Health care purchasing and payment systems in Germany

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European Observatory on Health Systems and Policies

30 November 2018
Universitat Pompeu Fabra | Barcelona
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Germany

Health system review

Reinhard Busse • Miriam Blümel

European Observatory on Health Systems and Policies

State of Health in the EU

Germany

Country Health Profile 2017

OECD

European Observatory on Health Systems and Policies
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

Germany has high numbers of hospital beds…
The health system triangle

Collector of resources

Steward/Regulator

Third-party Payer

Population

Providers
The German system at a glance

**Health Fund**
- "Risk-structure compensation"
- 110 sickness funds
- 41 private insurers

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

**Population**
- Universal coverage:
  - SHI: 88%
  - PHI: 11%

**Collector of resources**
- Uniform wage-related contribution
- + extra contribution set by sickness funds
- Risk-related premium
- Choice of fund/insurer

**Third-party payer**
- contracts, mostly collective
- PHI: no contracts

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

Valuation committee + 3 neutral members

Institute for the hospital payment system (InEK)

5 SHI, 2 hospitals, 2 physicians, 1 dentist

Federal Joint Committee + 3 neutral members

Institute for Quality and Efficiency in Health Care

Institute for Quality Assurance and Transparency in Health Care

Statutory health insurance
Purchasing and payment: inpatient care
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

Diagram:

1. **Tax payers**
   - Taxes
   - States
   - Infrastructure investments

2. **Patients**
   - Hospital services

3. **Hospitals**
   - Operating costs
   - Same payment system

4. **Contributions**
   - Sickness funds

5. **Premiums**
   - Private insurance
Infrastructure investments

Investments by state governments as % of total hospital expenditures
Operating costs

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

![Diagram: Casemix X Base rate + Supplementary fees + Surcharges = Hospital budget]

• 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

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>1) Phase of preparation</strong></td>
<td><strong>2) Budget-neutral phase</strong></td>
<td><strong>3) Phase of convergence to state-wide base rates</strong></td>
<td><strong>4) Current development and ongoing debates</strong></td>
</tr>
<tr>
<td>Historical Budget (2003)</td>
<td></td>
<td>Hospital specific base rate</td>
<td>• Impact of DRGs</td>
</tr>
<tr>
<td>Transformation</td>
<td></td>
<td>State-wide base rate</td>
<td>• Overcapacity of hospitals</td>
</tr>
<tr>
<td>DRG-Budget (2004)</td>
<td>State-wide base rate</td>
<td>Hospital specific base rate</td>
<td>• Managing hospital volumes</td>
</tr>
<tr>
<td>15 %</td>
<td></td>
<td>15 %</td>
<td>• Payment adjustments to ensure service availability</td>
</tr>
<tr>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>• Payment adjustments based on quality</td>
</tr>
<tr>
<td>20%</td>
<td>25%</td>
<td>25%</td>
<td>• Representative cost sample</td>
</tr>
<tr>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>• Exclusion of nursing costs from DRG-based payment</td>
</tr>
</tbody>
</table>
Tasks and stakeholders of G-DRGs

**Health Policy**
- Ministry of Health (federal, state)

**Administration**
- Self-Administration (DKG, GKV, PKV)
- Other Institutions (IQTiG, IQWiG)
- InEK (German DRG Institute)
- DIMDI (German Institute of Medical Information and Documentation)

**Consultation**
- Variety of Institutions (Professional medical associations, industry groups)

**Development**
- Dimdi (German Institute of Medical Information and Documentation)

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**G-DRG System**
- Goals and monitoring
- Forming a legal framework
- Contribution of expertise
- Technical management
1) Phase of preparation: From AR-DRGs to G-DRGS

- Case data
  - Implausibility of major diagnosis, medical procedures, demographic characteristics etc.
  - Transplantation, ventilation etc.
  - Error DRG
  - Major diagnosis
  - Pre-MDC

- MDC 1
- MDC 2
- MDC 3
- ...
- ...
- ...
- MDC 23

- Major diagnosis
  - + at least one surgical procedure
  - + no surgical procedure, but one other procedure being essential for the respective MDC
  - + no (essential) procedure for the respective MDC

- Surgical Partition
- Other Partition
- Medical Partition

- Basis DRGs
  (G-DRG Version 2010 : n=594)
  - n=294
  - Co-morbidity, medical procedures, age, clinical severity, complication, cause of hospital discharge
  - Split DRGs (n=906)
  - n=300
  - Significant differences in the resource consumption

- No significant differences in the resource consumption
  - Unsplit DRGs (n=294)
2) Budget neutral phase: Transfer to DRG budgets

<table>
<thead>
<tr>
<th>Hospital Budget 2002</th>
<th>Hospital Budget 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>100 Million Euros</strong></td>
<td><strong>100 Million Euros</strong></td>
</tr>
</tbody>
</table>

Reimbursement unit = per diem

Reimbursement unit = case (DRG)
3) Phase of convergence: Five year process

<table>
<thead>
<tr>
<th>Year</th>
<th>Reduction limit</th>
<th>(related to previous year's budget)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>1,5%</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2,5%</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>3%</td>
<td></td>
</tr>
</tbody>
</table>

- **Hospital-specific base rate**
  - **Losers**
    - 2004: +15% (of difference)
    - 2005: -15% (of difference)
    - 2006: -20% (of difference)
    - 2007: -20% (of difference)
    - 2008: -20% (of difference)
    - 2009: -25% (of difference)
  - **Winners**
    - 2004: +15%
    - 2005: +20%
    - 2006: +20%
    - 2007: +20%
    - 2008: +20%
    - 2009: +25%

- **Statewide base rate**
  - 2010: -20% (of difference)
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)

<table>
<thead>
<tr>
<th>Cost- Element Groups</th>
<th>Labour costs of the other medical staff</th>
<th>4b: Drug costs (individual costs/actual consumption)</th>
<th>5: costs of implants and grafts</th>
<th>6a: Material costs (without drugs, implants and grafts)</th>
<th>6b: Material costs (individual costs/actual consumption, without drugs, implants and grafts)</th>
<th>7: Medical infrastructure costs</th>
<th>8: Non-medical infrastructure costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Normal ward</td>
<td>654</td>
<td>1744</td>
<td>80</td>
<td>156</td>
<td>41</td>
<td>----</td>
<td>131</td>
</tr>
<tr>
<td>2: Intensive care unit</td>
<td>152</td>
<td>360</td>
<td>10</td>
<td>45</td>
<td>11</td>
<td>----</td>
<td>60</td>
</tr>
<tr>
<td>3: Dialysis unit</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>4: Operating room</td>
<td>623</td>
<td>----</td>
<td>401</td>
<td>23</td>
<td>12</td>
<td>1282</td>
<td>286</td>
</tr>
<tr>
<td>5: Anaesthesia</td>
<td>356</td>
<td>----</td>
<td>236</td>
<td>30</td>
<td>2</td>
<td>85</td>
<td>5</td>
</tr>
<tr>
<td>6: Maternity room</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>7: Cardiac diagnostics/ therapy</td>
<td>2</td>
<td>----</td>
<td>2</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>1</td>
</tr>
<tr>
<td>8: Endoscopic diagnostics/ therapy</td>
<td>3</td>
<td>----</td>
<td>3</td>
<td>----</td>
<td>1</td>
<td>----</td>
<td>2</td>
</tr>
<tr>
<td>9: Radiology</td>
<td>46</td>
<td>----</td>
<td>67</td>
<td>1</td>
<td>----</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>10: Laboratories</td>
<td>18</td>
<td>----</td>
<td>110</td>
<td>6</td>
<td>339</td>
<td>----</td>
<td>75</td>
</tr>
<tr>
<td>11: Other diagnostic and therapeutic areas</td>
<td>36</td>
<td>2</td>
<td>271</td>
<td>1</td>
<td>----</td>
<td>----</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>1890</td>
<td>2106</td>
<td>1180</td>
<td>261</td>
<td>424</td>
<td>1283</td>
<td>669</td>
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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

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<tbody>
<tr>
<td>DRGs total</td>
<td>664</td>
<td>824</td>
<td>878</td>
<td>954</td>
<td>1137</td>
<td>1200</td>
<td>1193</td>
<td>1196</td>
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<tr>
<td>Base-DRGs</td>
<td>411</td>
<td>471</td>
<td>614</td>
<td>578</td>
<td>604</td>
<td>609</td>
<td>595</td>
<td>588</td>
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<tr>
<td>Unsplit</td>
<td>236</td>
<td>454</td>
<td>353</td>
<td>318</td>
<td>293</td>
<td>290</td>
<td>287</td>
<td></td>
</tr>
<tr>
<td>Severity levels</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Inpatient DRGs total</td>
<td>664</td>
<td>824</td>
<td>878</td>
<td>952</td>
<td>1132</td>
<td>1195</td>
<td>1189</td>
<td>1191</td>
</tr>
<tr>
<td>- valued</td>
<td>642</td>
<td>806</td>
<td>845</td>
<td>912</td>
<td>1089</td>
<td>1154</td>
<td>1149</td>
<td>1148</td>
</tr>
<tr>
<td>- unvaluated</td>
<td>22</td>
<td>18</td>
<td>33</td>
<td>40</td>
<td>43</td>
<td>41</td>
<td>40</td>
<td>43</td>
</tr>
<tr>
<td>Day care DRGs total</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>- valued</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>- unvaluated</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>R² all cases</td>
<td>0.4556</td>
<td>0.5577</td>
<td>0.6388</td>
<td>0.6805</td>
<td>0.7209</td>
<td>0.7443</td>
<td>0.754</td>
<td>0.7671</td>
</tr>
<tr>
<td>R² inlier</td>
<td>0.6211</td>
<td>0.7022</td>
<td>0.7796</td>
<td>0.7884</td>
<td>0.8166</td>
<td>0.843</td>
<td>0.844</td>
<td>0.8533</td>
</tr>
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... and LOS adjustments and supplementary fees individualize payment to avoid skimping/creaming and to incentivize innovations

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</thead>
<tbody>
<tr>
<td>Range of cost weights: min.-max. (rounded)</td>
<td>0.12-29.71</td>
<td>0.11-48.27</td>
<td>0.12-57.63</td>
<td>0.12-65.70</td>
<td>0.11-68.97</td>
<td>0.13-73.76</td>
<td>0.14-65.34</td>
<td>0.14-64.14</td>
</tr>
<tr>
<td>Supplementary fees</td>
<td>0</td>
<td>26</td>
<td>71</td>
<td>83</td>
<td>115</td>
<td>143</td>
<td>150</td>
<td>159</td>
</tr>
<tr>
<td>- valuated</td>
<td>0</td>
<td>1</td>
<td>35</td>
<td>41</td>
<td>64</td>
<td>81</td>
<td>82</td>
<td>95</td>
</tr>
<tr>
<td>- unvaluated</td>
<td>0</td>
<td>25</td>
<td>36</td>
<td>42</td>
<td>51</td>
<td>62</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>

Relative cost weight + LOS adjustment \( \times \) Base rate \( + \) Supplementary fees = G-DRG payment

For services not (yet) included in DRG cost weights
Total hospital payment depends on the base-rate
Purchasing and payment: ambulatory care
Context is important for physician payment in ambulatory care

<table>
<thead>
<tr>
<th>Primary care</th>
<th>Ambulatory secondary care</th>
<th>Inpatient care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
<td><strong>(Primarily) Office-based specialists</strong></td>
<td><strong>Hospitals</strong></td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td><strong>Office-based GPs</strong></td>
<td></td>
</tr>
<tr>
<td><strong>England</strong></td>
<td><strong>Outpatient departments: hospital-based specialists</strong></td>
<td></td>
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<tr>
<td><strong>Netherlands</strong></td>
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</tbody>
</table>

No gate-keeping, free choice
Different payment mechanisms for patients with SHI and those with Private Health Insurance

Source of revenue by specialty, 2015

- SHI
- PHI
- Accident
- Other

Radiology: 1,132,910
Internal medicine, other: 796,756
Multiple specialties: 535,612
Pneumonology: 520,138
Gastroenterology: 518,777
Internal medicine, multiple: 486,392
Ophthalmology: 485,279
Dermatology: 455,874
Nuclear medicine: 446,176
Orthopedics: 432,926
Surgery: 419,828
Cardiology: 415,800
Urology: 378,809
Pediatric psychiatry: 341,998
ORL: 333,904
Pediatrics: 326,680
OBGYN: 321,250
Neurology and psychiatry: 319,147
Anaesthesia: 317,593
Total: 312,290
Family medicine: 304,155
Neurology: 296,749
Rehab: 239,683
Psychiatry: 194,642
Psychotherapy: 102,943
Psychotherapy and psychosomatics: 102,797

- Internal medicine, other
- Multiple specialties
- Pneumonology
- Gastroenterology
- Internal medicine, multiple
- Ophthalmology
- Dermatology
- Nuclear medicine
- Orthopedics
- Surgery
- Cardiology
- Urology
- Pediatric psychiatry
- ORL
- Pediatrics
- OBGYN
- Neurology and psychiatry
- Anaesthesia
- Total
- Family medicine
- Neurology
- Rehab
- Psychiatry
- Psychotherapy
- Psychotherapy and psychosomatics
Tasks and stakeholders of the ambulatory physician payment system

- **Health Policy**
  - Ministry of Health (federal, state)

- **Administration**
  - Self-Administration (GBA, KBV, GKV)
  - Other Institutions (IQWiG)

- **Consultation**
  - Valuation committee
  - Institute of the valuation committee

- **Development**

- **EBM**
  - Goals and monitoring
  - Contribution of expertise
  - Technical management
  - Forming a legal framework

- **Variety of Institutions** (Professional medical associations, industry groups)
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

Sickness Fund

Negotiated budget
Since 2009: morbidity-based

Regional Association of SHI physicians

Distribution (contact capitation / fee-for-service)
Since 2009: fee catalogue in €

Family physicians

Sickness Fund

Sickness Fund

Sickness Fund

Specialists
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)

3. A monetary conversion factor (Orientierungswert)
   – Regional negotiations determine actual monetary value
Ambulatory SHI physician payment since 2009

- Deduction of provisions and deductions in advance
- Additon/deduction of expected balances from financial compensations between regional physicians’ associations

Morbidity-based overall remuneration

Volume for family physicians

Volume for specialists

Addition/deduction of expected balances from financial compensations between regional physicians’ associations

Volume according to speciality

Practice-based volume of standard services (RLV)

Qualification-based additional volumes (QZV)

Calculation of physician-/practice-related RLV and QZV

+ extrabudgetary payments

30-40% of total budget

Unlimited FFS payment

RLV = budget for essential services

QZV = qualification dependent additional services

Ambulatory surgery, vaccinations, screening, innovations

60-70% of total budget
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)

but increasing case numbers → increasing expenditure
stable expenditure/case = high technical efficiency

Source: Busse et al., Lancet 2017
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)
Ongoing reform of EBM

- 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
Challenges and debates in ambulatory care

• 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
Conclusions

• 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
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 (DRG) 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 constraints 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 payments in the United States.

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Thank you very much for your time and attention!

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