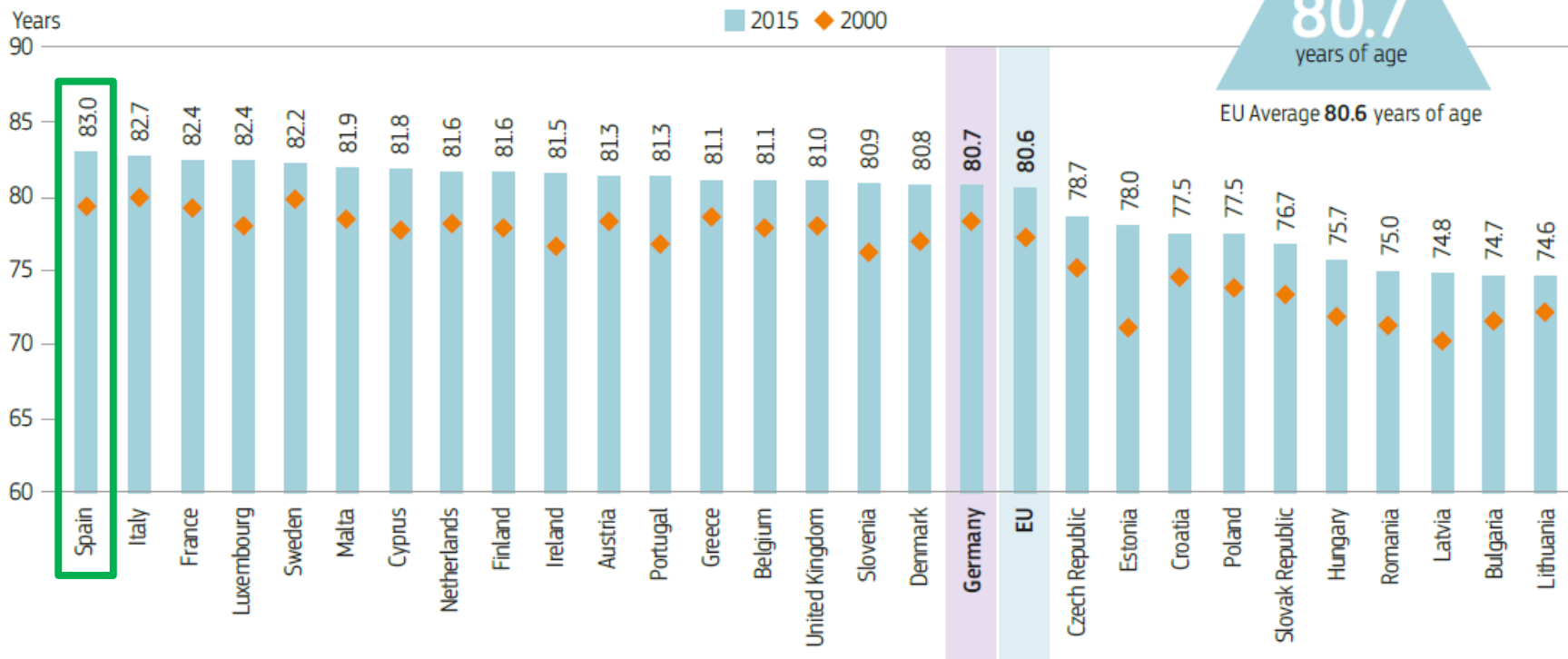
# State of Health in the EU Germany

## Country Health Profile 2017

# Life expectancy in Germany is about average



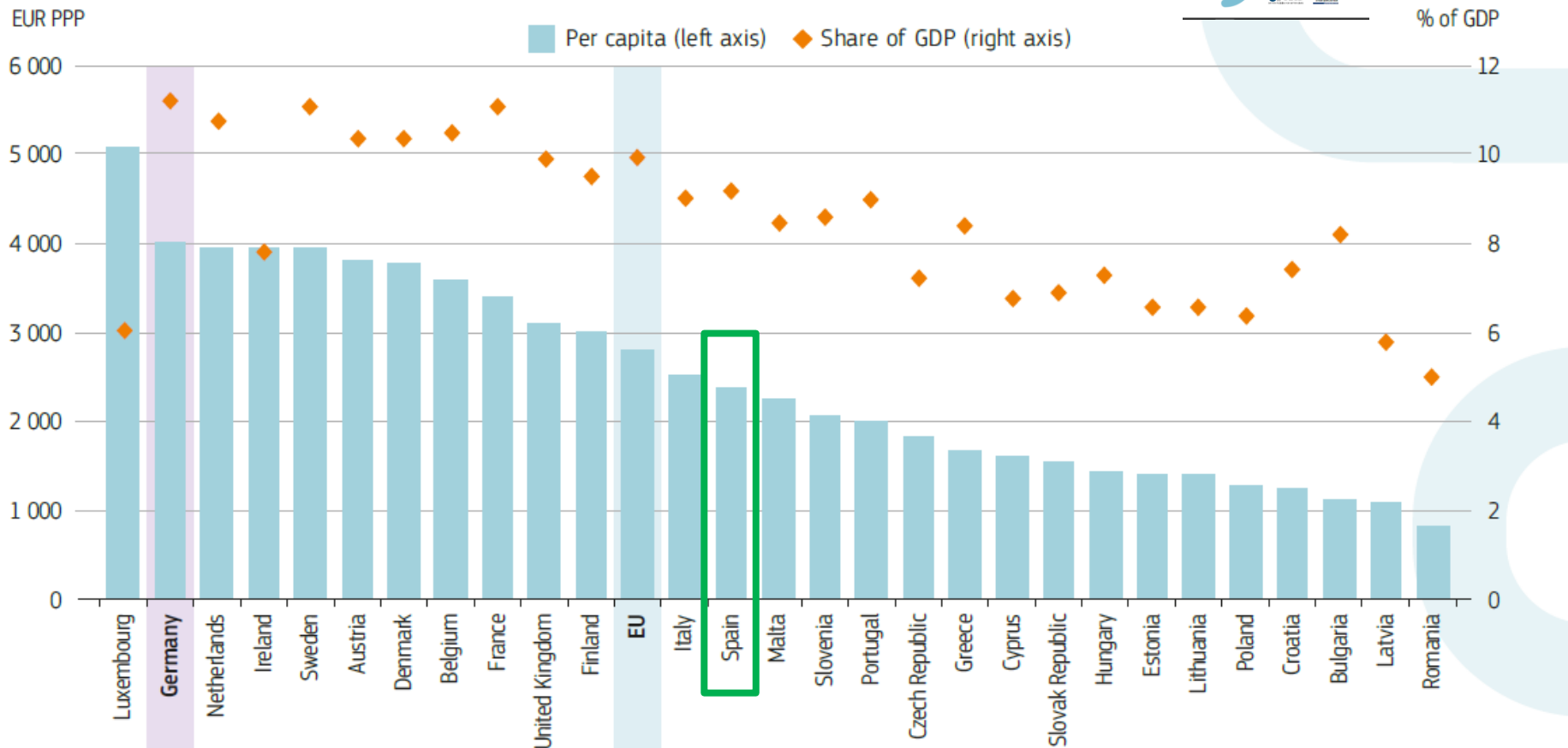
Figure 1. Life expectancy is slightly higher in Germany than the EU average



Source: Eurostat Database

# Health expenditures are very high

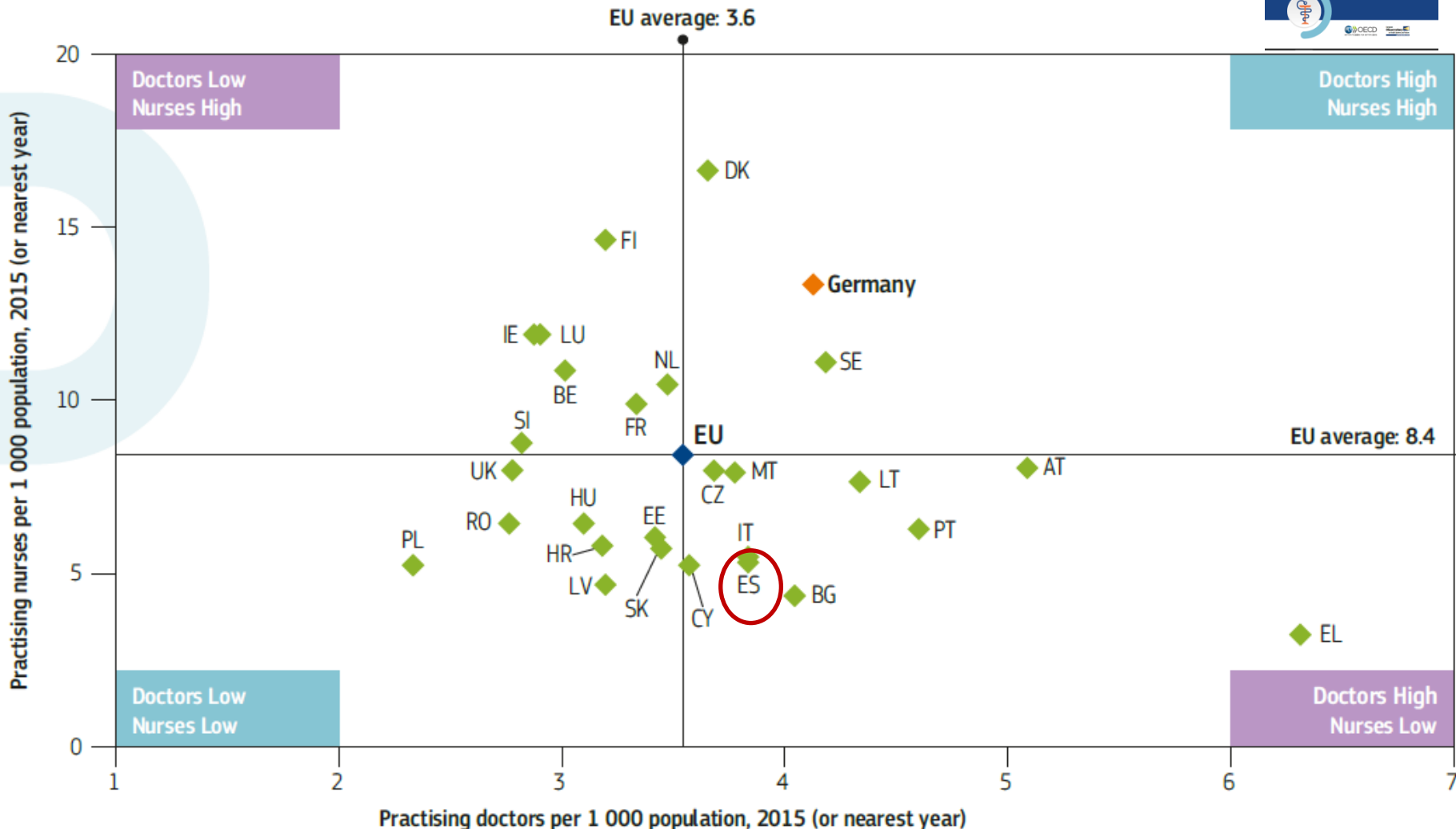
Figure 6. Germany spends the highest share of GDP on health



# Germany has many physicians and nurses

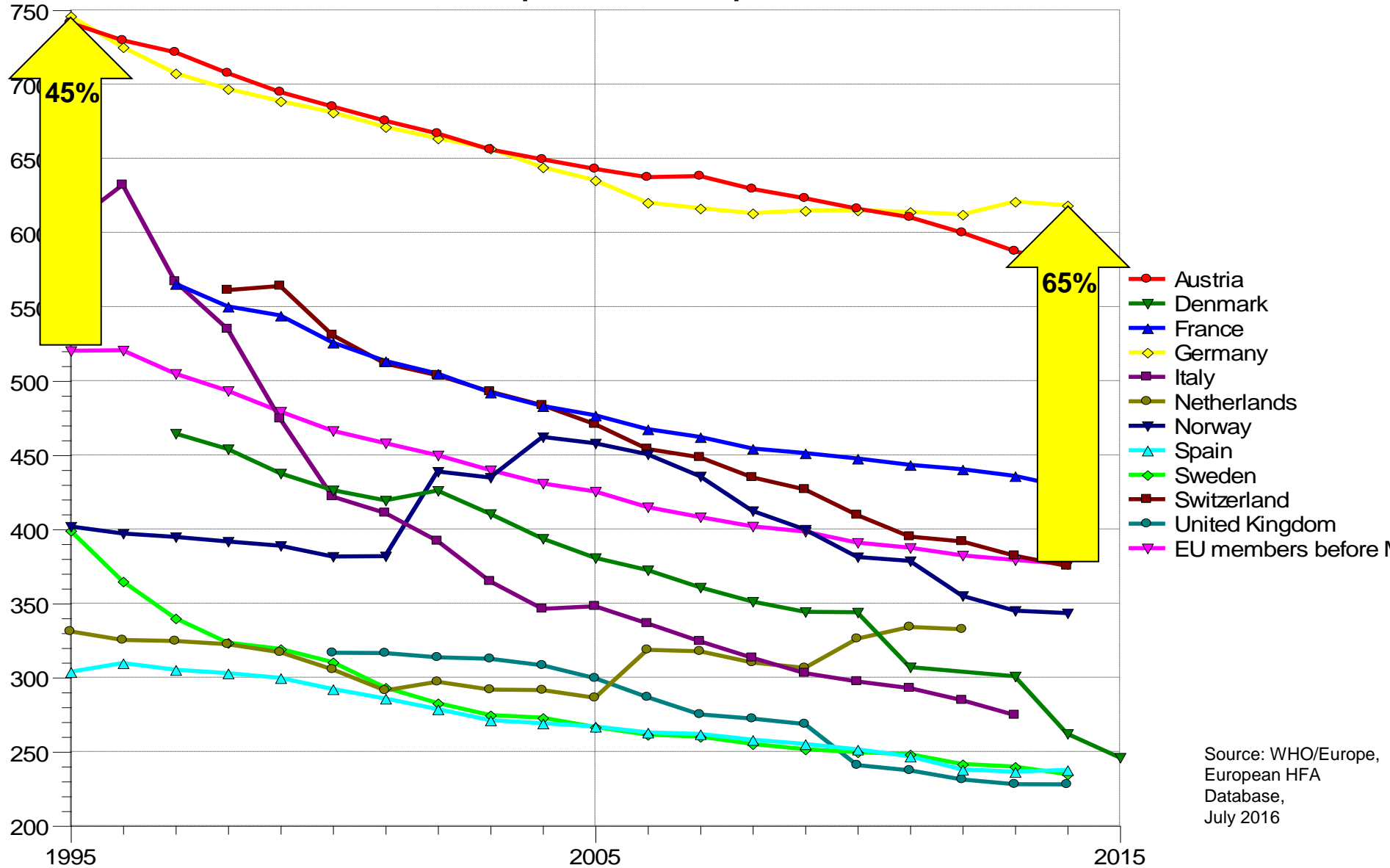


Figure 7. Germany has comparatively high numbers of physicians and nurses for its population



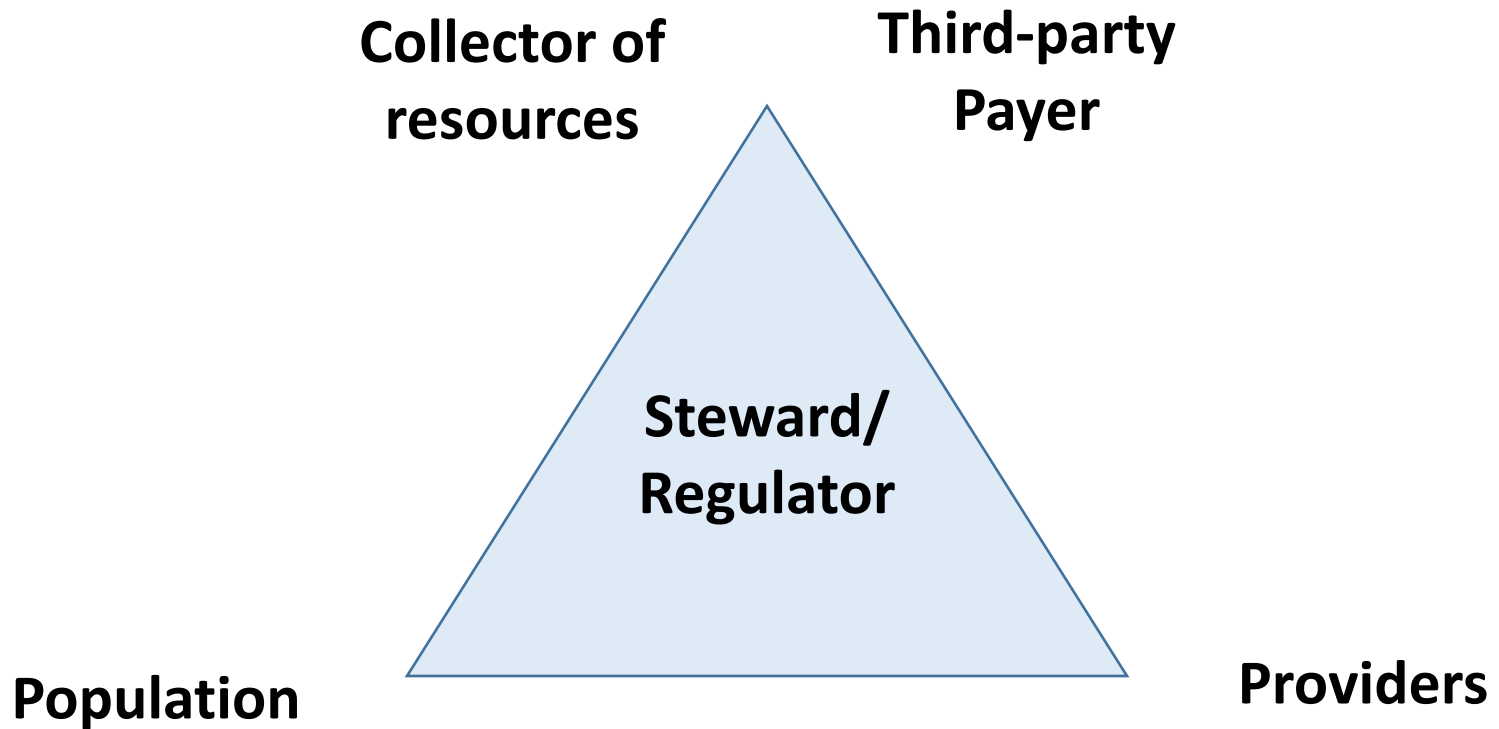
# Germany has high numbers of hospital beds...

## Acute care hospital beds per 100 000



Source: WHO/Europe, European HFA Database, July 2016

# The health system triangle





# The German system at a glance

**Collector of resources**

**“Risk-structure compensation”**

**Third-party payer**

**Health Fund**

**110 sickness funds**  
**41 private insurers**

**Uniform wage-related contribution**  
**+ extra contribution set by sickness funds**

**Risk-related premium**  
**Choice of fund/insurer**

**contracts, mostly collective**

**PHI: no contracts**

**strong delegation & limited governmental control (Federal Joint Committee)**

**Population**

**Universal coverage:**

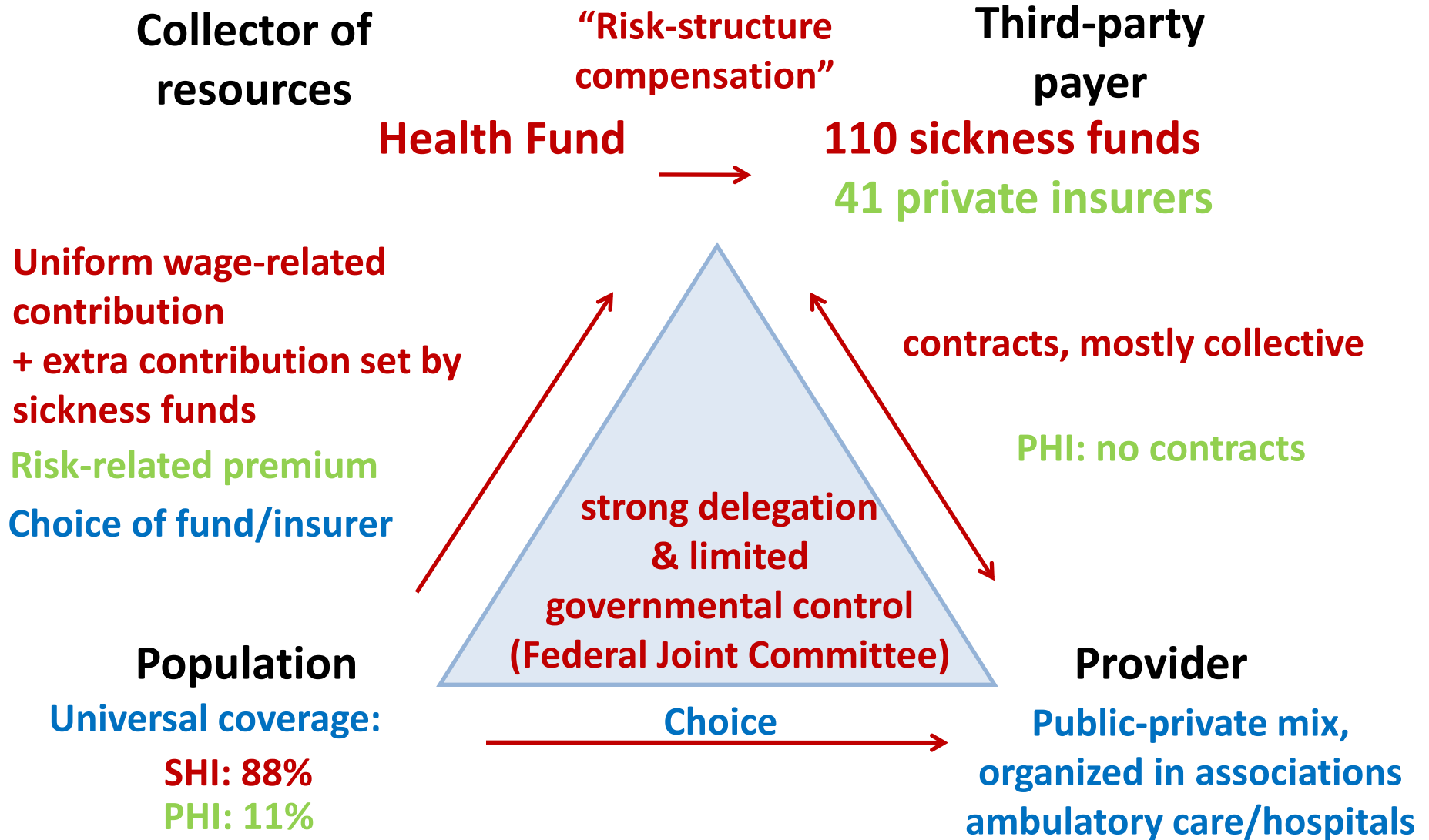
**SHI: 88%**

**PHI: 11%**

**Provider**

**Public-private mix, organized in associations**  
**ambulatory care/hospitals**

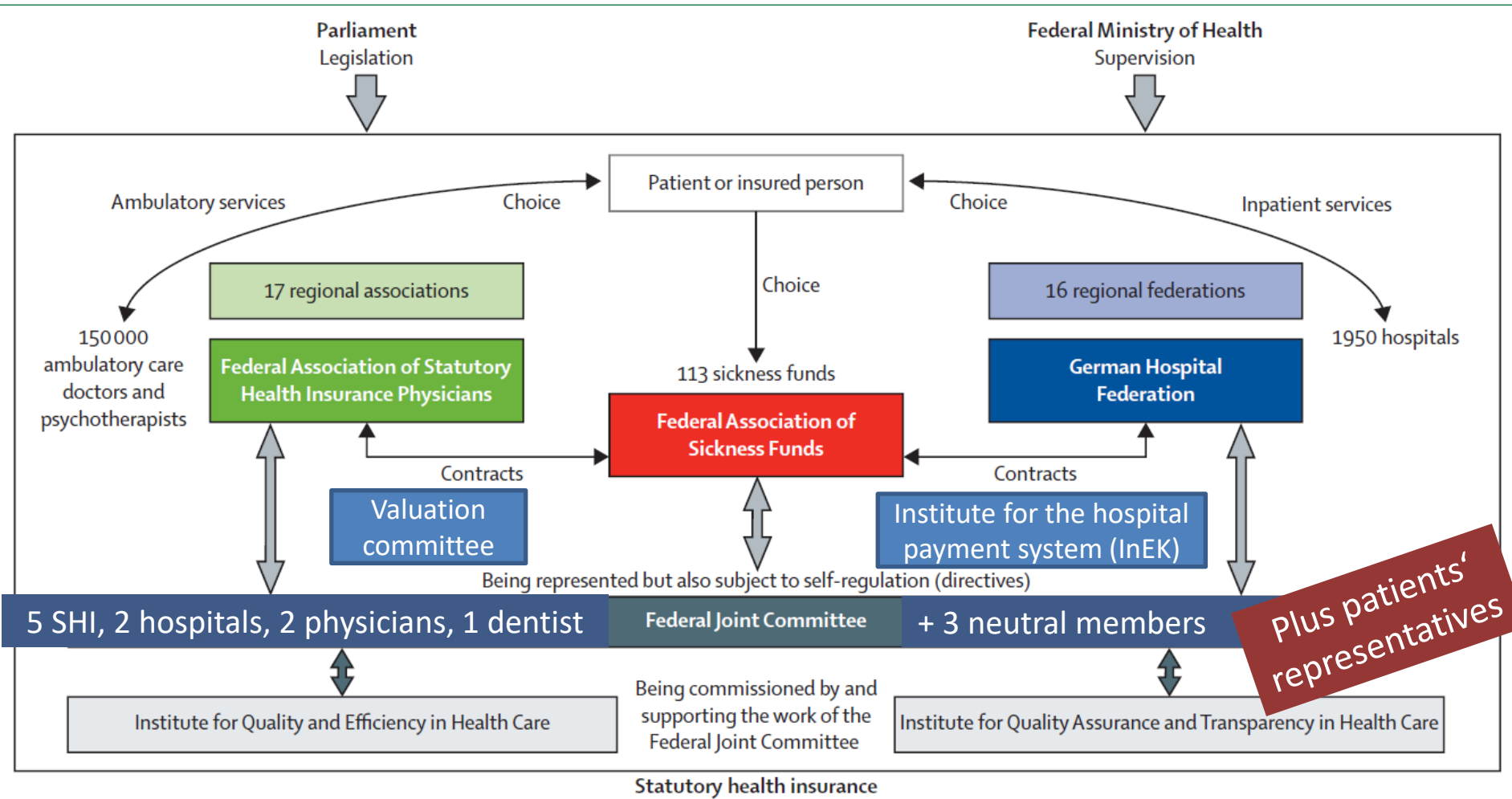
**Choice**



# Key characteristics of the German health system

- Sharing of decision-making powers:
  - the federal government
  - sixteen *Länder* (states)
  - statutory organizations of payers and providers (“self-governance”)
- German health care [almost] = SHI = Fifth Book of the German Social Law (SGB V)
  - defines self-regulated “corporatist” structures
  - gives them the duty and power to develop benefits, prices and standards
  - sectoral borders: separate planning, resource allocation, provision and financing for ambulatory (office-based physicians) and inpatient (hospitals) sector
- Existence of substitutive private health insurance alongside SHI

# Strong reliance on self-governance and collective contracts with competition among providers and payers

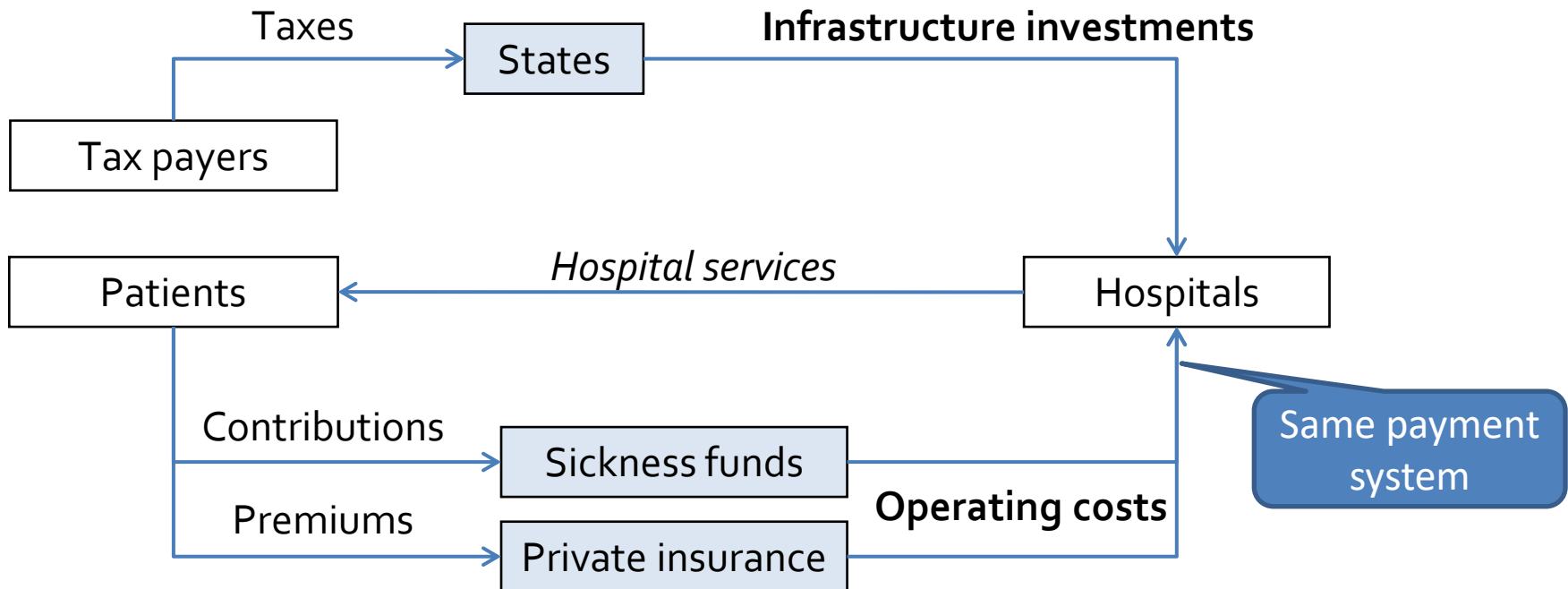


# Purchasing and payment: **inpatient care**

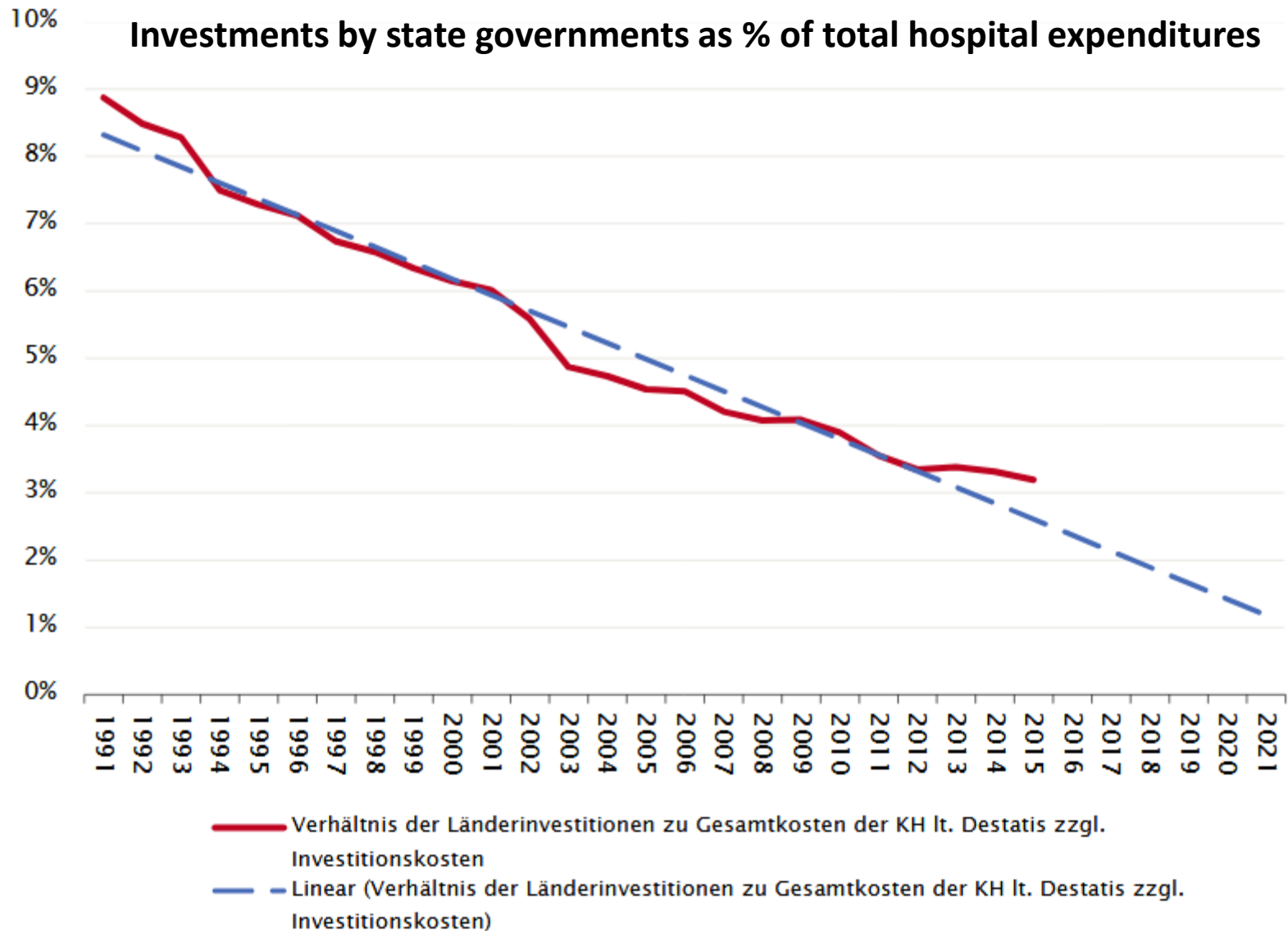
# Hospital payment and capacity planning

The Hospital Financing Act (KHG) of 1972 introduced the “**principle of duality**”

- State governments plan hospital capacities and finance investments
- Sickness funds and private insurance negotiate budgets and reimburse operating costs



# Infrastructure investments



- Sickness funds negotiate activity based DRG budgets every year with every “planned” Hospital.

$$\begin{array}{|c|} \hline \text{Casemix} \\ \hline \text{X} \\ \hline \text{Base rate} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Supplementary} \\ \hline \text{fees} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Surcharges} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Hospital budget} \\ \hline \end{array}$$

- Budget over-run adjustment (hospital pays back):
  - 65 % (standard DRGs), 25 % (drugs, medical, polytrauma and burns DRGs),  
Negotiations for certain DRGs (those that are difficult to predict)
- Budget under-run adjustment (hospital receives compensation) :
  - 20% (standard DRGs)

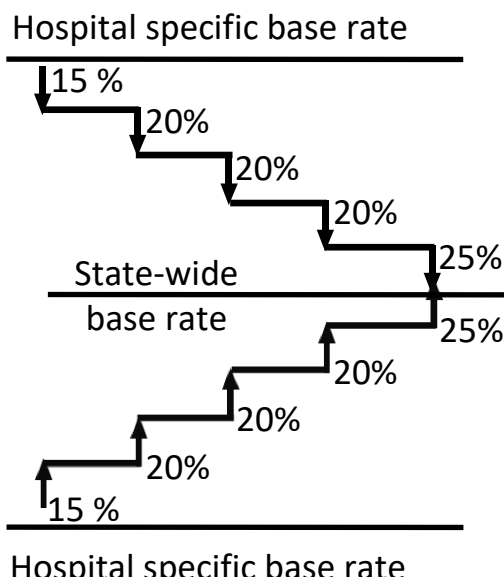
# Fifteen years of DRG-based hospital payment in Germany

2000-2002

2003 - 2004

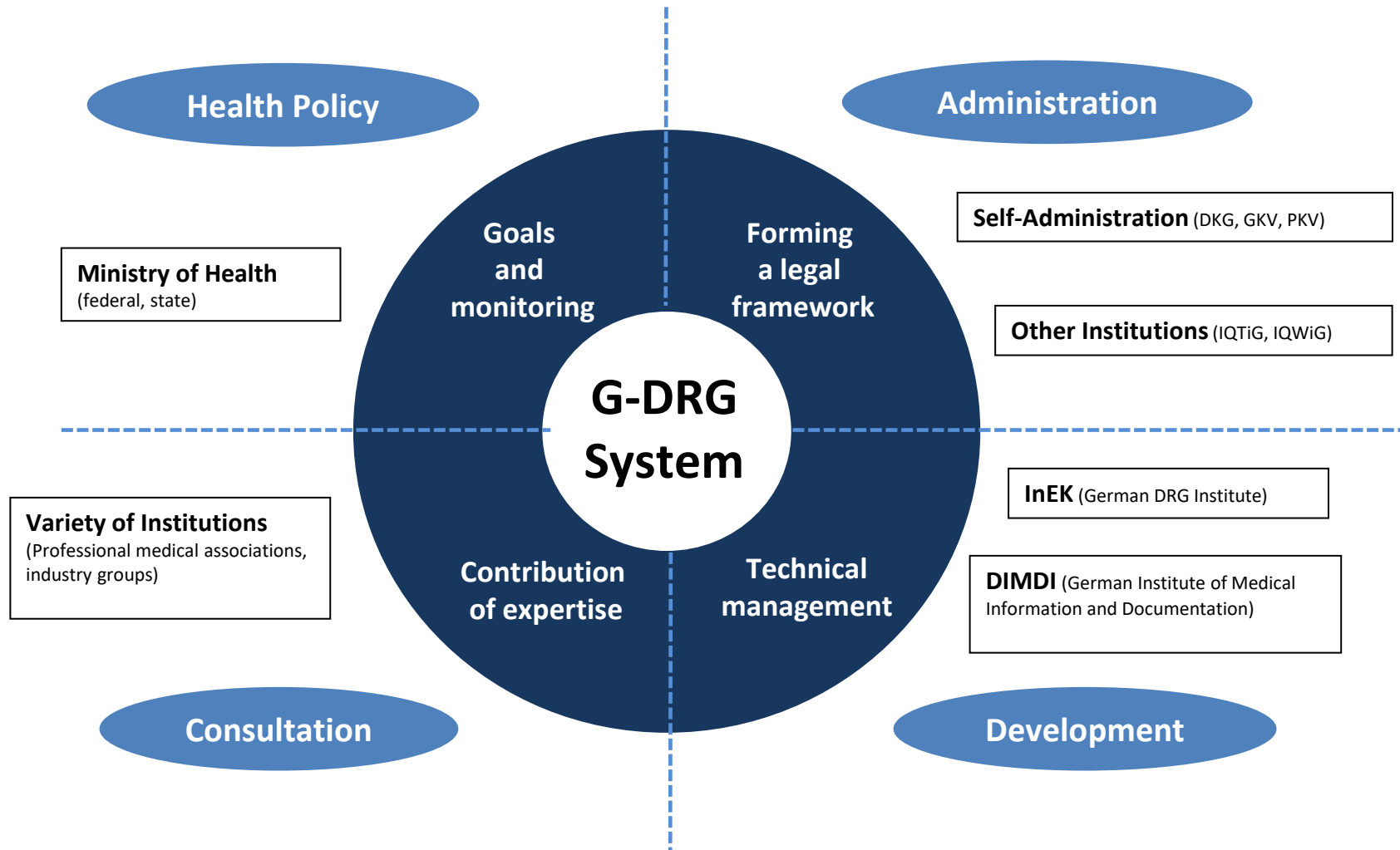
2005 - 2009

2010 - 2018

|                                | 2) Budget-neutral phase  | 3) Phase of convergence to state-wide base rates  | 4) Current development and ongoing debates  |
|--------------------------------|--|---|---|
| <b>1) Phase of preparation</b> | <p>Historical Budget (2003)</p> <p style="text-align: center;">↓</p> <p>Transformation</p> <p style="text-align: center;">↓</p> <p>DRG-Budget (2004)</p> |  <p>Hospital specific base rate</p> <p>↓ 15 %</p> <p>↓ 20%</p> <p>↓ 20%</p> <p>↓ 20%</p> <p>↓ 25%</p> <p>State-wide base rate</p> <p>↑ 25%</p> <p>↑ 20%</p> <p>↑ 20%</p> <p>↑ 20%</p> <p>↑ 15 %</p> <p>Hospital specific base rate</p> | <ul style="list-style-type: none"> <li>• Impact of DRGs</li> <li>• Overcapacity of hospitals</li> <li>• Managing hospital volumes</li> <li>• Payment adjustments to ensure service availability</li> <li>• Payment adjustments based on quality</li> <li>• Representative cost sample</li> <li>• Exclusion of nursing costs from DRG-based payment</li> </ul> |

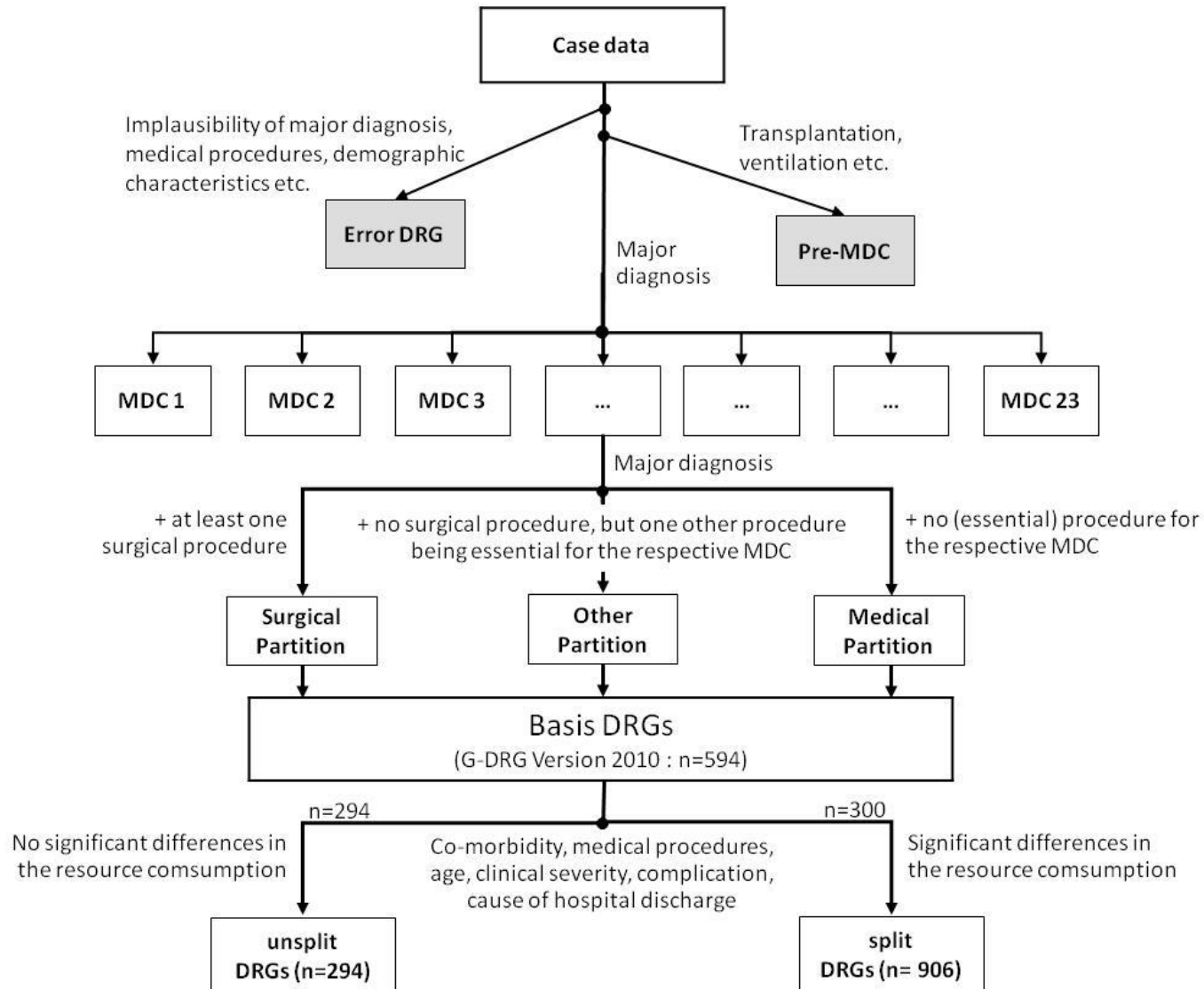


# Tasks and stakeholders of G-DRGs



# 1) Phase of preparation:

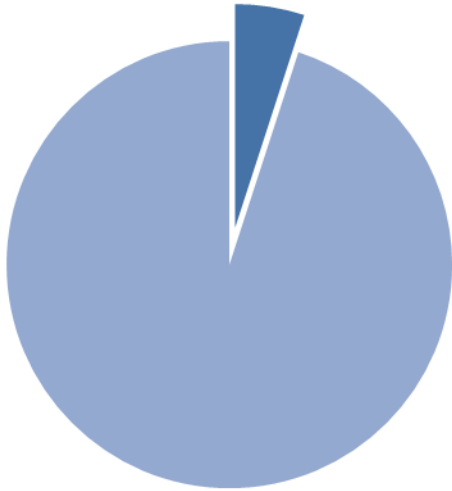
## From AR-DRGs to G-DRGs



## 2) Budget neutral phase: Transfer to DRG budgets

Hospital Budget 2002

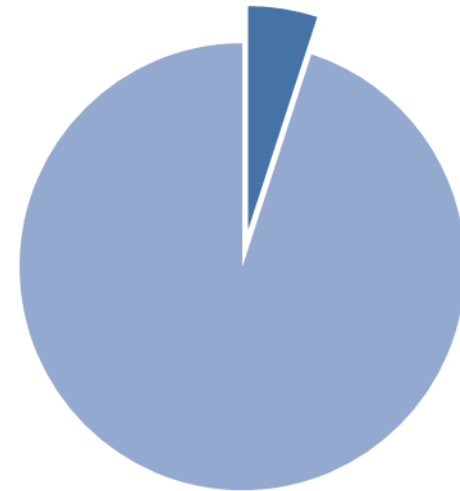
**100 Million Euros**



Reimbursement unit = per diem

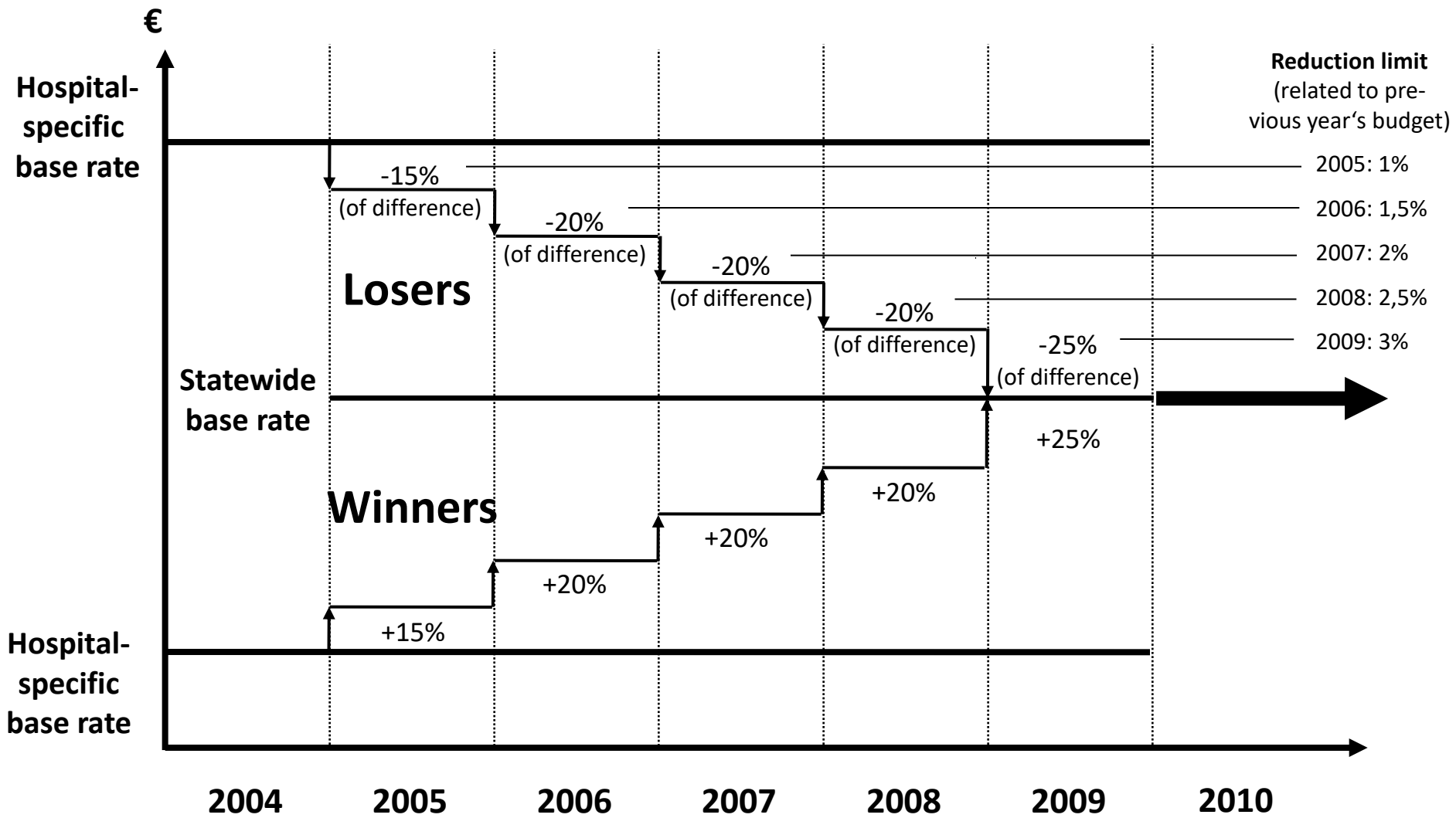
Hospital Budget 2004

**100 Million Euros**



Reimbursement unit = case (DRG)

### 3) Phase of convergence: Five year process



# Cost accounting in hospitals has been improved to develop DRG system and calculate cost weights

## Patient level costing

- Standardised cost accounting approach in hospitals (voluntarily) participating in the data sample

→ Example: DRG I03A  
(Hip revision or replacement with cc)

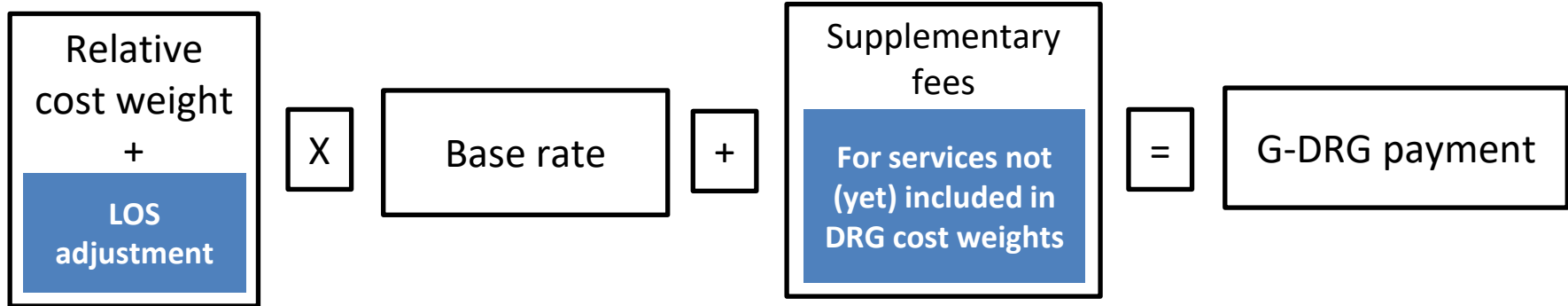
|                     |  | Cost- Element Groups                       |                                      |   |                |   |                                 |   |  |                                 |                                      |       |               |
|---------------------|--|--|--------------------------------------|---|----------------|---|---------------------------------|---|--|---------------------------------|--------------------------------------|-------|---------------|
|                     |  | 1: Labour costs of the other medical staff | 2: Labour costs of the nursing staff | 3: Labour costs of the administrative and technical staff | 4a: Drug costs | 4b: Drug costs (individual costs/ actual consumption) | 5: costs of implants and grafts | 6a: Material costs (without drugs, implants and grafts) | 6b: Material costs (individual costs/ actual consumption, without drugs, implants/ grafts) | 7: Medical infrastructure costs | 8: Non- medical infrastructure costs |       |               |
|                     |  | Labour                                     |                                      |   | Material       |   |                                 |   |  | Infrastructure                  |                                      | Total |               |
| Cost- Centre Groups | 01: Normal ward                            | Hospital units with beds                   | 654                                  | 1744  | 80             | 156   | 41                              | ----  | 131  | 19                              | 371                                  | 1358  | 4554          |
|                     | 02: Intensive care unit                    | Hospital units with beds                   | 152                                  | 360   | 10             | 45  | 11                              | ----  | 60   | 1                               | 64                                   | 179   | 881           |
|                     | 03: Dialysis unit                          | Hospital units with beds                   | ----                                 | ---   | ----           | ----  | ----                            | ----  | ----   | ----                            | ----                                 | ----  | 0             |
|                     | 04: Operating room                         | Diagnostic and treatment areas             | 623                                  | ----  | 401            | 23  | 32                              | 1282  | 286  | 109                             | 264                                  | 360   | 3380          |
|                     | 05: Anaesthesia                            |  | 356                                  | ---   | 236            | 30  | 2                               | ----  | 85   | 5                               | 50                                   | 112   | 875           |
|                     | 06: Maternity room                         |  | ----                                 | ---   | ----           | ----  | ----                            | ----  | ----   | ----                            | ----                                 | ----  | 0             |
|                     | 07: Cardiac diagnostics/ therapy           |  | 2                                    | ----  | 2              | ----  | ----                            | ----  | 1  | 2                               | 1                                    | 1     | 8             |
|                     | 08: Endoscopic diagnostics/ therapy        |  | 3                                    | ---   | 3              | ----  | 1                               | ----  | 2  | ----                            | 2                                    | 2     | 12            |
|                     | 09: Radiology                              |  | 46                                   | ---   | 67             | 1   | ----                            | 2   | 14   | 41                              | 24                                   | 45    | 240           |
|                     | 10: Laboratories                           |  | 18                                   | ---   | 110            | 6   | 339                             | ----  | 75   | 82                              | 12                                   | 50    | 694           |
|                     | 11: Other diagnostic and therapeutic areas |  | 36                                   | 2   | 271            | 1   | ----                            | ----  | 14   | 16                              | 15                                   | 111   | 468           |
| <b>Total</b>        |  |  | 1890                                 | 2106  | 1180           | 261   | 424                             | 1283  | 669  | 276                             | 803                                  | 2219  | <b>11 112</b> |

# Annual revisions have improved the G-DRG system: increasing numbers of groups, and better cost- predictive value

- Early years: Major revisions to increase precision
- Later years: development has stabilized

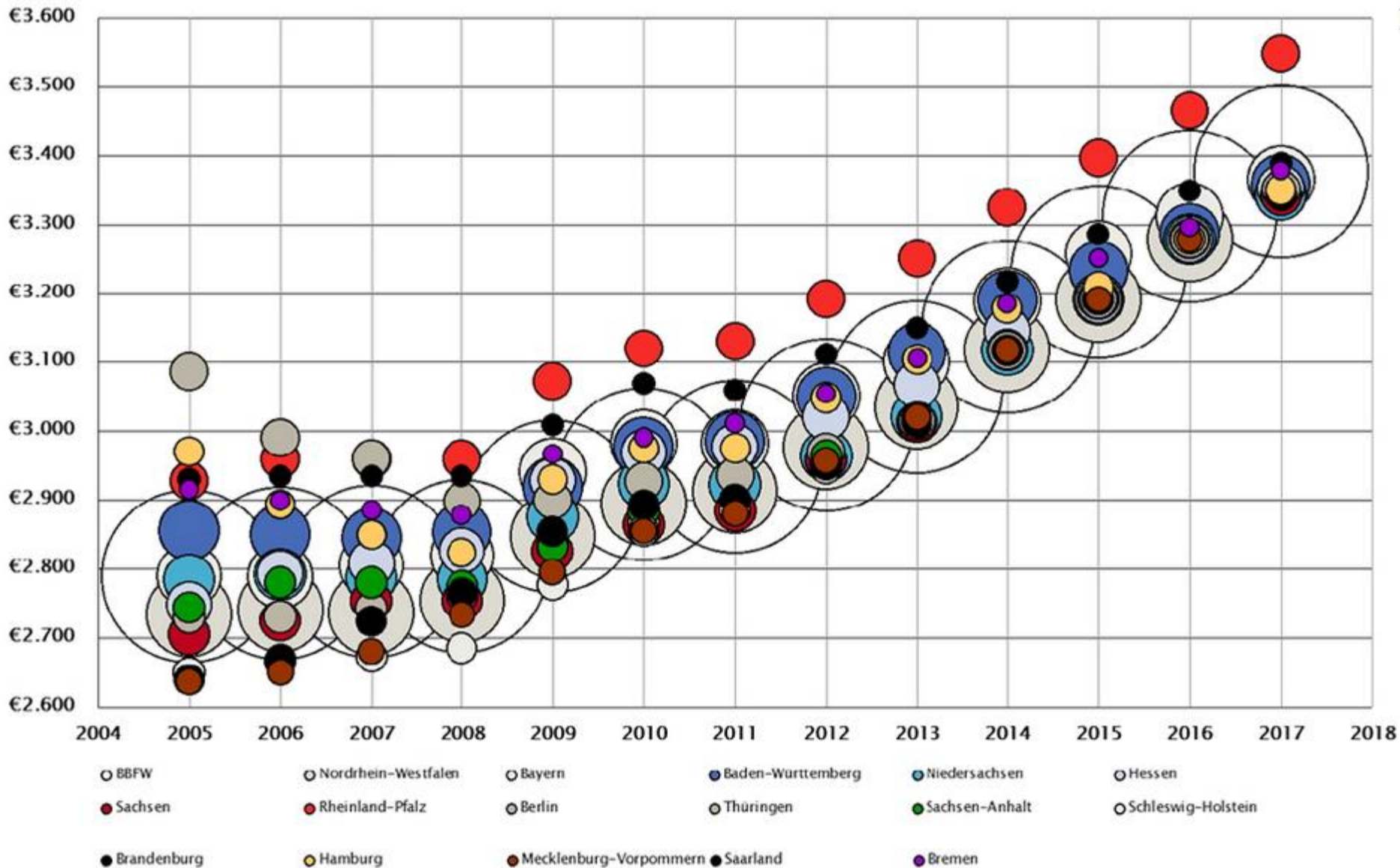
| Year                           | 2003          | 2004          | 2005          | 2006          | 2008          | 2010          | 2012         | 2014          |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|
| <b>DRGs total</b>              | <b>664</b>    | <b>824</b>    | <b>878</b>    | <b>954</b>    | <b>1137</b>   | <b>1200</b>   | <b>1193</b>  | <b>1196</b>   |
| Base-DRGs                      | 411           | 471           | 614           | 578           | 604           | 609           | 595          | 588           |
| Unsplit                        |               | 236           | 454           | 353           | 318           | 293           | 290          | 287           |
| Severity levels                | 4             | 5             | 7             | 8             | 9             | 9             | 9            | 9             |
| <b>Inpatient DRGs total</b>    | <b>664</b>    | <b>824</b>    | <b>878</b>    | <b>952</b>    | <b>1132</b>   | <b>1195</b>   | <b>1189</b>  | <b>1191</b>   |
| - valuated                     | 642           | 806           | 845           | 912           | 1089          | 1154          | 1149         | 1148          |
| - unvaluated                   | 22            | 18            | 33            | 40            | 43            | 41            | 40           | 43            |
| <b>Day care DRGs total</b>     | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>2</b>      | <b>5</b>      | <b>5</b>      | <b>5</b>     | <b>5</b>      |
| - valuated                     | 0             | 0             | 0             | 1             | 1             | 1             | 1            | 2             |
| - unvaluated                   | 0             | 0             | 0             | 1             | 4             | 4             | 4            | 3             |
| <b>R<sup>2</sup> all cases</b> | <b>0.4556</b> | <b>0.5577</b> | <b>0.6388</b> | <b>0.6805</b> | <b>0.7209</b> | <b>0.7443</b> | <b>0.754</b> | <b>0.7671</b> |
| <b>R<sup>2</sup> inlier</b>    | <b>0.6211</b> | <b>0.7022</b> | <b>0.7796</b> | <b>0.7884</b> | <b>0.8166</b> | <b>0.843</b>  | <b>0.844</b> | <b>0.8533</b> |

# ... and LOS adjustments and supplementary fees individualize payment to avoid skimping/ creaming and to incentivize innovations



| Year                                       | 2003       | 2004       | 2005       | 2006       | 2008       | 2010       | 2012       | 2014       |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| Range of cost weights: min.-max. (rounded) | 0.12-29.71 | 0.11-48.27 | 0.12-57.63 | 0.12-65.70 | 0.11-68.97 | 0.13-73.76 | 0.14-65.34 | 0.14-64.14 |
| Supplementary fees                         | 0          | 26         | 71         | 83         | 115        | 143        | 150        | 159        |
| - valuated                                 | 0          | 1          | 35         | 41         | 64         | 81         | 82         | 95         |
| - unvaluated                               | 0          | 25         | 36         | 42         | 51         | 62         | 64         | 64         |

# Total hospital payment depends on the base-rate



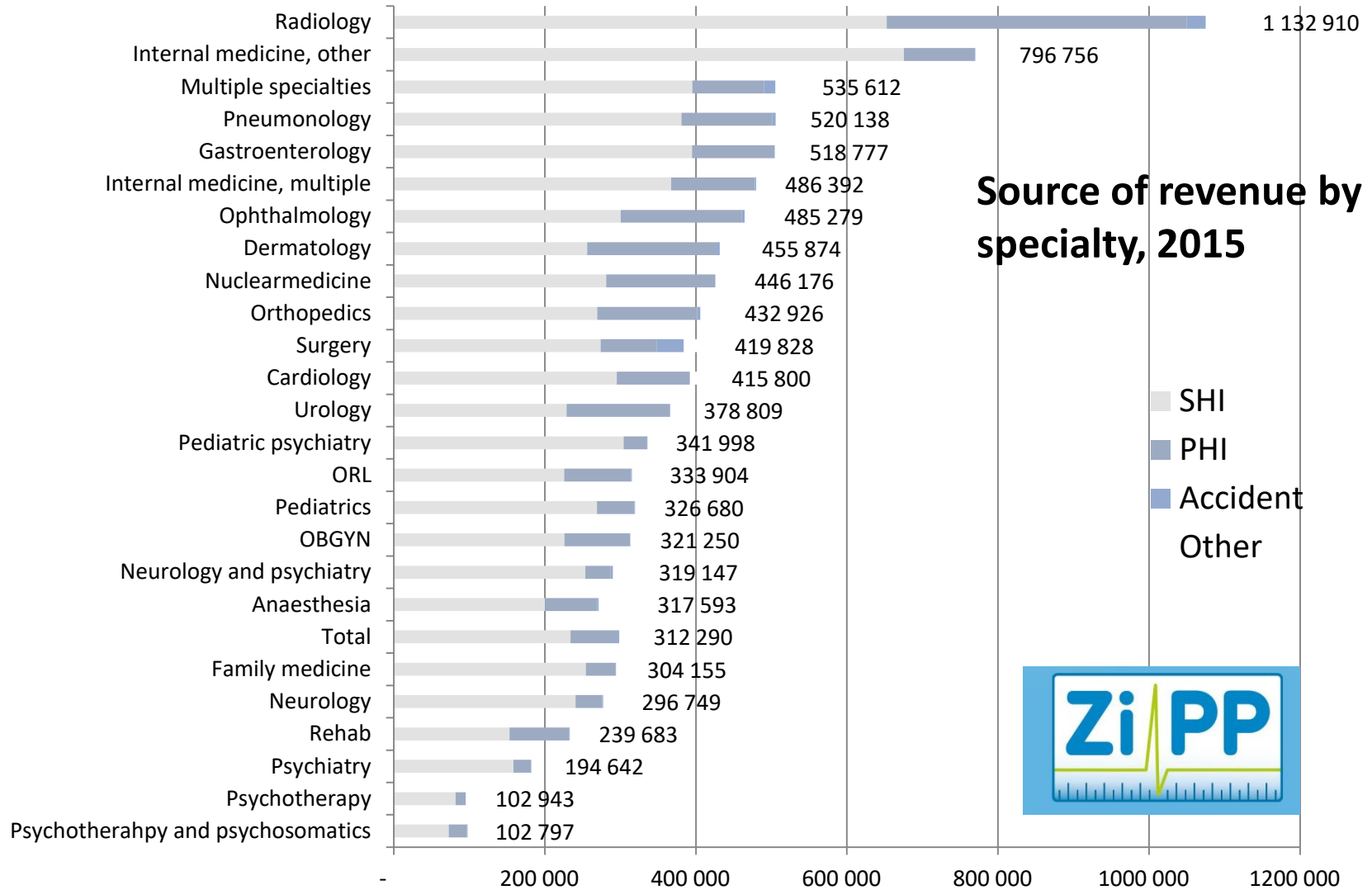


# Purchasing and payment: **ambulatory care**

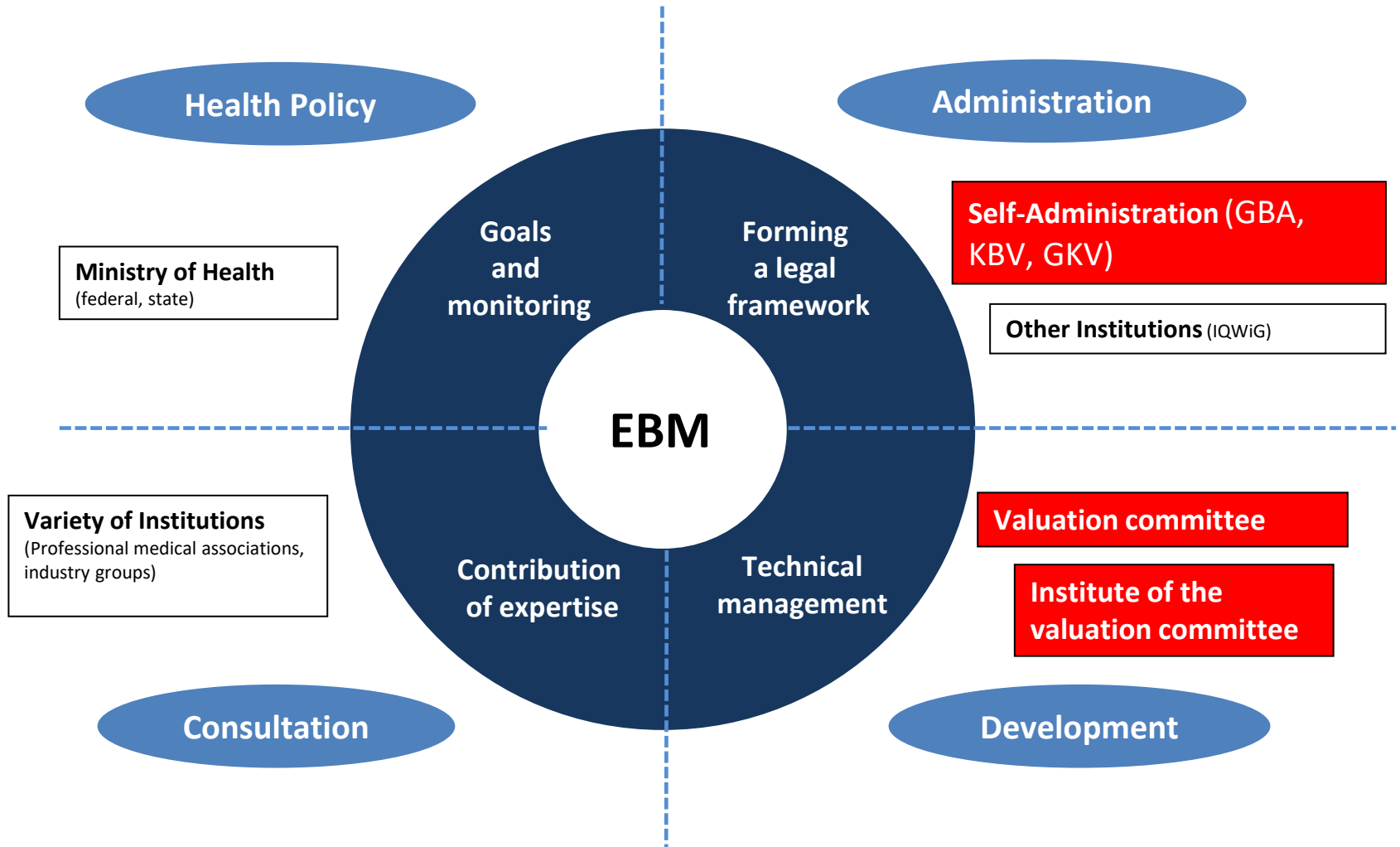
# Context is important for physician payment in ambulatory care

|             | Primary care                    | Ambulatory secondary care                                   | Inpatient care |
|-------------|---------------------------------|---|----------------|
| France      | No gate-keeping,<br>free choice | (Primarily)<br>Office-based<br>specialists                  |                |
| Germany     |                                 |   | Hospitals      |
| England     | Office-based<br>GPs             | Outpatient<br>departments:<br>hospital-based<br>specialists |                |
| Netherlands |                                 |   |                |

# Different payment mechanisms for patients with SHI and those with Private Health Insurance



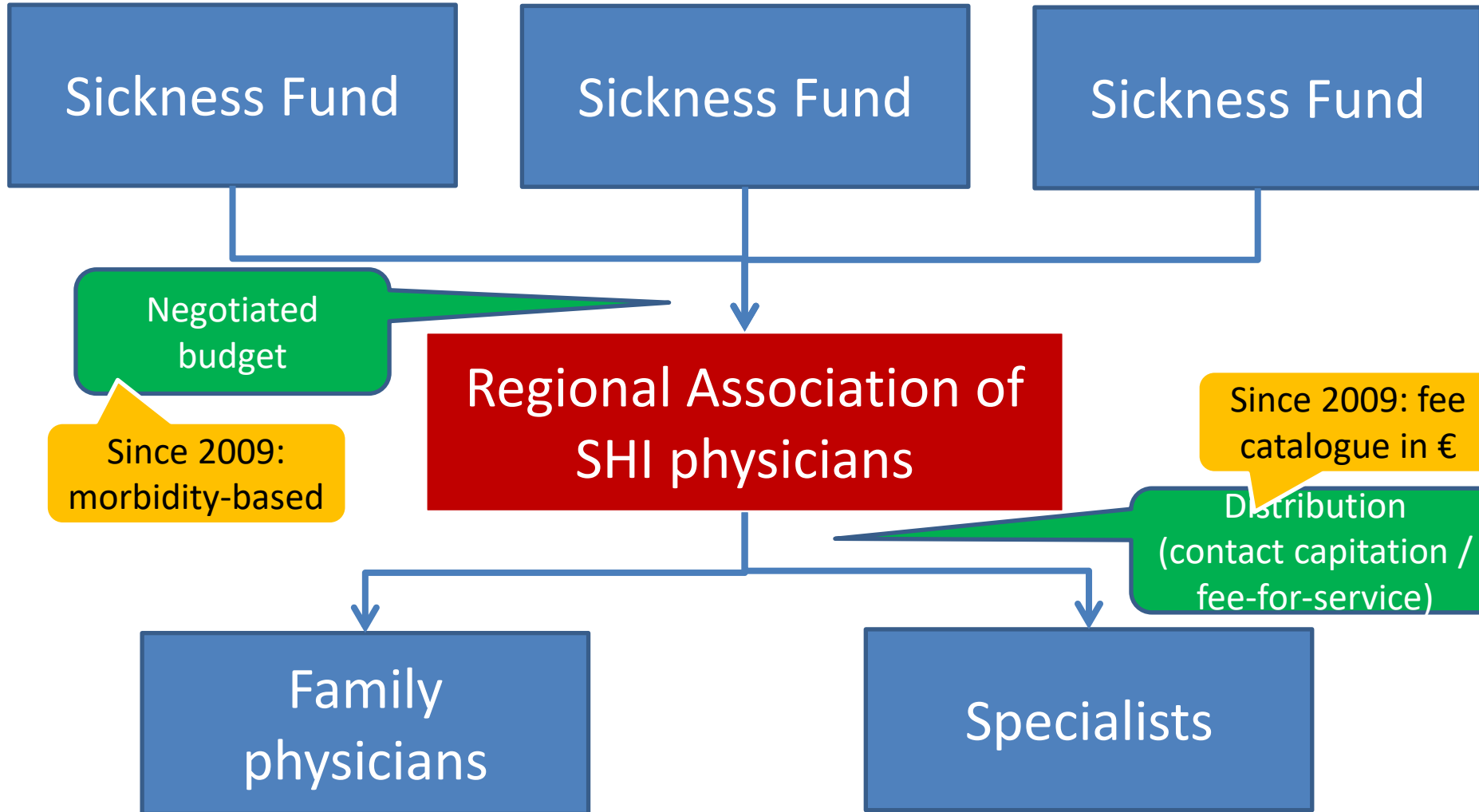
# Tasks and stakeholders of the ambulatory physician payment system



# Ambulatory care purchasing and payment in the SHI system

- Federal Joint Committee (GBA) determines catalogue of ambulatory benefits
- Regional Associations of SHI physicians (KVs) have legal obligation to guarantee the availability of services
- Needs-based planning limits the number of physicians in attractive areas and assures availability in rural areas
- Negotiations between associations of SHI physicians and associations of sickness funds determine the payment system and payment level

# Combining fee-for-service payment with budget for cost control



# Ambulatory SHI physician payment is determined by

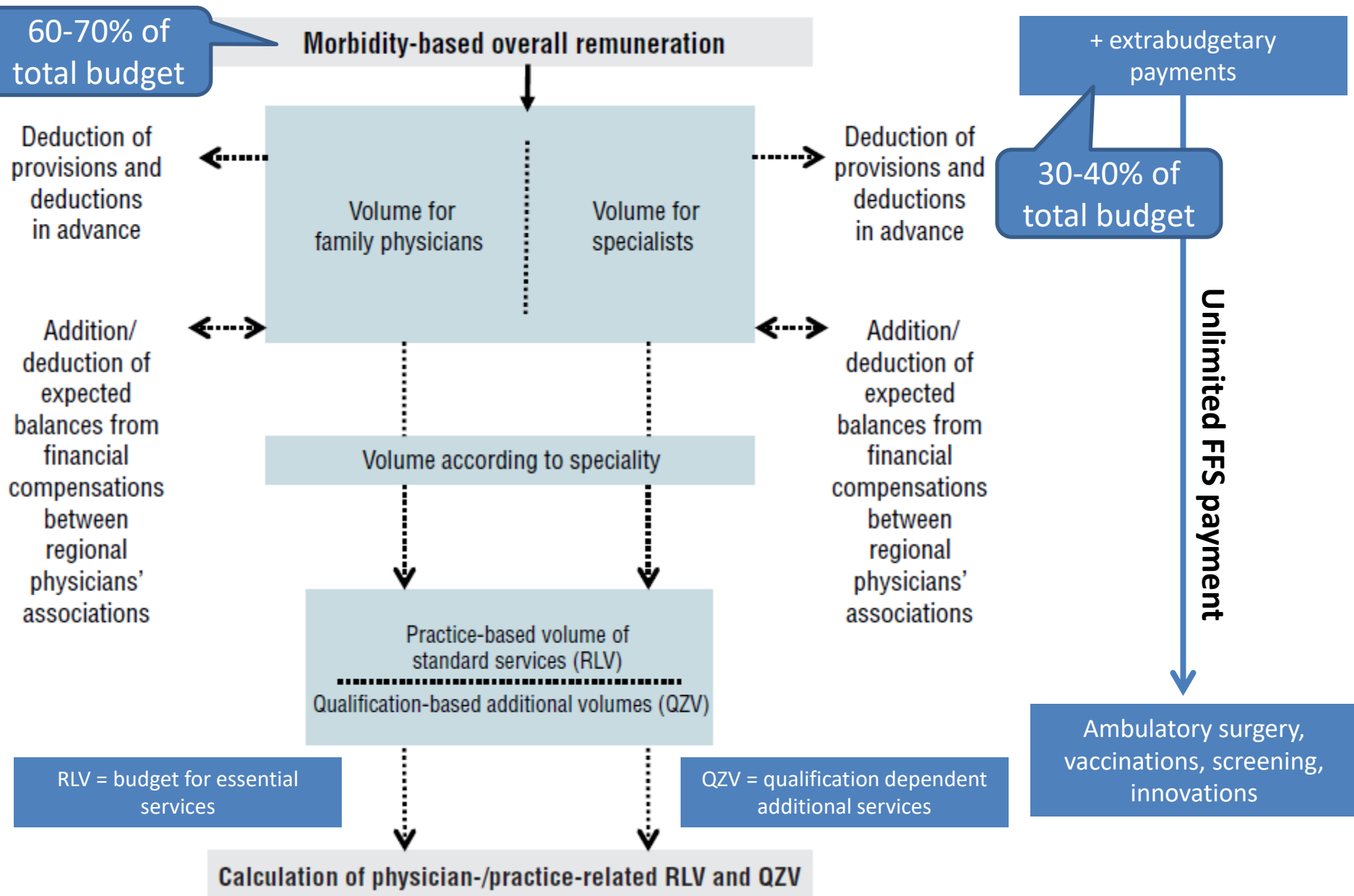
1. Negotiated morbidity-based overall remuneration
  - Influenced by assessed change rate of morbidity
  - Determined by coded ambulatory diagnoses
2. A fee catalogue called Uniform Value Scale (EBM)



Round about  
2,500 Services  
(incl. the contact  
capitations)

3. A monetary conversion factor (Orientierungswert)
  - Regional negotiations determine actual monetary value

# Ambulatory SHI physician payment since 2009





# The valuation committee is the central decision making body for ambulatory physician payment

- Equal representation of
  - The Federal Association of SHI physicians (KBV)
  - The Federal Association of Sickness Funds (GKV)
- The valuation committee takes decisions about:
  - EBM and monetary conversion factor
  - Morbidity of SHI insured
  - The system of morbidity-based overall remuneration
- If KBV and GKV fail to reach an agreement, Valuation Committee can be extended:
  - Three neutral members jointly appointed by KBV and GKV (or by MoH if they fail to reach agreement)

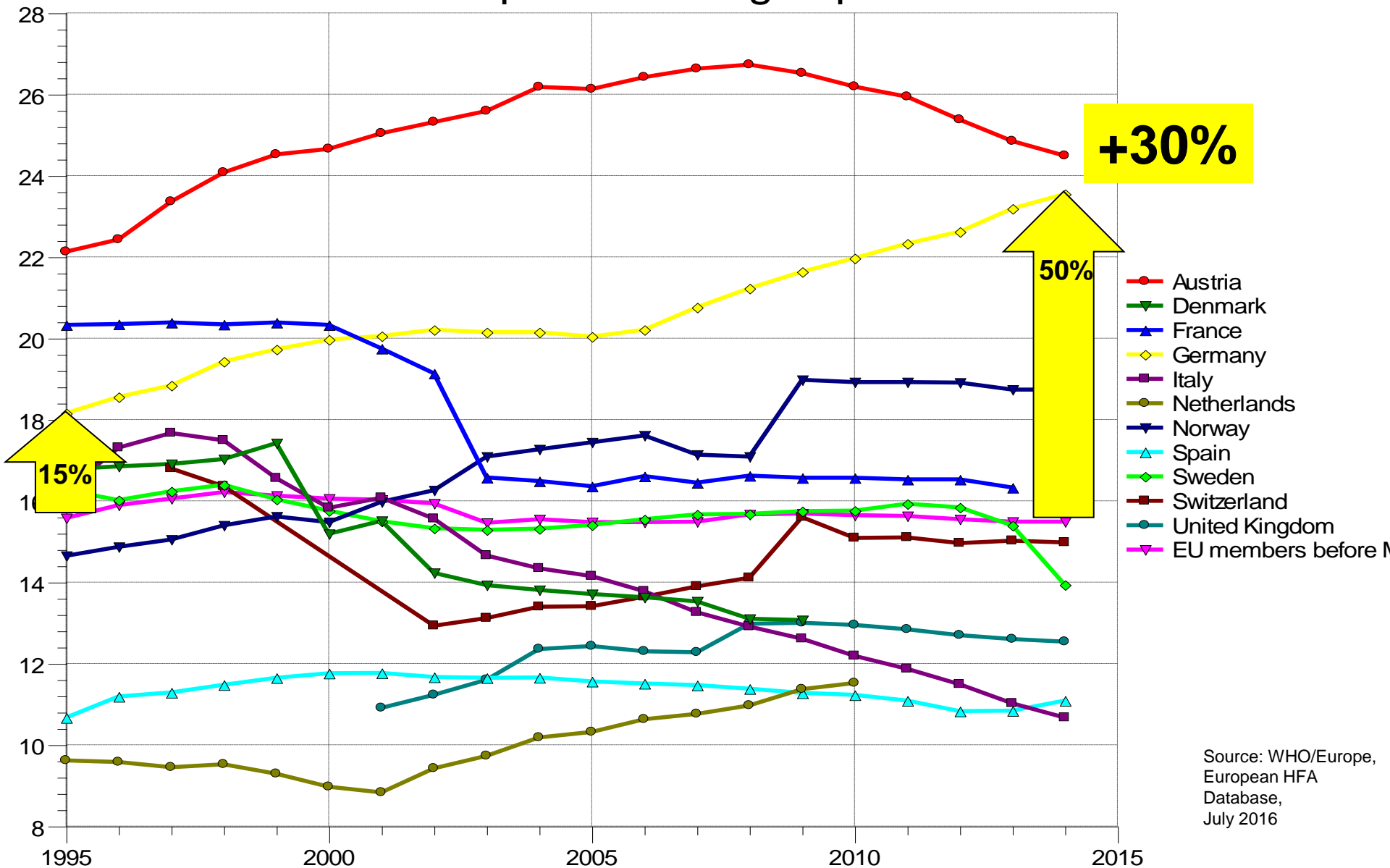
# FFS system development: Basis for updates of relative value units

- Two parts: (1) physician work and (2) practice expenses.
- Time estimates per service based on expert opinion (physicians' input).
- Practice expenses include capital costs, personnel costs, rents etc. → estimated based on costing studies.
- Normative physician income per minute based on normative annual income (€106,000 since 2007), and estimates of annual working time.

# Current challenges and debates

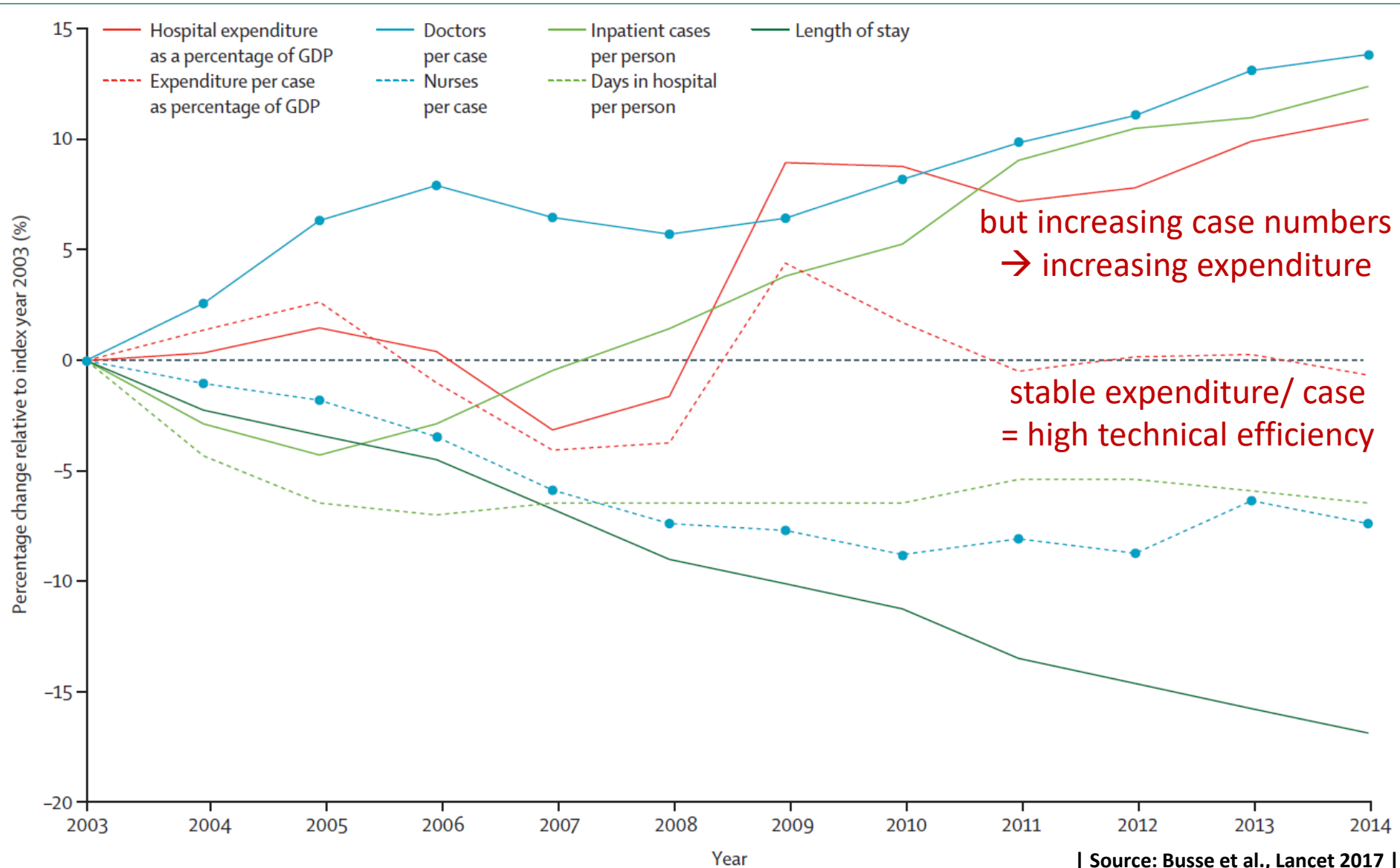
# Increasing numbers of hospital discharges

## Acute care hospital discharges per 100



Source: WHO/Europe, European HFA Database, July 2016

# Increasing hospital expenditures despite stable costs per case (in comparison to GDP)



# Inpatient care purchasing and payment: Developments and debates

- Impact of DRGs
- Overcapacity of hospitals → renewed focus on planning
- Managing hospital volumes
- Representative cost sample (implemented in 2016)
- Payment adjustments to ensure service availability (since 2017)
- Payment adjustments based on quality (in progress)
- Exclusion of nursing costs from DRG-based payment (current coalition agreement)

- Large income discrepancies across specialties indicate problems with relative values of fee catalogue
- Stepwise reform (originally planned for 2013)
- 2013: Introducing age-weighting of contact capitations
- Planned for 2019:
  - recalculation of RVUs using practice cost data of federal statistical office,
  - redefining normative income,
  - re-estimating time needs

- Ensuring service availability in rural areas
- Different reimbursement systems between SHI and PHI
- Waiting times in SHI (despite short waiting times in international comparison)
  - New appointment service (max. wait time 4 weeks)
  - Longer opening hours (draft law)
- New ambulatory payment system: Commission just started work
- Working group of federal and state governments on new regulatory framework to overcome sectoral borders



- Payment systems in ambulatory care and inpatient care have developed over many decades
  - One large payment reform for hospital payment and one large reform of ambulatory payment over past 15 years
  - Numerous small and incremental reforms
- Existing systems are highly complex, aiming to balance incentives for service provision with aims of cost control
- Current payment reforms in inpatient care focus on improving quality and service availability
- Current and ongoing payment reforms in ambulatory care focus on service availability and (maybe) equity

work best requires further research and monitoring of those payment systems currently being used and developed.

## REFERENCES

1. Organization for Economic Cooperation and Development, OECD Health Data 2010.

## DRG-type hospital payment in Germany: The G-DRG system

Wilm Quentin, Alexander Geissler,  
David Scheller-Kreinsen, Reinhard Busse



European **Observatory** on Health Systems and Policies Series

Diagnosis-Related Groups in Europe

## Diagnosis-Related Groups in Europe

Moving towards transparency, efficiency and quality in hospitals

Busse, Geissler, Quentin and Wiley

Edited by  
Reinhard Busse  
Alexander Geissler  
Wilm Quentin  
Miriam Wiley

By Wilm Quentin, David Scheller-Kreinsen, Miriam Blümel, Alexander Geissler, and Reinhard Busse

## Hospital Payment Based On Diagnosis-Related Groups Differs In Europe And Holds Lessons For The United States

**ABSTRACT** England, France, Germany, the Netherlands, and Sweden spend less as a share of gross domestic product on hospital care than the United States while delivering high-quality services. All five European countries have hospital payment systems based on diagnosis-related groups (DRGs) that classify patients of similar clinical characteristics and comparable costs. Inspired by Medicare's inpatient prospective payment system, which originated the use of DRGs, European DRG systems have implemented different design options and are generally more detailed than Medicare's system, to better distinguish among patients with less and more complex conditions. Incentives to treat more cases are often counterbalanced by volume ceilings in European DRG systems. European payments are usually broader in scope than those in the United States, including physician salaries and readmissions. These European systems, discussed in more detail in the article, suggest potential innovations for reforming DRG-based hospital payment in the United States.

DOI: 10.1377/hlthaff.2012.01075  
HEALTH AFFAIRS 32,  
NO. 4 (2013): 703–723  
©2013 Project HOPE—  
The People's Health  
Foundation, Inc.

**Wilm Quentin** ([wilmquentin@tu-berlin.de](mailto:wilmquentin@tu-berlin.de)) is a senior research fellow in the Department of Health Care Management at the Berlin University of Technology and a research fellow of the European Observatory on Health Systems and Policies, in Germany.

**David Scheller-Kreinsen** is an economic adviser in the Hospital Division of the National Association of Statutory Funds, in Berlin, Germany.

**Miriam Blümel** is a research fellow in the Department of Health Care Management at the Berlin University of Technology.



ELSEVIER

Contents lists available at ScienceDirect

Health Policy

journal homepage: [www.elsevier.com/locate/healthpol](http://www.elsevier.com/locate/healthpol)

## Paying hospital specialists: Experiences and lessons from eight high-income countries<sup>a</sup>

Wilm Quentin<sup>a,\*,1</sup>, Alexander Geissler<sup>b</sup>, Friedrich Wittenbecher<sup>c</sup>, Geoff Ballinger<sup>d</sup>, Robert Berenson<sup>e</sup>, Karen Bloor<sup>f</sup>, Dana A. Forgione<sup>g</sup>, Peer Köpf<sup>h</sup>, Madelon Kroneman<sup>i</sup>, Lisbeth Serden<sup>j</sup>, Raúl Suarez<sup>k</sup>, Johan W. van Manen<sup>l</sup>, Reinhard Busse<sup>a,\*,1</sup>

<sup>a</sup> Department of Health Care Management, Technische Universität (TU) Berlin, Straße des 17. Juni 135, 10623, Berlin, Germany

<sup>b</sup> Department of Health Care Management, TU Berlin, Berlin, Germany

<sup>c</sup> Medical Department, Division of Hematology, Oncology and Tumor Immunology, Charité, Berlin, Germany

<sup>d</sup> Canadian Institute for Health Information, Canada

<sup>e</sup> Urban Institute, USA

<sup>f</sup> Department of Health Sciences, University of York, UK

<sup>g</sup> University of Texas at San Antonio, USA

<sup>h</sup> Deutsche Krankenhausgesellschaft, Berlin, Germany

<sup>i</sup> Netherlands Institute for Health Services Research (NIHES), The Netherlands

<sup>j</sup> Swedish National Board of Health and Welfare, Sweden

<sup>k</sup> Universitätsklinik Zürich, Switzerland

<sup>l</sup> Dutch Healthcare Authority, The Netherlands

<sup>m</sup> European Observatory on Health Systems and Policies, Belgium, Brussels

### ARTICLE INFO

#### Article history:

Received 3 July 2017

Received in revised form 9 February 2018

Accepted 8 March 2018

#### Keywords:

Health reform  
Hospitals  
Physician payment  
Comparative research

### ABSTRACT

Payment systems for specialists in hospitals can have far reaching consequences for the efficiency and quality of care. This article presents a comparative analysis of payment systems for specialists in hospitals of eight high-income countries (Canada, England, France, Germany, Sweden, Switzerland, the Netherlands, and the USA/Medicare system). A theoretical framework highlighting the incentives of different payment systems is used to identify potentially interesting reform approaches. In five countries, most specialists work as employees – but in Canada, the Netherlands and the USA, a majority of specialists are self-employed. The main findings of our review include: (1) many countries are increasingly shifting towards blended payment systems; (2) bundled payments introduced in the Netherlands and Switzerland as well as systematic bonus schemes for salaried employees (most countries) contribute to broadening the scope of payment; (3) payment adequacy is being improved through regular revisions of fee levels on the basis of more objective data sources (e.g. in the USA) and through individual pay



Thank you very much for  
your time and attention!

Slides available on:  
**[www.mig.tu-berlin.de](http://www.mig.tu-berlin.de)**

**PD. Dr. med Wilm Quentin, MSc HPPF**

Department of Health Care Management (MiG)

Berlin University of Technology

European Observatory on Health Systems and Policies

WHO Collaborating Centre for Health Systems, Research and Management



European  
**Observatory**  
on Health Systems and Policies

