

Strengths and Weaknesses of Financing Hospitals in Germany

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Abstract: *In this study strengths and weaknesses of financing hospitals in the German health care sector are examined. In the first part of the paper key data of hospitals, subsidies granted by federal states to hospitals, allocation of expenses in the statutory and private health sector are examined. Moreover, in the same part precautions taken in the German health care industry are analyzed. In the second part of the study compensation system, in particular Diagnosis Related Groups, as a financial resource for the activities performed in hospitals are investigated. For comparison the system before 2003 is also considered. In the third part critical view of the dual system in Germany is discussed. Change in financing of hospitals from 2003 shows improvement in financial situation of these institutions in Germany. However, the new implemented dual system reveals deficits in investment expenditures supported by federal states. The monistic model proposed by Rürup for a financing system from a single resource may provide a better financial base for well-equipped hospitals to meet the challenges among the competitive German hospitals.*

Keywords: Financing of hospitals, dual financing principle, diagnosis related groups, investment shortfalls, monistic financing principle.

JEL Classification: I11, I13, G22, G28

1. Introduction

In Germany, hospitals provide crucial contribution to high-quality health care services through their employees. These institutions not only meet fundamentally significant task for whole population, but also they are important for economic sector with high employment, innovation, and growth potential.

German hospital sector represents an economic power of 86.8 billion Euros in 2012 which is the biggest single item within the health care sector. Moreover, this service sector stimulates the economy particularly in economic recession time. So, more than 1.146 mio. people find employment opportunities in this sector where 5.2 mio. is the total number of workers in the health care sector. Financing of investments in health care industry plays major role for sustainable economic activity and for entrepreneurial behavior of hospitals. This should also be viewed in the context of increasing number of private hospitals in the German health care industry (IHK Essen, 2014; Statistisches Bundesamt, 2013 and Statistisches Bundesamt, 2014).

There are more than 2,000 hospitals in Germany, but only 32 university clinics. Nevertheless, these university hospitals provide services to around 10% of stationary treated

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patients. The role of university hospitals in stationary patient care should not be underestimated. That's why; financial situation of university clinics needs to be examined carefully. Modern medicine, however, can not be thought without continuing investment. Doctors can no longer pursue their jobs properly, if investments are absent and if they turn out to be too low. In this context the university hospital of Freiburg argued that; 12 of 32 German university hospitals expected a negative annual result of over one million Euros in 2013. Besides, 11 of 32 university clinics believed that they could achieve a balanced year-end result for the entire 2013. Only 19% of all university hospitals assumed positive annual earnings of over one million Euros. Furthermore, the German journal *Ärzteblatt* accepts the difficult financial situation of university hospitals as a consequence of applied dual system in Germany. Investment subsidies provided by federal states are not sufficient for years. Insufficient financial resources impact hospitals negatively by expanding the infrastructure or such a situation forces hospitals to cover these costs from their own funds at least in part. In addition, further progress can not be thought in the lack of financial means. However; personnel costs, expensive pharmaceutical, and energy costs permanently increase more than the payments made by health insurance funds for provided services. Also, Diagnosis Related Groups (DRG) based lump sum remuneration by health insurance funds does not adequately meet central additional tasks of university hospitals. Consequently, hospitals pay less and less for staff despite increasing number of patients. Hence, this DRG system does not include relevant differentiation (Universitätsklinikum Freiburg, 2013 and *Ärzteblatt*, 2013).

Due to high-quality health care in Germany, functioning of German hospitals' financing is interesting for hospital owners, hospital managers and as well executives in the Ministry of Health in Turkey. This study aims examining strengths and weaknesses of hospitals in Germany from a financial point of view. For this reason in the first part of the paper key data of hospitals, financial support granted by federal states given to hospitals, total expenditure in German hospitals, and prevention and rehabilitation facilities in the German health sector are illustrated in order to understand the situation of hospitals in Germany. Second part of the study aims to clarify the compensation system used in hospitals since 2003 and also legal basis and functioning of the dual financing system implemented in 2003 which is performance-related lump-sum remuneration system based on DRG's. Moreover, in the same part compensation of psychiatric and psychosomatic care in hospitals is explained by giving an example for calculation and importance of the Federal Joint Committee which has a vital role in quality assurance in the health care is shown. The third part of the study deals with a critical view of the dual financing. Also, monistic financing system proposed by Rürup is critically examined.

2. German Hospital Sector

2.1. Key Data of Hospitals

In many regions of Germany, hospitals are the largest employer (Bundesministerium für Gesundheit, 2013a). But the number of hospitals goes down from 2,242 in the year 2000 to 2,017 in 2012. Main reason for this is increasing financial difficulties of hospitals. That's why; the pressure for rationalization and increase in efficiency grows steadily (Statista, 2014 and IHK Essen, 2014). Furthermore, this situation is a result of cost pressure in combination with shorter duration of stay in hospitals which has put many municipalities under financial stress to make better use of their capacity or to merge into bigger hospitals (Die Welt, 2010). As a result, economical necessities move to the forefront.

Table 1 shows important key data of hospitals in Germany. The indicators are number of beds, capacity utilization, occupancy days, and average time spent in hospital. From the capacity utilization it can be read that nearly 80% of total bed capacity in hospitals is used. Furthermore, in 2011 there were 2,045 hospitals (Deutsche Krankenhaus Gesellschaft, 2014: 2) and the occupancy days were 141.7 mio. days in that year. As a result, the occupancy was 186 days per hospital. In addition, 18.3 mio. in 2011 is the number of inpatient cases which has increased continuously from 16.8 mio. in 2006. Table 1 also depicts the average time stayed in hospital as almost 8 days in 2011.

Hospital owners in Germany are primarily public hospitals and charity based non-profit institutions. There is also a significant number of private hospital operators. For example, there were 30.4% public, 36.5% charity based, and 33.2% private hospitals in 2011 (Deutsche Krankenhaus Gesellschaft, 2013: 5).

Financing of hospitals in Germany is based on a dual financing principle. Costs arising from the ongoing operational expenses (i.e., personnel and material costs) are only included within the compensation system (Entgeltssystem) which are covered by health insurance funds. But, the investment costs are supported by public funds of the federal state in Germany (e.g., North Rhine-Westphalia or Bavaria) in which health care organization is located. Since the hospital financing act was accepted in 1972, hospitals in hospital plan of the particular federal state have the legal right to state support for their investments. In other words, these funds are financed from tax revenues (Bundesministerium für Gesundheit, 2014).

Table 1. Key Data of Hospitals

	Hospitals (number)	Beds (in 1,000)	Capacity utilization (in %)	Occupancy days (in Mio.)	Number of inpatient cases (in Mio.)	Length of stay (in days)
2006	2,104	510.8	76.3	142.3	16.8	8.5
2007	2,087	503.4	77.4	142.9	17.2	8.3
2008	2,083	503.4	77.4	142.5	17.5	8.1
2009	2,084	503.3	77.5	142.4	17.8	8.0
2010	2,064	502.7	77.4	141.9	18.0	7.9
2011	2,045	502.0	77.3	141.7	18.3	7.7

Source: Deutsche Krankenhaus Gesellschaft, 2014: 2-3

2.2. Subsidies Granted by Federal States

Table 2 displays the amount of money given by federal states to hospitals. Thereby, subsidies reach more than 2.6 billion Euros in whole Germany where the federal state North Rhine-Westphalia takes the biggest slice of the national cake with 18.64% followed by Bavaria with 16.88%, and on third rank Baden-Württemberg with 14.35% of all subsidies.

Federal states have the responsibility to guarantee needs-oriented and comprehensive health coverage of the population with efficient and economically independent hospitals. This goal can be achieved with federal hospital plan. In this hospital plan, federal states determine how many hospitals and which hospitals should participate at medical care of statutory insured people. These hospitals have to treat insured people, and on the other hand health insurance funds must pay these selected hospitals for inpatient services. Consequently, these hospitals receive public grants from the federal state (Wirtschaftslexikon Gabler, 2014; Albrecht and Zich, 2008 and IHK Essen, 2014).

Investment shortfalls in German clinics have reached 50 billion Euros. Investments not realized for modern equipment and medical machines have far-reaching impact on patients and employees according to a study in which 100 decision-makers in clinics were interviewed. Consequently, hospitals assumed stronger burden to employees and longer treatment duration of patients. According to a survey performed by the Medical Technology Association, cost pressure in the sector is expected to continue with increase. Around 59% of hospital executives do not believe improvement in the financial situation or reduction in investment shortfalls of 50 billion Euros. Only half of this of money is necessary for the new acquisition of required devices. Only 11% of the survey participants assume change of the trend. The participants of the survey expect that the greatest backlog demand occurs for acquiring new equipment in surgery, internal medicine, and radiology areas where expensive and new-technology machines play crucial role for patient treatment. About 65% of hospitals are not able to offer their patients the latest treatment techniques. This has automatically caused longer duration of therapy according to the Manager of the Association Sven Behrens (Die Welt, 2010).

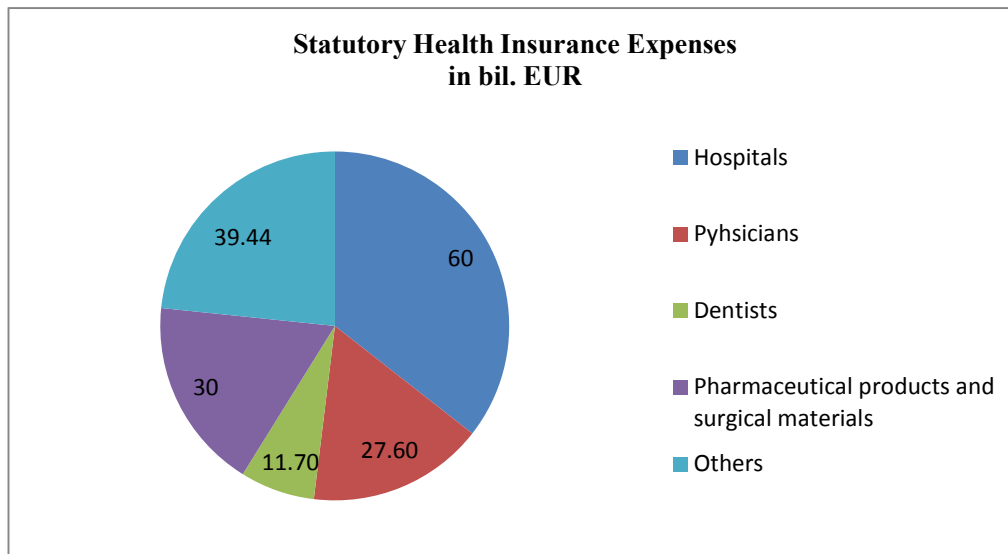
Table 2. Subsidies Granted by Federal States in 2011

Federal States in Germany	Subsidies granted by states in 2011 in Mio. Euro	Proportion of total support in %
Baden-Württemberg	382.5	14.35
Bavaria	450.0	16.88
Berlin	83.4	3.13
Brandenburg	98.4	3.69
Bremen	30.2	1.13
Hamburg	117.4	4.4
Hessen	224.5	8.42
Mecklenburg-Western Pomerania	69.1	2.59
Lower Saxony	238.7	8.96
North Rhine-Westphalia	496.8	18.64
Rhineland-Palatinate	116.8	4.38
Saarland	38.7	1.45
Saxony	97.0	3.64
Saxony-Anhalt	67.0	2.51
Schleswig-Holstein	84.7	3.18
Thuringia	70.0	2.63
Total	2,665.2	100

Source: Deutsche Krankenhaus Gesellschaft, 2013: 12

2.3. Allocation of the Expenses in the German Health Sector

Total expenditure of the statutory health insurance has reached 168.74 billion Euros in 2011. Only some service fields are of importance for the examination of the study (GKV-Spitzenverband, 2014). Figure 1 indicates the allocation of special service fields' expenditures in the German statutory health sector in 2011, from which it becomes clear that hospitals make up the biggest part of all expenses. Second biggest share is possessed by pharmaceutical products and surgical materials and followed by costs for physicians. Expenses allocated in the private health sector shows another structure where the leading position is occupied by hospitals amounting to 6.7 billion Euros. But, the second rank is owned by physicians with 5.6 billion Euros followed by dentists with 3.4 billion Euros and pharmaceutical products and surgical materials with the lowest priority making up 2.4 billion Euros among total costs.

Figure 1. Distribution of Statutory Health Insurance Expenses in 2011

Source: Deutsche Krankenhaus Gesellschaft, 2014: 10

2.4. Standard Precautions in the Health Sector

Table 3 demonstrates the facilities serving as prevention and rehabilitation in the German health sector. The number of facilities highlights the importance given to preventive measures taken by statutory health industry. Bed occupancy rate presents the acceptance of applied techniques by patients to assure and to improve health condition. Nearly 80% of the bed capacity is used for these intensions. At the same time, indicators such as care-days, number of cases, and length of stay support the tendency for more and more recognition by people.

Table 3. Prevention- and Rehabilitation Facilities

	Facilities	Beds (in 1000)	Bed occupancy rate (in %)	Care-days (in Mio.)	Number of cases (in 1,000)	Length of stay (days)
2006	1,255	172.7	74.6	47.0	1,836.7	25.6
2007	1,239	170.8	79.4	49.5	1,942.6	25.5
2008	1,239	171.1	81.3	50.9	2,009.5	25.3
2009	1,240	171.5	81.7	51.1	2,005.5	25.5
2010	1,237	171.7	80.1	50.2	1,974.7	25.4
2011	1,233	170.5	78.7	49.0	1,926.1	25.4

Source: Deutsche Krankenhaus Gesellschaft, 2013: 16

3. Compensation System of Hospitals

3.1. Existing Hospital Compensation System until 2003

Until 2003, the payment system for hospital services were realized by hospital-individual per diem charge (Pflugesatz) which were remunerated for each day spent in hospital. The day related per diem charge was independently determined according to the amount of actual treatment cost for each patient. This implies that; a slightly ill patient as well as a seriously sick patient treated in the same department of the hospital was equally

charged. As a result, the compensation was not performance-focused or service-related. After implementing the service-related lump-sum remuneration system starting from 2003, classification in the case-payment (Fallpauschale) is processed using IT-supported systems and it is especially determined by the type of sickness (diagnosis), the severity of the disease, and provided operations and procedures (Bundesministerium für Gesundheit, 2014).

3.2 Legal Basis of the New Hospital Financing Act in Germany

Ambulatory and stationary services are remunerated by DRG-system according to § 17b of the Hospital Financing Act (Krankenhausfinanzierungsgesetz – KHG). Remuneration details of the DRG-hospitals are regulated by the KHG, Hospital Remuneration Act as well as fixed sum per case agreement of self-government partners. These self-administration partners at federal level are charged with the task of implementing and developing the compensation system. These self-government partners are German Hospital Association (Deutsche Krankenhausgesellschaft), Central Federal Association of Statutory Health Insurance Funds (Spitzenverband Bund der Gesetzlichen Krankenversicherung), and Association of Private Health Insurance Funds (Verband der privaten Krankenversicherung). Inclusion of the Association of Private Health Funds in the system means that compensation for general hospital services is equal for all patients and also for privately insured people other than the field of out-patient medical care (Bundesministerium für Gesundheit, 2014).

Investment financing is regulated in the 1th Clause of § 6 of Hospital Financing Act as it is realized for the hospital planning at the federal level. Moreover, each federal state must establish an investment plan. These investment subsidies are divided into two areas, one is called as individual support and the other is flat rate funding. According to the 1th and 2nd Clauses of § 9 of Hospital Financing Act, federal states finance occurring investment costs on application of hospitals consisting of (Deutsche Krankenhaus Gesellschaft, 2014: 2-4),

- payments for hospitals' construction including initial payment for necessary assets of hospital operating,
- payments for reacquisition of assets with an average operating life of more than three years.

Furthermore, federal states approve application of subsidies to hospitals. Some of the important supports are provided:

- for the use of fixed assets, for start-up costs, conversion costs of in-house changes as well as acquisition, opening up, rent, and leasing of estate,
- transition of hospitals and hospital departments to nursing facilities or to organizationally and economically hospital independent separate functioning nursing departments

Further details of individual support are regulated by § 11 of Hospital Financing Act in respective federal state hospital acts (Deutsche Krankenhaus Gesellschaft, 2014: 2-4). There was a negative development in hospital financing funding from 0.24% in 1991 down to 0.10% as a percentage of GDP in 2012 and 2013 despite increasing hospital expenses as a share of GDP (Deutsche Krankenhaus Gesellschaft, 2014: 60). Furthermore, by comparing the hospital investment ratio of 3.5% with 17.6% investment ratio of the national economy, a big difference is recognized (Deutsche Krankenhaus Gesellschaft, 2014: 63).

3.3. New Financing Method - Diagnosis Related Groups

Since 2003, legislator has decided to substitute the existing compensation system with a continuous, performance-related lump-sum remuneration system based on DRG's. Starting point of the newly introduced compensation system in Germany is the Australian DRG-system. The initial model of all DRG systems is the for medicare patients implemented DRG system with more than 495 groups of cases by U.S. Health Care Financing Administration (HCFA-DRG) in 1983. A simple one-to-one absorption according to the opinion of the Federal Ministry of Health does not come into question because the cost delimitations are differently handled in other health systems. In American DRGs costs for doctor care are not included, but investment costs are financed by public funds of federal state budgets in Germany. There are also other questions to be clarified such as the different wage level, salary, and qualification structures of hospital employees in various countries. In addition, differences in personnel resources should also be handled (Simon, 2000: 11-12).

Diagnosis Related Groups represents the prerequisite for a service-oriented hospital reimbursement system. Introduction of diagnosis related groups of cases where hospitals are paid fixed amounts of money for particular treatment cases regardless of expenditures incurred in individual case (Versicherungsmagazin, 2014). According the new system, a patient with a mild disease pays less than a person with a more severe and costly illness. Using valuation relations expression of different treatment expenditures is possible. So, the cost weights reflect differences in the treatment expenses of each group. A per case flat rate is a lump sum refunding all physician services of a concluded treatment case. That means, with a flat rate reimbursement the payment of a defined sickness and its treatment in a given time period of stay in hospital is calculated. Thereby, same flat rate compensation is paid for the time defined for a particular treatment case in hospital independent from concrete period of time spent in hospital. In general, price for per case flat rate is the result of multiplying cost weight in other word valuation relation of the particular DRG with the federal state base rate (Bundesministerium für Gesundheit, 2014).

Table 4 displays per case flat rate of federal states in 2014 which are used to calculate the price for per case flat rate. Moreover, the nation-wide valid value in Germany is given for comparison.

Table 4. Valid Federal Per Case Flat Rate in Federal States in Germany in 2014

Federal State	Federal State Flat Rate Per Case in 2014	Per Case Flat Rate in Germany
Bavaria	3,188.00	3,156.82
Berlin	3,117.36	
Rhineland-Palatinate	3,325.00	
Bremen	3,185.00	
North Rhine-Westphalia	3,117.36	

Source: AOK, 2014

In Table 5 examples for DRG's based per case flat rate system are given in which valuation ratios of the responsible department of DRG's are used to determine the price for DRG's stationary treatment.

Table 5. Some Examples for DRG's Based Per Case Flat Rates System

Diagnosis Related Groups name	Valuation ratio of the responsible department	Average hospital stay	Maximum length of hospital stay / Valuation ratio per day	Minimum length of hospital stay / Valuation ratio per day	External relocation discount per day (valuation ratio)
Liver transplantation with artificial respiration > 179 hours or combined small intestine transplantation	34.449	52.7	71 / 0.543	17 / 1.588	-
Bone marrow transplantation / stem cell transfusion, autogenous except for multiple myeloma, age < 16 years	12.918	30.2	44 / 0.497	3 / 0.898	-
Kidney transplantation without postoperative failure of the kidney transplants, age > 15 or incompatible transplantation	6.010	17.1	28 / 0.281	5 / 0.767	-
Complex interventions in glaucoma	0.872	5.4	12 / 0.068	1 / 0.257	0.082
Other acute leukemia with highly complex chemotherapy	11.286	53.1	71 / 0.208	17 / 0.614	0.204
Acute and serious eye infection	0.632	6.5	13 / 0.067	1 / 0.428	0.083

Source: G-DRG, 2014

The valuation ratios are applied for invoicing of inpatient care. As above stated, the price for per case flat rate is the result of multiplying the valuation relation of the particular DRG with the federal state base rate. As an example, the treatment price in a hospital in the federal state Bavaria for the case of "Complex interventions in glaucoma" is:

$$\text{Price} = 3,188.00 \text{ (from Table 4)} * 0.872 \text{ (from Table 5)} = 2,779.936 \text{ Euros}$$

That means by introducing the DRG's based per case reimbursement system, hospitals are paid 2,779.936 Euros by health insurance funds for the treatment of "complex interventions in glaucoma".

The Diagnosis Related Groups catalogue in 2014 is calculated on the basis of cost and performance data from 244 hospitals (including 12 university hospitals) and a total of 3.5 Mio. medical cases. This record of 2014 consists of 1,196 per case flat rates and 159 additional charges mainly for expensive medical products and medical devices. Only one DRG is to be charged per hospital stay. It should also be highlighted that per case flat rates in German health care system have been continuously improved since 2003 according to the service-oriented remuneration. So, a better differentiation of DRG between simple and expensive services is achieved. For this reason, in particular a better and more appropriate compensation of high-performance medicine can be realized. Medical societies and other

interested third parties have participated with proposals for improvement of the remuneration system at the Institute for the Hospital Compensation System (Institut für das Entgeltsystem im Krankenhaus). Moreover, enough number of hospitals is involved in the voluntary calculation of the DRG system. These hospitals deliver more differentiated calculation data to the Institute for the Hospital Compensation System (G-DRG, 2014).

Improvement in transparency and cost effectiveness in hospital care management has been reached by implementing the DRG system. In particular, hospitals have improved the process organization and efficiency reserves have been realized. Moreover, average stay of patients in hospital has continued to decline and it has reached 7.1 days in 2012, whereas it was 9.2 days in 2000. This also indicates a better hospital care management. Simultaneously, the number of mergers and cooperations has increased in the health sector (Bundesministerium für Gesundheit, 2014).

3.4. Remuneration of Psychiatric and Psychosomatic Care in Hospitals

The act of introducing flat rate compensation system for psychiatric and psychosomatic facilities (Psych Remuneration Act) was adopted by the German parliament on 14 June 2012. The Federal Council (Der Bundesrat) has approved the mentioned act on 6 July 2012. The new compensation law has become legally effective on 1 January 2013. By implementing the new act, the legal framework for flat rate and performance related remuneration system of fully and partly stationary hospital treatments for psychiatric and psychosomatic facilities are determined. These institutions are free to choose whether or not to make use of the new system for the years 2013 and 2014. But; from the year 2015 onwards, the application will be mandatory for all facilities (AOK Verlag, 2013).

Table 6. Some Examples of PEPP Compensation Catalogue for Full Stationary Hospital Care

PEPP	Description of disease	1. Remuneration level			2. Remuneration level			3. Remuneration level		
		F	U	VR / day	F	U	VR / day	F	U	VR / day
PA02A	Psychological and behavioural disorders due to psychotropic substances , with complicating constellation	1	6	1.5339	7	17	1.0732	18		1.0423
PA03B	Schizophrenia, schizotypal and delusional disorders or other psychotic disorders, age < 65 years, without complicating constellation	1	16	1.0682	17	39	0.8640	40		0.8516
PA14B	Personality and behavioural disorders, eating and other disorders, age < 64, without complicating constellation	1	9	1.2463	10	29	0.8854	30		0.8500
PK01Z	Intellectual disorders, profound disorders, tic disturbance and other disorders with onset usually occurring in childhood	1	21	2.0280	22	56	1.3879	57		1.3396
PK04A	Affective, neurotic, stress, somatoform and insomnia with complicating secondary diagnosis or with single or small group care with increased expense	1	18	1.9918	19	58	1.5900	59		1.5801

Source: AOK-Gesundheitspartner, 2014 (F: From ; U: Until; VR: Valuation Ratio)

Psychiatry and psychosomatics (Pauschalierende Entgelte Psychiatrie und Psychosomatik (PEPP)) are free to choose whether or not they implement flat rate charges from 2003 onwards. The catalogue of PEPP contains the billing regulations of mental diseases. In Table 6 some examples of the flat rate charges of PEPP catalogue for full stationary hospital care are depicted. Thereby, for a given sickness the PEPP classification code and three remuneration levels are presented.

Following case example shows how the payment of full inpatient care in psychiatry and psychosomatics is calculated using Table 6 depending on the duration of stay in a hospital. Three different remuneration levels are considered in this calculation.

Case example: Determination of compensation amount in stationary health care treatment of mental diseases in hospitals

Stationary treatment admission: 01.02.2014

Full inpatient dismissal: 21.02.2014

Length time: 20 calculation days

PEPP-Classification: PA02A

Hospital unique basis compensation value: 400 Euros

1. Remuneration level: 1.5339 (valuation ratio / day) * 400 (hospital unique basis compensation value) = 613.56

2. Remuneration level: $1.0732 * 400 = 429.28$

3. Remuneration level: $1.0423 * 400 = 416.92$

Calculation of remuneration = $6 * 613.56 + (17 - 6) * 429.28 + (20 - 17) * 416.92$

Amount of compensation: 9,654.2

For hospital care of the sickness mentioned with PEPP classification code PA02A, hospital is paid 9,654.2 Euros by health insurance funds for 20 days of stationary treatment.

Moreover, in Table 7 examples of valuation ratios for partial inpatient hospital care in PEPP compensation catalogue are given.

Table 7. Examples of valuation ratios for partial inpatient hospital care in PEPP compensation catalogue

PEPP	Description of disease	Valuation ratio / day
TA02Z	Psychological and behavioral disorders from psychotropic substances	0.7687
TK04Z	Affective, neurotic, stress-related, somatoform and sleep disorders without complicating secondary diagnosis	1.1527
TP20Z	Psychosomatic or psychiatric disorders	0.8784

Source: AOK-Gesundheitspartner, 2014

Legal basis of the compensation system for psychiatric and psychosomatic facilities is given in § 17 d of Hospital Financing Act. This remuneration system is an integrated, performance-related, and flat rate compensation system on the basis of day rates pay system. It is also important to consider if other billing units can be introduced for certain service areas. Similarly, it should be examined to what extent outpatient provided services in outpatient clinic of the institute of psychiatric according to § 118 of the Volume 5 of the Social Insurance Code (Fünftes Buch Sozialgesetzbuch – SGB V) can be considered. In this system valuation ratios are defined as relative weights for single risk classes of diseases. The definition of flat rates and their valuation ratios are determined nationwide as given in Tables 6 and 7. But, at the federal level payment of services which are not evaluated should be agreed between contractual parties according to the 2th Clause of § 18. The remuneration system in psychiatric and psychosomatics treatment is a flat rate and daily-related payment system, but it would be gradually introduced in different phases during a transitional period (Bundesministerium der Justiz und Verbraucherschutz, 2014).

3.5. The Role of the Federal Joint Committee in Quality Assurance

Quality assurance is the most important pre-requisite for an effective and efficient health care system. That means securing medical and nursing activities and improving provided health care services in the statutory health care system. Thus, supply of health care to patients is possible as needed but in an economical manner. Institutions offering health care services (e.g., hospitals) in the German health care system are committed to the Principle of Quality Assurance. The Volume V of the Social Insurance Code (Das Fünfte Sozialgesetzbuch SGB V) regulates essential requirements for quality assurance. Applicable tangible regulations in areas of ambulatory and stationary treatment are transferred to the Federal Joint Committee (Gemeinsamen Bundesausschuss G-BA). Thus, in order to secure applied quality assurance especially in hospitals, the task of design management is given to the Federal Joint Committee. This board determines in which areas the quality requirements are applicable; moreover the committee gives the details of this guidance. Major decisions taken by the Federal Joint Committee for hospitals are (Bundesministerium für Gesundheit, 2013b):

1. Mandatory continuing medical education for doctors, psychological psychotherapists, child and youth psychotherapists in hospitals
2. Minimum quantity for certain plannable services
3. Content of quality report which is to be prepared every year

The act to strengthen competition in statutory health insurance regulates determination of the requirements with respect to quality assurance in a most possible uniform and cross-sectoral manner. For that purpose, important task of the Federal Joint Committee is to issue cross-sectoral rules of action for hospitals and medical care. For further development of quality assurance Federal Joint Committee is supported by Applied Quality Improvement and Research in Health Care (AQUA)-Institute (according to §137a of Volume V of the Social Insurance Code). This scientific institution is responsible for measurement and depiction of medical care quality and for developing as far as cross-sectoral agreed indicators and instruments. In case the Federal Joint Committee prepares a final report, then the AQUA-Institution has to arrange technical implementation and feasibility study followed by a trial run in various test regions (Bundesministerium für Gesundheit, 2013b).

4. Critical View of Dual Financing

Monistic financing system means that investment and operational costs are funded from a single source. Current talks on this issue show that health insurance funds should be responsible for such a conversion. Since insurance companies are not able to meet additional costs, proponents of monistic system demand tax subsidy from federal government, but not from the federal state. Due to modernization, jobs are cut in hospitals in case of expense in the number of hospital staff. For example, 17,119 employees lost their jobs in 2004 (Vereinte Dienstleistungsgewerkschaft, 2008).

In dual financing key business decisions are not met from a single source. That means hospitals can decide on their staff, but hospitals are not free to choose about investments. However, these factors can not be treated independently from each other concerning future profits development. In order to realize reasonable economical calculation of the earnings, control over the two factors should be given to hospitals. Otherwise, financial success would be hindered (IHK Essen, 2014).

Dual financing of hospitals is considered as not being sustainable. The separation of financing of operational expenses paid by health insurance funds from hospital investments that originate from taxes prevents hospitals from following reasonable business objectives and planning. So; it can be concluded that hospitals are strongly dependent on municipal political influences. Financing from a single source should be the medium-term reform goal, where health insurance funds complement diagnosis-specific per case flat rates payment by additional investment surcharges.

Monistic system assumes that health insurance funds should compensate operational costs as well as investment costs of hospitals according to the claimed services. Furthermore, explicit investment support in terms of health insurance funds can not be applied because dual financing system will remain and investment decisions will continue to be the subject of bureaucratic processes. So, technically the monistic system is implemented by investment surcharges on the diagnosis related reimbursement groups. Depending on the structure of surcharges different allocation effects result. The relation between the amount of diagnosis-related payment and diagnosis-related investment needs is not always linear; that's why a differentiated system of extra charge for investment should be introduced. The technical solution of coupling the investments to DRG flat rates means that investment supports which originate from the German Health Funds in the framework of statutory health insurance act in effect since 2009 are used to compensate hospitals according to provided stationary treatment services. As a result of coupling investment means to provided service remuneration also implies that no investment deficit may occur in the future. Moreover; the existing hospital planning performed by federal states is going to be replaced through supervisory role of stationary treatment for approved hospitals regarding to quality and security. As a consequence of this; federal states monitor development of hospital capacity concerning to regional distribution and geographical accessibilities. Thus, federal states still remain responsible for ensuring the health care services in hospitals of the population (Rürup, 2008: 11-14).

Advantage of the monistic system for hospitals is that they can autonomously pursue investment policy. But, transition to a monistic system is considered as skeptical by most of the people involved in the health care sector. Representatives of hospitals are afraid that no money would be available at the end and they are also doubtful about the calculation basis

for future investment surcharges included in the price. Thus, at the 7th National DRG-Forum in Berlin the President of the German Hospital Society Rudolf Kösters indicated that rate of increase in hospital financing should depend on gross domestic product instead of the current at the basic wage rate (Deutsche Eliteakademie, 2014).

After examining critically the dual financing of hospitals, hospital landscape should be considered as an overview. Results delivered by the managerial group of the Friedrich Ebert Foundation highlights strengths and weaknesses of the hospital landscape in Germany as follows (Friedrich Ebert Stiftung, 2010):

Strengths:

- High level of patient care : The quality of German hospital care in an international comparison is very high in advanced medicine as well as in basic health care.
- Diversity of sources in health care funding, i.e. health care financing institutions and insurance companies : Basically, different types of health care funding provide competition between existing systems in German health care sector consisting of private and statutory care.
- Lump-sum remuneration system based on DRG's : Since 2003 implemented Diagnosis Related Group System has been internationally accepted and it provides quality-oriented, cost-efficient health care service structure and financing structure. But, this managerial group of the Friedrich Ebert Foundation also recommends transition into monistic financing system. An advancement of this system would provide further improvement in quality, greater cost efficiency, and solution of undesired effects.

Weaknesses:

- Inefficient and insufficient dual financing results in investment backlog : Dual financing has proven ineffective. Federal states in Germany have failed to fulfil their obligations to cover investment costs for years and the result is an investment shortfall of 50 billion Euros. As a consequence, hospitals have postponed required investments and they have increasingly tended to finance these backlogs by revenues gained by provided health care services from health insurance funds and insurance companies. Result of the incorrect use of the financial resources leads directly to enormous cost pressures on staff. Such an investment backlog would also lead to disparities in quality of health care between rich and poor federal states. Because; poor states are not able to provide the second part of the dual financing consisting of funds for investment.
- Local political influence : One of the biggest weaknesses in German hospital market is municipal-political impact. Short-term local political interests come into conflict with required decisions for development of efficient health care structures. Changes in financing structure and rational entrepreneurial decisions which may contribute to development of locations are complicated by municipal political discussions.
- Overcapacity : In Germany, number of beds per 1000 inhabitants is 5.7 beds in spite of a reduction in the total number of beds. This number of 5.7 is still significantly

higher than other countries such as USA with 2.9 beds and Sweden with 3.2 beds. This report highlights that the overcapacity is a result of inefficient financing structures, political influence, and lack of free entrepreneurial decision-making.

- Prevented competition by collective contracts
- Increasing quality differences between sources of health care funding
- Rigid distinctions between outpatient and inpatient care
- Due to inflexible definition between outpatient and inpatient care huge financial resources and opportunities for improving quality were left unexploited. In particular, hospitals have the chance to act as a center of health care networks or by offering innovative new services for efficient and a higher quality care.
- Increasing demand for skilled labor and lower professional attractiveness : As a consequence of financial gap in hospitals caused by missing investment resources financed by federal states, a huge pressure on hospital staff occurred. Work intensification and financial cuts were the consequence and particularly the attractiveness of nursing profession has reduced significantly. But, at the same time there is a growing uncovered demand for skilled labor. Moreover; a great amount of qualified personnel threats to move away from Germany.

5. Results

Hospitals in Germany play an important role for people's health. Also as an economic power of 86.8 billion Euros in 2012, they have provided employment to more than 1.146 mio. people from 5.2 mio. employees in whole health care sector and they have shown great growth potential. Investment shortfalls in German hospitals have reached 50 billion Euros. As a result, backlog demand for acquiring new equipment occurs, in particularly, in surgery, internal medicine, and radiology departments in clinics where the necessity of costly and modern technology devices for patient care arises. Such a deficit has naturally caused longer duration of therapies. Number of hospitals has been decreasing because of the financial bottleneck of the clinics. Also, the decrease in the number of hospitals is a result of shorter staying period in hospitals and merging of hospitals into bigger institutions. It is obvious that; nearly 80% of total bed capacity of hospitals is used and inpatient cases reached 18.3 mio. in 2011. It should also be recognized that length of stay in hospitals has decreased which is a result of improving health technology and a better management of patient treatment. At the same time, there is a big development in the prevention and rehabilitation sector where nearly 2 mio. number of cases has been reached.

In Germany, financing of hospitals is established on dual financing principle. Personnel and material costs are financed by health insurance companies, but investment expenses arising from tax revenues in Germany are met by federal states. Until 2003, the day related rate system in which a slightly ill patient and seriously sick patient were treated at the same department of the hospital had been equally charged. So, the compensation until 2003 was not performance-related and service-related. The new remuneration system active from 2003 on is performance-related lump-sum remuneration based on Diagnosis Related Groups. Patient is paid fixed amount of money for particular treatment cases notwithstanding the costs occurring from individual case. By using valuation relations, expression of different

treatment expenses is possible. That's why; the new dual system enables a patient with a mild sickness to pay less than an individual with a difficult illness. Thus, the cost weights show differences in the treatment expenditures of each DRG group. By means of DRG's catalogue in 2014, the amount of payment is calculated for a selected sickness using the valid per case flat rate in federal states in Germany. Similar way is followed for the remuneration of psychiatric and psychosomatic care in hospitals. Because of different length of stay in case of full stationary care, calculation for a particular case is done by using three levels of remuneration. For this reason, some examples of PEPP compensation catalogue for full stationary hospital care are chosen. Moreover, the new compensation system is defined in the Volume 5 of the Social Insurance Code (Fünftes Buch Sozialgesetzbuch – SGB V) in all details.

The last part of the study deals with critical view of dual financing. Due to investment deficits in dual financing system, modernization in hospitals is realized at the cost of job cuts in hospitals. The monistic model proposed by Rürup assumes a compensation system according to the claimed services. This means that; operational costs and investment costs are determined dependent on the services used. In addition to DRG-based lump sum remuneration, an investment surcharge is also depicted in the price covered by health insurance funds. By doing so, all costs are funded from a single source. Furthermore; investment decision taken in the dual system is abandoned and dependency from being the subject of bureaucratic processes is avoided. In monistic system investment surcharges on the diagnosis related remuneration groups are implemented. Rürup's model is also supported by the managerial group of the Friedrich Ebert Foundation.

By illustrating the strengths and weaknesses of financing hospitals in Germany, it becomes clear that the existing system used since 2003 has been implemented to improve the financial situation of health care institutions. The system has improved the economic condition since 2003. But, critical view of the existing financing system shows deficits concerning investment cuts which play crucial role for modernization of hospitals. Physicians pursue their jobs properly and so they can provide better service to patients. That's why; implementing investment surcharges on the diagnosis related reimbursement groups can be defined as appropriate for better functioning hospitals. Financially better equipped hospitals have more room for increased scope for the required further strategic development.

Strengths and weaknesses of the hospital landscape in Germany proposed by managerial group of the Friedrich Ebert Foundation clarify the hospital landscape and financial situation in Germany as an overview. Strengths can be defined as high level of patient care, diversity of sources of health care funding, and lump-sum remuneration system based on DRG's which is much more advanced compared to the previous system used until 2003. However; the report of Friedrich Ebert Foundation also recommends transition to monistic financing system. Weaknesses emphasized are inefficient and insufficient dual financing which leads to investment backlog, municipal political influence, overcapacity concerning number of beds per 1000 inhabitants, inflexible demarcation between outpatient and inpatient care, increasing demand for skilled labor and lower professional attractiveness, prevented competition by collective contracts, increasing quality differences between sources of health care funding, and rigid distinctions between outpatient and inpatient care.

If the monistic system is to be implemented, the question of how to design the transition process of the new system results. Moreover; it is also necessary to examine how all hospitals could achieve the same level in terms of infrastructure. But, all these aspects are very broad and comprehensive in its scope. So; it is extremely difficult to give a brief answer. That's why, these questions represent recommendations for further research.

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