Hospital Financing in Germany: The G-DRG System

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&
European Observatory on Health Systems and Policies
Hospital Financing in Germany: The G-DRG System

1. Diagnosis Related Groups (DRGs): Introduction
   - Options for hospital reimbursement
   - DRGs: Patient classification + hospital payment

2. DRGs in Germany
   - Three phases of introducing DRGs
   - Current developments and options for the future

3. EuroDRG
1. Diagnosis Related Groups (DRGs): Introduction
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3. EuroDRG
## Options for hospital reimbursement (I)

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<th>Strengths</th>
<th>Weaknesses</th>
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<tr>
<td>Global budgets</td>
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- **Undertreatment**
- **Inappropriate treatment**
## Options for hospital reimbursement (II)

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<tr>
<td>Fee-for-service</td>
<td>- incentives to increase provision of services</td>
<td>- incentives for over-treatment</td>
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<tr>
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<td>- incentives to provide all (necessary) care for all patients</td>
<td>- no incentives for efficiency</td>
</tr>
<tr>
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<td>- allows incentivising specific services</td>
<td>- cost inflation</td>
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<td>- administratively complex</td>
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## Options for hospital reimbursement (III)

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- administratively simple  
- planning security for providers | - no incentives for performance / productivity  
- no incentives for efficiency  
- incentives to avoid sicker patients |
| Per diems      | - administratively simple  
- somewhat related to resource consumption of patients | - incentives to increase length of stay  
- usually not adapted for performance of providers  
- incentives to avoid sicker patients |
| DRGs           | - reimbursement is related to performance  
- incentives to increase efficiency | - administratively complex  
- incentives to avoid sicker patients  
- undertreatment of patients possible  
- up/wrong-coding, gaming  
- tendency to increase admissions |
| Fee-for-service| - incentives to increase provision of services  
- incentives to provide all (necessary) care for all patients  
- allows incentivising specific services | - incentives for over-treatment  
- no incentives for efficiency  
- cost inflation  
- administratively complex |

**Undertreatment**

**Inappropriate treatment**

**Overtreatment**
DRGs: 1st step = patient classification / grouping

patient variables

main diagnosis, gender, age, other diagnoses, severity

medical and management decision variables

mix and intensity of procedures, technologies and human resource use

Group of patients with homogenous resource consumption
= DRG
DRGs 2nd step = Price setting (I)

patient variables

- gender, age, main diagnosis, other diagnoses, severity

medical and management decision variables

- mix and intensity of procedures, technologies and human resource use

\[
\text{DRG reimbursement} = \text{cost weight} \times \text{base rate}
\]
DRGs 2nd step = Price setting (II)

Determinants of hospital costs

- **Patient variables**
  - gender, age, main diagnosis, other diagnoses, severity

- **Medical and management decision variables**
  - mix and intensity of procedures, technologies and human resource use

- **Structural variables on hospital/regional/national level**
  - e.g. size, teaching status; urbanity; wage level

DRG reimbursement = cost weight × base rate + adjustment factors

Date: 25 May 2010

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2. DRGs in Germany
   – Three phases of introducing DRGs
   – Current developments and options for the future

3. EuroDRG
Background: German hospital sector

- Key figures (2008):
  - 2100 Hospitals (1780 reimbursed through DRGs)
  - 17 mio. inpatient cases
  - 57 bill. € financing sum

- Dualistic way of hospital financing
  - Sickness funds pay running costs
  - States pay investment costs
# DRGs in Germany

## 1) Phase of preparation

**Historical Budget (2003)**

**Transformation**

**DRG-Budget (2004)**

## 2) Budget-neutral phase

## 3) Phase of convergence to state-wide base rates

- **Hospital specific base rate**
  - 15%
  - 20%
  - 20%
  - 20%
  - 25%

- **Statewide base rate**
  - 20%
  - 25%

## 4) Current developments and options for the future

- Nationwide base rate
- Dual Financing or Monistic
- Introduction of DRG-like
- Reimbursement for psychiatric hospitals
- Selective or uniform negotiations
- Quality Assurance (adjustments)
1) Phase of preparation: Responsibilities

Health Policy
Health Ministry (federal, state)

Variety of Institutions
(Professional medical associations, industry groups)

Consultation

Goals and Monitoring

Forming the Legal Framework

G-DRG System

Technical Management

InEK (German DRG Institute)

DIMDI (German Institute of Medical Information and Documentation)

Other Institutions (HTA, quality)

Self-Administration (DKG, GKV, PKV)

Administration

Development

25 May 2010 Hospital Financing in Germany: The G-DRG System
1) Phase of preparation: How to construct a system?

- **Patient classification system**
  - Diagnoses
  - Procedures
  - Severity

- **Data collection**
  - Clinical data
  - Cost data
  - Sample size

- **Price setting**
  - Average prices
  - Cost weights

- **Reimbursement rate**
  - Outliers
  - High cost cases
1) Phase of preparation: Patient Classification

- Patient classification system
  - Diagnoses
  - Procedures
  - Severity

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
No significant differences in the resource consumption

split DRGs (n= 906)

Significant differences in the resource consumption

n=300
Co-morbidity, medical procedures, age, clinical severity, complication, cause of hospital discharge

n=294
unsplit DRGs
1) Phase of preparation: Data collection

**Data collection**
- Clinical data
- Cost data
- Sample size

**DIMDI**
- Development and update of classification base (ICD - 10 GM and OPS codes)

**InEK**
- Development of case fee catalogue annually
- Checking data content

**Data Centre**
- Collecting datasets
- Checking case and cost data technically
- Anonymising data

**Sickness funds**
- Checking data via their medical review board
- Paying hospital

**Hospitals**
- Case data for reimbursement (§ 301 SGB V)
- Case-related performance and hospital-specific structural data from every hospital (§21 KHEntgG) until March 31

**Federal Statistical Office**
- Publication of data

**Checked and anonymised data**

**25 May 2010**

Hospital Financing in Germany: The G-DRG System
1) Phase of preparation: Price setting mechanism

- Calculation of cost weights: based on average costs of cases
- Data sample:

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2005</th>
<th>2007</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals participating in cost data collection</td>
<td>125</td>
<td>148</td>
<td>263</td>
<td>251</td>
<td>253</td>
</tr>
<tr>
<td>- excluded for data quality</td>
<td>9</td>
<td>0</td>
<td>38</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>- actual</td>
<td>116</td>
<td>148</td>
<td>225</td>
<td>218</td>
<td>225</td>
</tr>
<tr>
<td>- included university hospitals</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>- number of cases available for calculation</td>
<td>633,577</td>
<td>2,909,784</td>
<td>4,239,365</td>
<td>4,377,021</td>
<td>4,539,763</td>
</tr>
<tr>
<td>- number of cases used for calculation after data checks</td>
<td>494,325</td>
<td>2,283,874</td>
<td>2,863,115</td>
<td>3,075,378</td>
<td>3,257,497</td>
</tr>
</tbody>
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→ Cost weight of each DRG = Average costs of DRG inliers / Reference Value
1) Phase of preparation: Reimbursement

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Reimbursement rate</th>
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<tr>
<td>Outliers</td>
<td>High cost cases</td>
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**Graph: Reimbursement**

- **Revenues**
- **LOS**
  - **Deductions (per day)**
  - **Surcharges (per day)**
- **Thresholds**
  - **Lower LOS threshold**
  - **Upper LOS threshold**

Legend:
- Outliers
- High cost cases
# DRGs in Germany

## 1) Phase of preparation

### Historical Budget (2003)

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- DRG-Budget (2004)

## 2) Budget-neutral phase

### Hospital specific base rate

- Nationwide base rate
- Dual Financing or Monistic
- Introduction of DRG-like

## 3) Phase of convergence to state-wide base rates

### Nationwide base rate

- Selective or uniform negotiations
- Quality Assurance (adjustments)

## 4) Current developments and options for the future

- Nationwide base rate
- Dual Financing or Monistic
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25 May 2010

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2) Budget neutral phase: Transfer to DRG budgets

Hospital Budget 2002

Reimbursement unit = per diem

100 Million Euros

Hospital Budget 2004

Reimbursement unit = case (DRG)

100 Million Euros
2) Budget neutral phase: Hospital-specific base rate

Relative cost weight
- Patient characteristics
  - Gender, Age, Diagnoses, Severity
- Treatment options
  - Procedures, Technologies, Intensity

Base rate

Hospital-specific

G-DRG reimbursement
### DRGs in Germany

**1) Phase of preparation**
- Historical Budget (2003)
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- DRG-Budget (2004)

**2) Budget-neutral phase**

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- Nationwide base rate
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3) Phase of convergence: Adaptation of base rate

Relative cost weight

- Patient characteristics
  - Gender, Age, Diagnoses, Severity
- Treatment options
  - Procedures, Technologies, Intensity

Base rate

Hospital-specific $\rightarrow$ Uniform statewide

G-DRG reimbursement
3) Phase of convergence: Five year process

- **Hospital-specific base rate**
  - **Losers**
    - 2004: -15% (of difference)
    - 2005: -20% (of difference)
    - 2006: -20% (of difference)
    - 2007: -20% (of difference)
    - 2008: -25% (of difference)
  
  - **Statewide base rate**
    - 2004: +15%
    - 2005: +20%
    - 2006: +20%
    - 2007: +20%
    - 2008: +25%
    - 2009: +25%
    - 2010: +25%

- **Winners**
  
- **Reduction limit** (related to previous year's budget)
  
- 2005: 1%
- 2006: 1.5%
- 2007: 2%
- 2008: 2.5%
- 2009: 3%
### 3) Phase of convergence: Changing cost weights

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<th>Treatment options</th>
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<tr>
<td>Gender, Age, Diagnoses, Severity</td>
<td>Procedures, Technologies, Intensity</td>
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<tr>
<td>DRGs total</td>
<td>664</td>
<td>878</td>
<td>1082</td>
<td>1192</td>
<td>1200</td>
</tr>
<tr>
<td>Inpatient DRGs total</td>
<td>664</td>
<td>878</td>
<td>1077</td>
<td>1187</td>
<td>1195</td>
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<tr>
<td>Range of cost weights: min.-max.(rounded)</td>
<td>0.12 - 29.71</td>
<td>0.12 - 57.63</td>
<td>0.11 - 64.90</td>
<td>0.12 - 78.47</td>
<td>0.13 - 73.76</td>
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<tr>
<td>Day care DRGs total</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Supplementary fees</td>
<td>0</td>
<td>71</td>
<td>105</td>
<td>127</td>
<td>143</td>
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### DRGs in Germany

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#### 3) Phase of convergence to state-wide base rates
- **Hospital specific base rate**
  - 15% 20% 20% 20% 25%
  - Statewide base rate
    - 20% 25%
  - Hospital specific base rate

#### 4) Current developments and options for the future
- Nationwide base rate
- Dual Financing or Monistic
- Introduction of DRG-like reimbursement for psychiatric hospitals
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DRGs in Germany: Main facts

1. Central role of self-governing bodies

2. Data driven system with annual updates

3. Detailed analysis of hospital costs

4. Ten-year process of introduction
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   - Options for hospital reimbursement
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2. DRGs in Germany
   - Three phases of introducing DRGs
   - Current developments and options for the future

3. EuroDRG
EuroDRG project

• EuroDRG: project partner institutions from 13 countries

• Book on DRGs in Europe

• Mapping of grouping algorithms

• Analyses of determinants of hospital costs

http://www.eurodrg.eu/
Thank you very much!