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## Case study

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# Germany

Jonas Schreyögg and Ricarda Milstein  
University of Hamburg  
Germany

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## Abbreviations

Abbreviation	German original (if applicable)	English translation
BÄK	Bundesärztekammer	German Medical Association
DKG	Deutsche Krankenhausgesellschaft	German Hospital Federation
DRG	Fallpauschale	Diagnosis-related group
FFS	-	Fee-for-service
gkv-Spitzenverband	Spitzenverband Bund der Krankenkassen	National Association of Statutory Health Insurance Funds
GP	Hausarzt	General Practitioner (Family Physician)
InEK	Institut für die Entgeltvergütung im Krankenhaus	Institute for Hospital Reimbursement
KBV	Kassenärztliche Bundesvereinigung	National Association of Statutory Health Insurance Physicians
KHSG	Krankenhausstrukturgesetz	Hospital Structure Reform Act
KV	Kassenärztliche Vereinigung	Association of Statutory Health Insurance Physicians
LTC	-	Long-term care
PKV-Verband	Verband der Privaten Krankenkassen	Association of Private Health Insurance Funds
PHI	Private Krankenversicherung	Private Health Insurance
P4P	-	Pay for Performance
SHI	Gesetzliche Krankenversicherung	Statutory Health Insurance

## Abstract

The German healthcare system features high levels of provision of care and a rigorous price-setting process which limits expenditure increases. The three investigated sectors (inpatient and outpatient sectors and long-term care), however, feature substantively different characteristics. The budgeting of health services, for example, ranges from no budgeting at all (private health insurance (PHI) outpatient sector) via budgeting on an individual level (inpatient sector) to budgeting on a state level (statutory health insurance (SHI) outpatient sector). This makes Germany an interesting, but fragmented and complex case study.

Germany pairs generous levels of supply of providers with reimbursement systems that set incentives on high volumes and low waiting times, and low prices compared to other OECD countries. This achieves low waiting times and high service volumes at the expense of overprovision and wasteful spending. Germany features far higher densities of providers per inhabitants than other OECD countries with twice as many hospital beds per 100 000 inhabitants than the OECD average. It ranks in the upper third of OECD countries in terms of physician and nursing home densities per 100 000 inhabitants. The country reimburses inpatient providers almost exclusively on the basis of DRGs, outpatient specialists largely on the basis of fee-for-service (FFS), outpatient general practitioners by a combination of FFS, budgets and other modes of reimbursement, and nursing homes on a per-diem basis.

The healthcare system is largely governed by associations of payers and providers on the federal, state and regional level. In selected sectors, however, competencies are assumed by or shared with the legislature. The planning, budgeting and reimbursement of the inpatient and outpatient sectors and long-term care are strictly separated. Furthermore, Germany features an SHI system, which insures roughly 90% of the population and a PHI system, which covers the remainder.

The price-setting in the inpatient sector and the SHI's outpatient sector follows the federal structure of this country. In both sectors, prices are calculated by a joint institute of payer and provider associations on the federal level. States can deviate from federal prices within a predefined range. In the long-term care sector, prices of nursing homes are negotiated on an individual level and benchmarked with the price-level of their neighbouring homes.

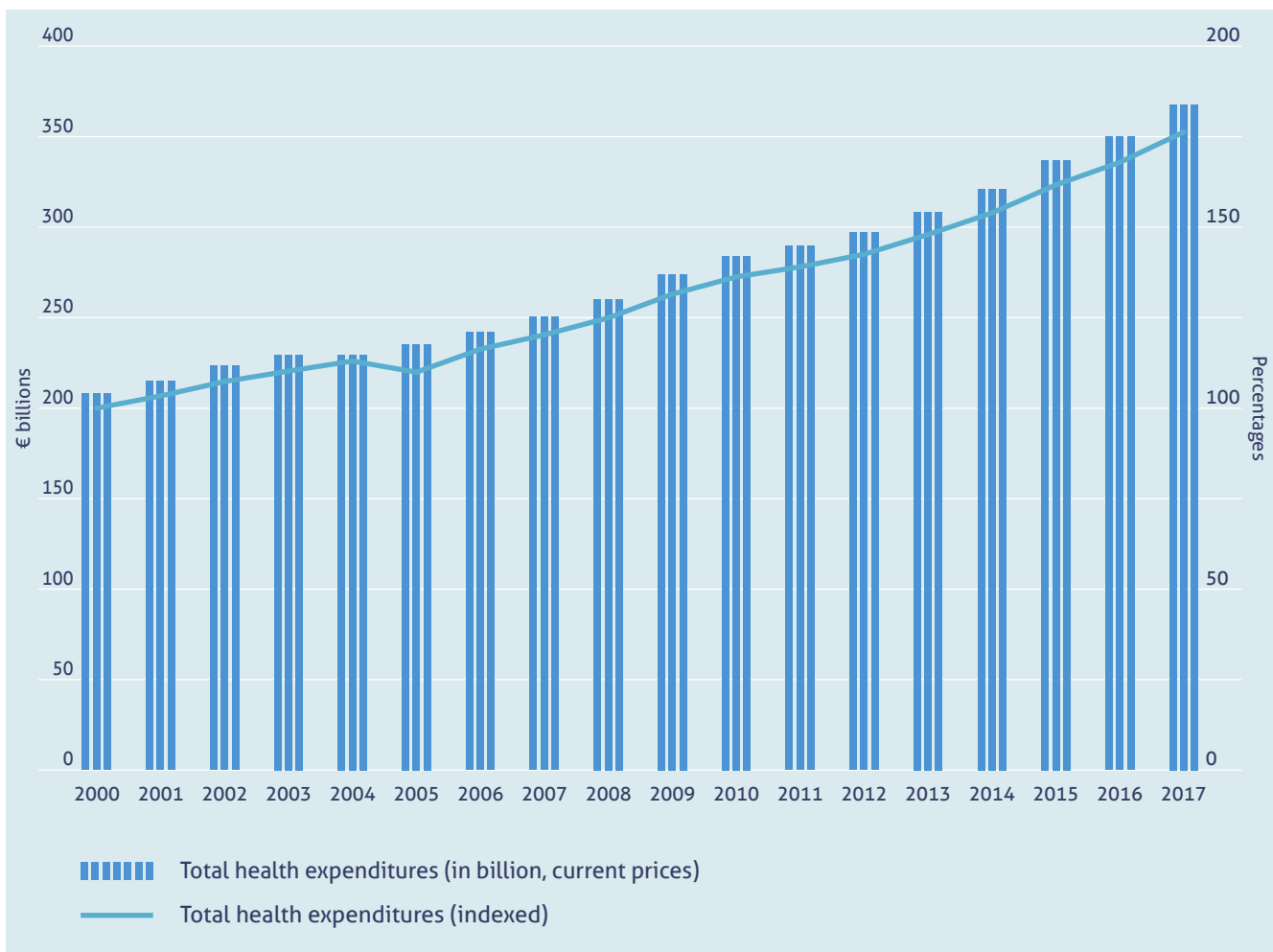
Services in the inpatient sector are budgeted on an individual level between a hospital and sickness funds which insure more than 5% of the hospital's patients. Services in the SHI's outpatient sector are budgeted on the state level and broken down to the individual physician. In contrast, services in the PHI's outpatient sector are not budgeted.

Germany still enjoys a positive GDP growth rate and solid finances. As a result, financial sustainability and cost containment have been and still are less of a concern than in other OECD countries. Attempts to reduce the number of providers, most notably of hospitals, have fallen short. As of today, the country joins other OECD member states in its quest for integrated care and quality of care. Several reforms are under way. In 2016, the country has introduced a comprehensive reform of the inpatient sector to improve quality of care, to reduce hospital volumes and to redistribute financial flows in a more adequate way. This reform makes an attempt to reorganize the governance structure by subtly shifting competencies to the federal level in exchange for a large financial benefit package. Discussions on harmonizing the SHI and PHI outpatient reimbursements and on improving the integration of the inpatient and outpatient sector systems have been started.

## 1 Introduction

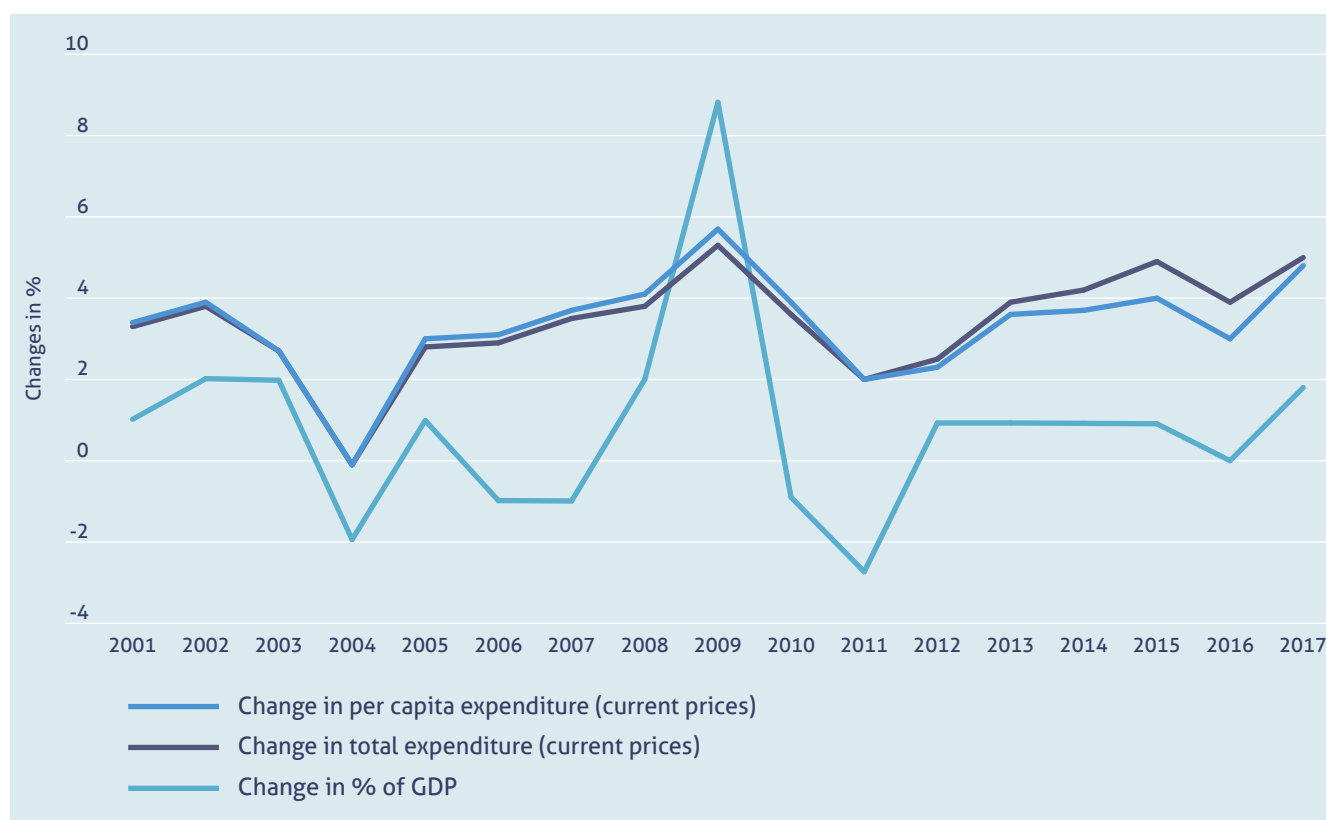
In 2017, health care expenditures amounted to €374.2 billion (OECD, 2018a). This represented 11.3% of the country's GDP. Over the past two decades, expenditures have increased by 80% from about 200 billion in 2000 (see Figure 1) (OECD, 2018a). The annual increase has ranged between -0.3% and 5.3% with an average annual growth rate of 4% over the past decade (Figure 2). Over the same time, the GDP share has increased by 1.5 percentage points from 9.8% in 2000. Despite high variability in the first decade of the 21st century, the GDP share has stabilized at an annual growth rate of about 1% since 2012.

**Figure 1**  
Total health expenditures in current prices and price-indexed (2000=100) from 2000-2017



Source: OECD, 2018a.

**Figure 2**  
Changes in total expenditure, per capita expenditure and GDP share (2001-2017)



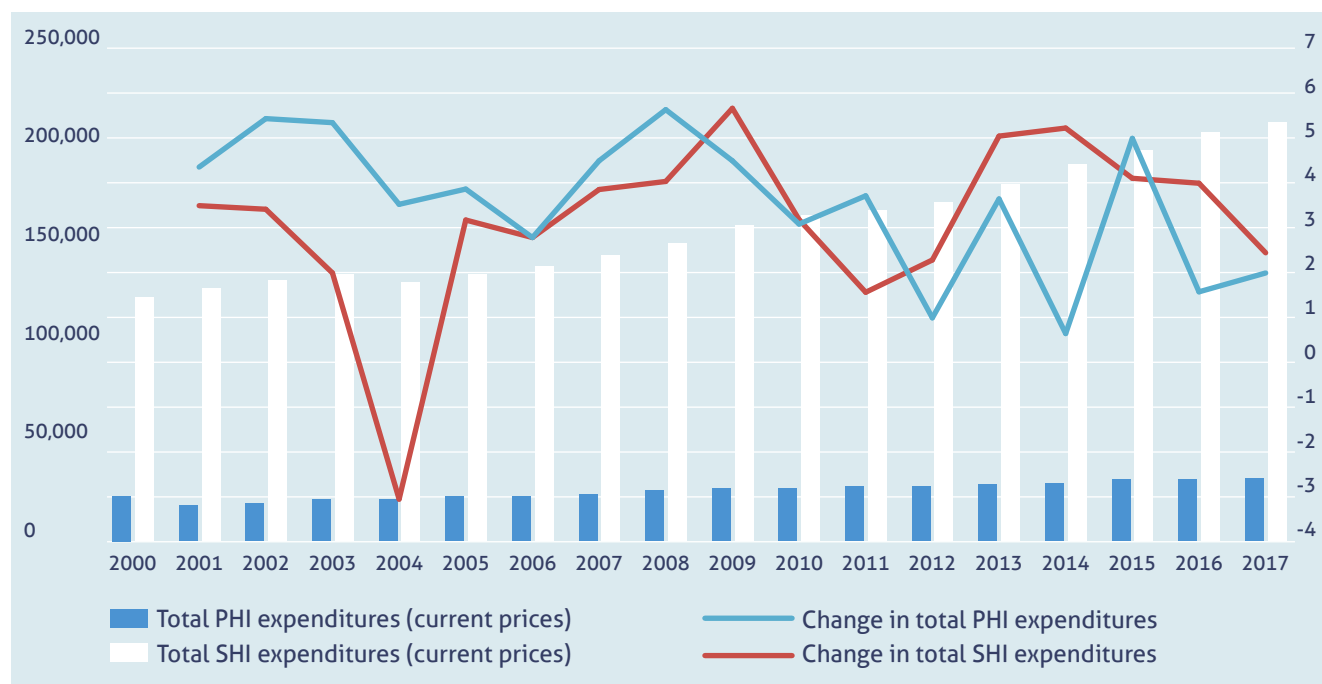
Source: OECD, 2018a.

### Germany is split into a SHI and a PHI system

Germany's health system is split into a statutory health insurance (SHI) system, which enrolls 90% of the population (72.81 million), and a private health insurance (PHI) system, which insures the remainder (8.77 million). PHI provides full coverage to employees whose income ranges above a pre-defined threshold (in 2019, annual gross income of €60 750 or greater) and the self-employed. In addition, it partially insures civil servants with a residual PHI ranging between 20% and 50%.

In 2017, the SHI system spent €233.89 billion on health care. This represented approximately 62% of the country's total health expenditures, which translated into expenditures of €3190 per capita (BMG, 2018a). From 2000 to 2017, SHI expenditures increased by 70%. Over the past two decades, the growth rate of SHI has ranged between 1.5% and 6%, with a pronounced exception of -4% in 2004 (Figure 3). In 2017, the PHI system spent €31.63 billion on health care (GBE, 2018), equalling approximately 8.5% of Germany's total health expenditures. From 2000 to 2017, PHI expenditures have increased by 80% from formerly €17.49 billion in 2000. Over the same period, the growth rate of PHI has ranged between 0.6% and 5.6% with a slightly downward sloping trend (Figure 3).

**Figure 3**  
Total SHI and PHI expenditures in current prices and change rates from 2000 to 2017 (or latest year available)



Source: GBE, 2018.

### **A high density of providers, volume-incentivising remuneration systems and moderate price levels contribute to high utilization rates**

Compared to its neighbouring countries, Germany maintains a high density of providers, high utilization rates and low to moderate prices. It employs reimbursement systems, which set incentives on good access to care and low waiting times at the expense of volume growth and an oversupply of care. Germany's density of physicians ranks considerably above the OECD average (4.2 physicians per 1000 inhabitants against an OECD average of 3.4) (OECD, 2018b). It features the third highest density of hospital beds, with 8.1 beds per 1000 inhabitants, after Japan (13.1 per 1000) and Korea (12 per 1000), which is almost double the OECD average of 4.7 beds per 1000 inhabitants (OECD, 2018b). The number of beds in long-term care (LTC) facilities and nursing homes ranges in the upper half of OECD countries and is in line with Germany's neighbouring OECD countries (OECD, 2018c).

Germany's reimbursement systems set maximum incentives at service provision, but prices per service are low to moderate (Koechlin, Lorenzoni and Schreyer, 2010; Lorenzoni and Koechlin, 2017). Virtually all inpatient services are reimbursed on the basis of diagnosis-related groups (DRGs). As a result, waiting times in the inpatient sector are non-existent and lengths of stay have declined over the past two decades, while hospital volumes have increased (Statistisches Bundesamt, 2018). Similarly, outpatient services are reimbursed by a fee-for-service (FFS) system and a system of lump-sum

payments. The FFS component again leads to low waiting times but sets strong incentives to increase the number of services provided to patients.

The low-price level paired with high rates of provider densities and reimbursement systems, which reward volume growth, incentivized Germany's high utilisation rates of healthcare services. It ranks among the countries with the highest number of doctor consultations per capita and tops the list of hospital discharges per 100,000 inhabitants (OECD, 2018d). Germany also is among the countries which lead the list of surgical procedures per inhabitant (Kumar and Schoenstein, 2013; OECD, 2018d). Reimbursement systems have been subject to various policy interventions to limit expenditure growth, but they have been of mixed success.

### **Prices shall reimburse the average cost of providers**

The provision of health care services in the SHI system follows an efficiency principle (*Wirtschaftlichkeitsgebot*). Health services shall be sufficient, appropriate and efficient, and not range beyond what is deemed medically necessary. Such a restriction does not apply to the PHI system. Price setting intends to allocate resources among providers based on their contribution to the health care system and to reimburse average market costs of providers. Germany has made several attempts to increase the transparency, efficiency and accountability of health care providers by harmonizing prices on the national level.

There is no overall health care budget comparable to the English National Health Service (NHS). Instead, total expenditures are an aggregate of expenditures in different sectors and insurance systems. There is a strict separation between the sectors. Inpatient services, outpatient services (including specialist and primary care), and LTC are paid from three different budgets, and prices are set differently. Interaction between these sectors is low (Milstein and Blankart, 2016; Amelung, Hildebrandt and Wolf, 2012).

Thus far, cost containment has been less important in Germany than in other OECD countries. As of 2018, Germany still benefits from a positive GDP growth rate and solid finances, and SHI funds enjoy financial surpluses. In past years, Germany has experimented with various ways to reduce the high volume of service provision. These, however, have had limited effects so far. For example, the country operates with deductions to limit provider incentives that increase service provision and has increased the share of bundled payments at the expense of FFS reimbursement in the outpatient sector and for general practitioners (GPs), in particular. In the inpatient sector, Germany has introduced price deductions on services which are subject to economies of scale. However, the effect of these policies on cost containment and service volumes is disputed and has resulted in complex reimbursement systems which are hard to navigate for both payers and providers.

## 2 Governance of the health care sector

### Payers and providers are responsible for organising the delivery of care

The German healthcare system is governed by the so-called *Selbstverwaltung* (self-governance of the healthcare sector). The government has mandated payer and provider associations to organize the delivery of care. This structure dates to 1881. In the SHI system, payers and providers have formed collective agreements. SHI funds are obliged to contract all providers which have been licensed by the state or the provider association in accordance with national and state guidelines. The German Federal Ministry of Health assumes a supervisory function and can intervene in selected instances. Theoretically, it could revoke the entire mandate.

SHI funds are represented by the *Spitzenverband Bund der Krankenkassen* (GKV-Spitzenverband, National Association of Statutory Health Insurance Funds) at the federal level, and by state associations at the state level. In line with this organization, PHI funds are represented by the *Verband der Privaten Krankenkassen* (PKV-Verband, Association of PHI funds) with its respective state associations. The *Deutsche Krankenhausgesellschaft* (DKG, German Hospital Federation) and its 16 state federations represent the interests of inpatient providers. The *Bundesärztekammer* (BÄK, German Medical Association) represents all physicians who are licensed to practice. Outpatient physicians, who want to provide services to SHI patients and be reimbursed by the SHI, must obtain a licensure by one of the 17 *Kassenärztliche Vereinigungen* (KV, Associations of SHI physicians). At the federal level, they unite in the *Kassenärztliche Bundesvereinigung* (KBV, National Association of SHI Physicians).

### Price setting and budgeting reflect Germany's federal structure

In the inpatient sector, state associations of SHI that have closed an agreement with a state contract all hospitals in the state. These hospitals can apply for funding for investment costs from the state and are reimbursed by SHI funds. In return, they must adhere to the state's hospital plan including the amount of beds, medical units and selected quality criteria. In the PHI system, patients can access all hospitals and claim reimbursement from their PHI fund. Hospitals are reimbursed almost exclusively on the basis of DRGs. Prices are mostly calculated at the federal level. States can deviate from the overall price level within a predefined range. The budget of a hospital is negotiated between an individual hospital and SHI and PHI funds.

In the outpatient sector, state associations of SHI funds have closed collective agreements with their state's KV and consequently contract all physicians who hold a licensure with the KV. Physicians are reimbursed by the SHI funds and must adhere to location restrictions by their KV. Physicians are reimbursed by a mixture of FFS and lump-sum payments. Similar to the inpatient sector, prices are largely set on the federal level and tailored to specificities at the state level. In contrast to the inpatient sector, services are budgeted. SHI funds pay an aggregate budget to their state's KV. It is up to the KV to distribute the budget among its SHI physicians. Services to PHI patients are reimbursed differently, albeit by a FFS system. Patients can receive services from all physicians who hold a medical licensure to practice and claim reimbursement from the PHI fund depending on their health plan. As opposed to the SHI system, services are not budgeted.

In LTC, state associations of LTC funds (both public and private) and state associations of nursing home providers have formed an agreement on the provision of nursing care in a given state. The provision of care is supervised by the respective state authority (generally, Ministry of Social Affairs or Ministry of Health). Nursing homes, which want to provide care within this agreement and be reimbursed accordingly, close a contract with sickness funds on the provision of nursing care to their enrollees. This holds true for both SHI and PHI funds. In return, nursing homes must adhere to quality criteria, such as staffing ratios. Prices are negotiated individually between a nursing home and LTC funds. They are split into a per diem nursing care charge, which is covered by a lump-sum payment of the LTC funds, and a copayment, costs for housing and meals, infrastructure, training and additional services, which are paid by the patient.

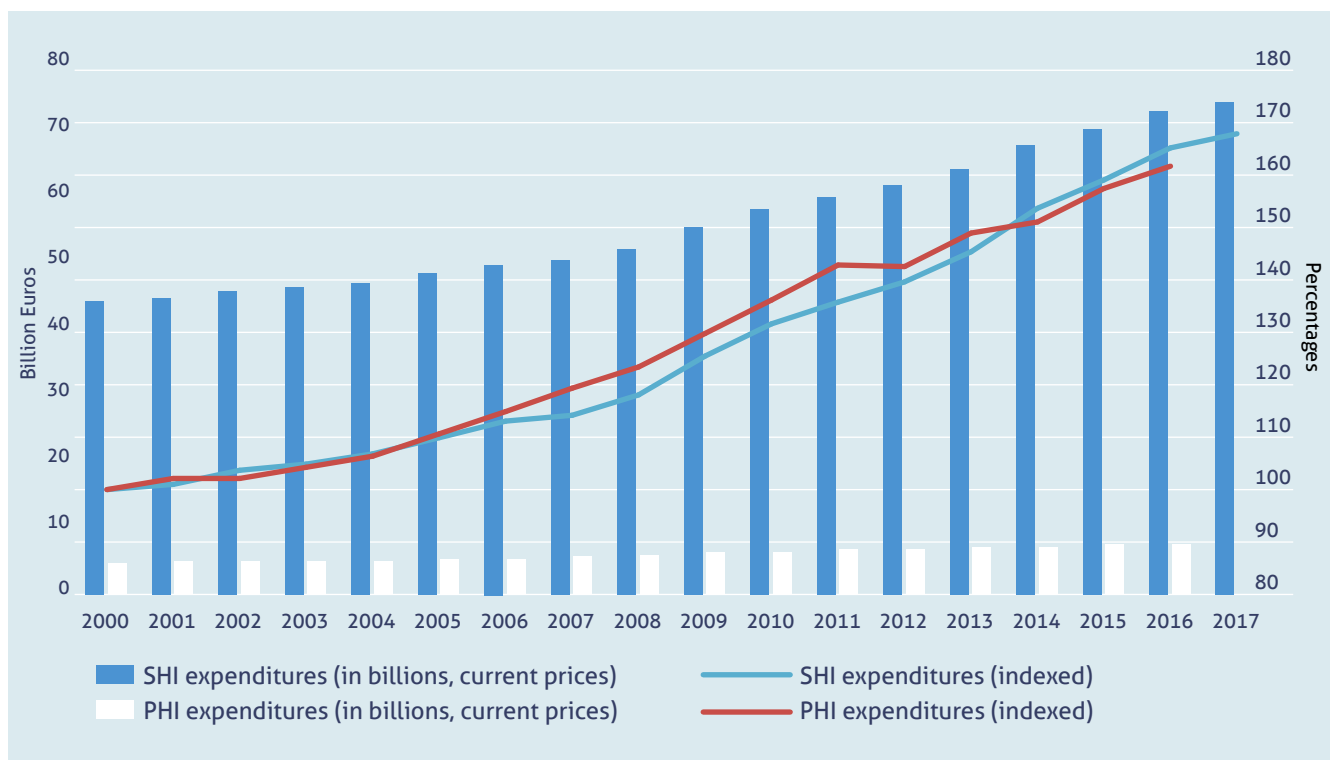
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## Price setting and budgeting by the health care sector

### The inpatient sector

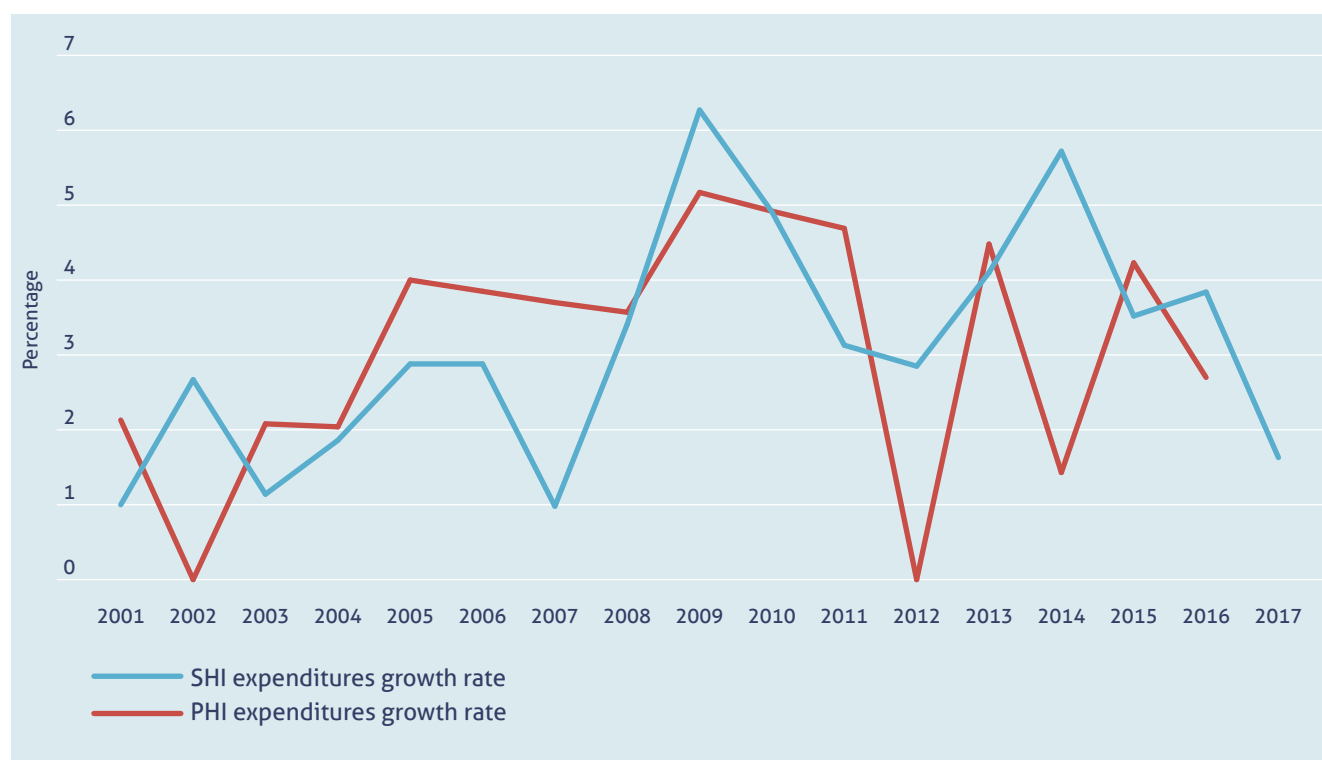
In 2016 and 2017, SHI expenditures for inpatient services amounted to €72.95 billion and €74.14 billion, respectively. In 2016, the PHI spent €7.59 billion on inpatient services (2017 data was not available). This is a 70% increase compared to 2000 (Figure 4). Over the past two decades, expenditures by both SHI and the PHI have increased at a similar pace (Figure 5). The increase in PHI expenditures was steeper in the first half of the past decade (2003-2008) but was overtaken by the SHI in the following years. In the past two years, growth rates in both SHI and PHI have declined.

**Figure 4**  
SHI and PHI inpatient expenditures in current prices and price-indexed (2000=100) from 2000 to 2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 is not available.

**Figure 5**  
Growth rates of SHI and PHI inpatient expenditures from 2001-2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 is not available.

### The distribution of hospitals is regulated at the state level

In 2017, Germany had 1942 hospitals totalling 497 182 beds, which translates into 6 beds per 1000 inhabitants (Statistisches Bundesamt, 2018). 37% (720) of all hospitals are private for-profit hospitals, followed by 34% private not-for-profit hospitals (662), and the remainder being public hospitals (560). With regards to hospital beds, however, the public hospitals provide the largest share with 48% of all beds (238 748), followed by private non-for-profit hospitals with 33% (165 245 beds), and private for-profit hospitals with 19% (93 189). In 2017, Germany had 35 university hospitals, and close to a quarter of all beds are concentrated in about 100 hospitals (Figure 6).

**Figure 6**  
Number of hospitals and total beds by bed category (2017)

Bedsizes	0	1-49	50-99	100-149	150-199	200-299	300-399	400-499	500-599	600-799	800+
No. of hospitals	65	365	236	252	187	243	185	129	105	78	97
Total Beds	-	7374	17 063	30 894	32 452	60 141	63 209	57 165	57 148	53 729	118 007

Source: Statistisches Bundesamt, 2018.

The distribution of hospitals is regulated at the state level by the respective State Ministry of Health in accordance with the hospital association, the SHI and PHI associations at the state level, and additional partners that are deemed necessary by the respective state. Hospitals which conclude a contract with the state (so-called *Plankrankenhäuser*) are eligible for financial support from the state for their infrastructure, and SHI funds are obliged to reimburse services they provide. In return, hospitals can be mandated to provide certain services, run specific units, and to increase or decrease their number of beds. Roughly 98% of all hospitals have concluded a contract with the state.

The planning varies greatly between the 16 states. Historically, states have planned the distribution of hospital beds and have largely relied on the Hill-Burton formula to set target occupancy rates depending on the unit type leading to status quo maintenance. In the past few years, states have started to deviate from and begun to include quality criteria, such as staffing ratios, infrastructural prerequisites for specialized units, and minimum volumes (DKG, 2018).

### **Services are reimbursed almost exclusively on the basis of DRGs**

The running costs of hospitals are reimbursed almost exclusively on the basis of DRGs and mirror the real expenditures hospitals incur. Patients are allocated to a specific DRG based on their major diagnosis, co-diagnoses, procedures, length of stay, ventilation hours (if applicable), age, gender, weight (for newborns), medical unit, and type of discharge, such as “discharged as fully recovered” or “death”. The reimbursement that hospitals receive covers medical treatment, nursing care, the provision of pharmaceuticals and therapeutic appliances, board, and accommodation.

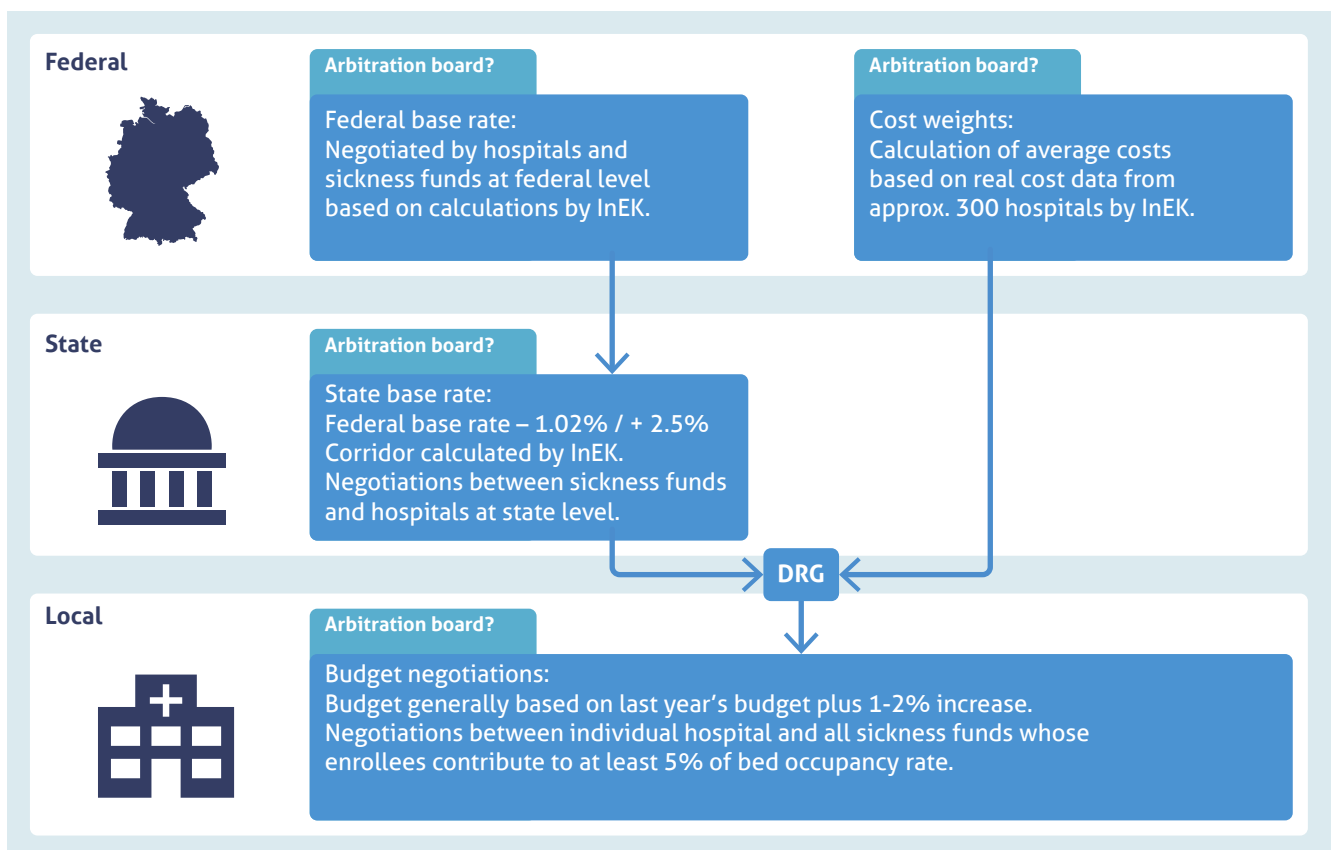
The German system is modelled on the Australian DRG system. In 2018, the German DRG system included 1292 DRGs and 205 add-on payments for patients with particularly high demand for nursing care or for the provision of additional services and pharmaceuticals which are not included in the DRG system yet. Each DRG can be split into up to five subcategories depending on the patient’s severity. The DRG system is revised annually to accommodate cost changes. DRGs are split into a cost weight (relative weight) and a base rate. The base rate defines the overall price level, whereas cost weights represent the severity of a diagnosis and its accompanying procedures vis-à-vis all other diagnosis. Accordingly, an increase in the base rate augments the prices of all DRGs, whereas an increase in the cost weight augments the price of one DRG compared to all others. Further, the base rate differs between all 16 states, whereas the cost weight is the same across the country. Both parts are calculated separately from one another as described below (Figure 7).

There is no difference between private, private not-for-profit, and public hospitals: DRG prices are the same for all hospitals contracted by the state. SHI is obliged to reimburse services hospitals provide. In return, hospitals can be mandated to provide certain services, run specific units, and to increase or decrease their number of beds.

The German DRG system was introduced in 2003 and implemented nationwide in 2005, replacing per diem payments. DRGs were introduced to increase transparency and efficiency in the health care sector and to decrease the average length of stay in hospitals. In contrast to other OECD countries, attempts to reduce costs did not motivate the introduction of DRGs.

Since the introduction of DRGs, the average length of stay has decreased by 17%, the number of cases has increased by 18%, and the number of nursing days has remained rather stable with a 1% decrease (Statistisches Bundesamt, 2018). This has been part of a longer trend. Since 1990, the average length of stay has halved, and the number of cases has increased by 30%. The number of nursing days had decreased by 30% up to the mid-2000s and has remained constant ever since (Statistisches Bundesamt, 2018). Prior to the introduction of DRGs, Germany had already experimented with mixtures of per diem payments and case-based remuneration systems.

**Figure 7**  
From price to budget calculation in the inpatient sector



Source: authors.

**Cost weights are calculated by averaging cost data from a sample of hospitals.**

Cost weights are calculated annually by the *Institut für das Entgeltsystem im Krankenhaus* (InEK, institute for hospital reimbursement), a joint institute by the DKG, the GKV-Spitzenverband, and the PKV-Verband. Cost weights reflect the average expenditures of a sample of hospitals.

To calculate the weights, the institute collects data from roughly 300 hospitals that participate on a voluntary basis. These data include patient-level data on the major diagnosis and other diagnoses, clinical interventions (such as medical procedures), patient characteristics (age, gender, and weight of newborn children), cause of hospital admission and discharge, as well as accompanying cost data, such as workforce and technical resources and pharmaceuticals. Based on that information, the InEK groups patients into DRGs and assigns cost weights to each of the DRGs. In a first step, diagnoses are clustered into 23 Major Disease Categories. The cost weight of the specific DRG in question is determined by the procedures, comorbidities, and clinical severity. Following that, the InEK averages the contributing cost data of each and every DRG to determine the cost weights. In conjunction, it also determines the average length of stay and its accompanying range. If a patient stays below the lower or above the upper limit of what is deemed an appropriate length of stay for his DRG (known as “outlier”), the hospital receives a depreciation on a per diem basis.

The InEK can mandate hospitals to submit cost data and select hospitals randomly. Hospitals can sue the InEK at the administrative court and some have made use of that option. In 2017, the InEK mandated 120 hospitals to submit data; 28 hospitals did not submit data, and 13 hospitals filed lawsuits against the InEK. However, the first court ruling on that matter has dismissed the case.

The catalogue of cost weights is approved annually by the DKG, the GKV-Spitzenverband, and the PKV-Verband. These three parties also define the overall framework and methodology to determine relative weights to which the InEK has to adhere. If the parties fail to come to an agreement, the federal arbitration board decides. It consists of 21 members, with one non-partisan chair being among them, two additional non-partisan members, nine representatives of the DKG, eight representatives of the GKV-Spitzenverband, and one representative of the PKV-Verband. The non-partisan members are appointed by a joint decision of hospitals and sickness funds. If they fail to come to an agreement, the President of the Federal Social Security Court appoints three members. Decisions of the arbitration board are intended to be binding. In very few cases has one of the negotiating parties filed a lawsuit against the arbitration board at the Superior State Social Court. The entire procedure is supervised by the German Federal Ministry of Health. If negotiations between the DKG, the GKV-Spitzenverband, and the PKV-Verband fail, the Ministry

can also intervene and overrule the parties by decree. This was the case in 2003 when the negotiating parties failed to agree on the reimbursement of semi-inpatient services.

### **The federal base rate is adjusted annually to reflect changes in hospital costs and contributions to SHI funds**

The growth rate of the federal base rate is negotiated annually by the DKG, the GKV-Spitzenverband, and the PKV-Verband. In 2018, the federal base rate was set at €3467.30. The three negotiating parties are obliged to mandate the InEK to calculate the federal base rate. These calculations are based on the state base rates, the total expenditures and the case mix of the preceding year. The growth rate of the federal base rate is based on two parameters: the average change rate of contributions by SHI enrollees (*Grundlohn-Veränderungsrate*) and the average change rate of hospital costs (*Orientierungswert*). The latter is calculated annually by the German Federal Statistical Office. If the change rate in contributions is higher than the cost increase, this rate is chosen automatically. If costs increase at a higher rate, the DKG, GKV-Spitzenverband, and the PKV-Verband negotiate on an increased rate, which has to range between both rates. If the parties fail to come to an agreement, the aforementioned federal arbitration board decides.

This regulation, however, has been subject to frequent interventions and changes by the legislature. In the past, the change rate of the federal base rate has ranged between 2.5% and 3%.

The growth and cost rates have been criticized. Changes in contributions by SHI enrollees are not related to changes in the hospitals' costs and revenues. Changes in hospital costs, on the other hand, do not take expenditures and cost reductions into account, for example, due to technical innovation. Finally, regulations on how to determine the change rate have been modified on a frequent basis, but several exceptions apply (GKV-Spitzenverband, 2018a; 2018b).

### **States can deviate from the federal base rate within a predefined range**

Once the federal base rate has been defined, each of the 16 states define their state base rates. They can deviate from the federal base rate by -1.02% to +2.5% (€3431.93 or €3553.98). In practice, the states increase their state base rate by the growth factor of the federal base rate. The so-called "corridor" within which states can deviate from the federal base rate is also calculated by the InEK and negotiated between the DKG, the GKV-Spitzenverband, and the PKV-Verband. It forms part of the negotiations on the federal base rate.

Negotiations on the state base rate take place between the state's hospital association, the state associations of SHI funds, and the state association of PHI funds, and should be finalized by 30 November of the given year. The decision has to be

approved by the respective State Ministry of Health. If the parties fail to reach an agreement, the dispute is handed over to an arbitration board. The latter is composed of a neutral chair and representatives of hospitals and sickness funds in equal representation. It is supervised by the State Ministry of Health. About two out of 16 states appeal to their arbitration board per year (Vdek, 2018a). Arbitration boards should finalize their decision by 1 January of the given year, but often take until April. Furthermore, all of the negotiating parties at the state level can contest the decision of the arbitration board. However, the legal process is not properly defined. It is not clear whether the party has to sue the arbitration board or its opposing party, and which court holds the judicial competence.

### **Each hospital negotiates its annual budget with sickness funds**

Once both the state base rate and cost weights are defined, each hospital negotiates with sickness funds, which enrol at least 5% of the cases of the hospital's patients, on the hospital's annual budget. The budget has to be approved by the State Ministry of Health. If the parties fail to reach an agreement, an arbitration board decides on the budget. As in the preceding steps, parties can sue one another or the arbitration board. In theory, budget negotiations should be concluded prospectively for the following year. In practice, however, this is seldom the case and negotiations tend to be finalized between March and September of the given year. By and large, the prospective budget equals the budget of the year before plus 1-2%.

SHI funds can mandate the medical service of SHI funds to investigate whether hospitals have coded and billed diagnoses and treatments correctly. If not, the hospital has to repay the difference between what it has received and what it should have correctly received to the SHI fund. If the SHI fund has erred, it has to pay a compensation to the hospital. Furthermore, both parties can sue one another at the Social Court.

### **Additional reimbursements supplement the DRG reimbursement**

In addition to the DRG reimbursement, hospitals can receive additional payments or may be subject to deductions and penalties as a disciplinary measure. In 2018, there were 29 different add-on payments and deductions or penalties (GKV-Spitzenverband, 2018c). In the majority of cases, these are negotiated individually as part of the annual budget negotiations of the respective hospital. In selected cases, they are decided at the state or federal level. They can either be negotiated between provider and payer associations at the state or federal level, or be set by the Joint Federal Committee, Germany's highest decision-making body of the *Selbstverwaltung*. Add-on payments and deductions are used to impact the behavior of hospitals via financial incentives and to compensate for deficiencies in the DRG system.

First, add-on payments compensate for the provision of specific hospital structures and services that are not appropriately reflected in the DRG system. Among them are additional payments for medical education, specialized units and medical centres or the delivery of care to medically demanding patients. In line with that, hospitals enjoy add-on payments if they are located in financially unattractive regions but are vital to provide medical services to the region.

Second, deductions are used to incentivize hospitals not to deviate from the negotiated budget. If a hospital performs more services than agreed upon, it receives only 35% of the reimbursement it would normally receive for this service (*Mehrerlösausgleich* [surplus compensation]). If a hospital performs fewer services than negotiated, it receives a reimbursement of 20% for the services it should have theoretically performed (*Mindererlösausgleich* [deficiency compensation]). These deductions are not adjusted based on hospital characteristics, such as size and provider status.

Third, hospitals face penalties as a disciplinary measure. For example, they receive a deduction if they refuse to participate in the provision of emergency delivery of care (€60 per case) if they fail to submit requested data or if the data are of insufficient quality. However, the effect of these deductions is limited. By and large, it is financially favourable for a hospital to pay a penalty rather than to entertain an accident and emergency (A&E) department or to hire additional staff for submitting data.

### **In spite of a strict and detailed costing approach to determine DRGs, some problems in price setting exist**

Generally, the German DRG system follows a very detailed, standardized, strict, and unique costing approach to determine DRGs. However, there are still some problems in price setting (Schreyögg, Tiemann and Busse, 2006). For instance, it does not include any adjustment based on hospital or regional characteristics, such as the Market Forces Mechanism in England or the Medicare Wage Index in the United States (Schreyögg et al., 2006). Hospitals in rural regions have lower infrastructural and staffing costs but receive the same remuneration as their counterparts in urban regions of the same state. For the time being, there are 16 different price levels resulting from 16 different state base rates, but these follow historic developments and cannot be explained by patient or hospital structures or different wage levels (RWI, 2013). Germany still aims to align state base rates to one uniform price level with the federal base rate. The transition phase has been expanded to 2021. The introduction of a Market Forces Factor or a similar adjustment mechanism has not been presented as a potentially successful policy proposal yet. Thus, the council of experts on Germany health care recently proposed the introduction of a regionalization factor considering the hospital-specific price level of a respective region, such as county level (Advisory Council on Health Care, 2018).

One further problem is that the sample of hospitals, which submit their cost data to the InEK and/or their case-mix changes annually, is not representative of the country's hospital structure (SVR Gesundheit, 2018). To improve the latter, the DKG, GKV-Spitzenverband, and PKV-Verband have authorized the institute to oblige hospitals to submit data, but this option has only been introduced in 2016 and results in lengthy legal disputes with hospitals. It is not clear yet whether this authorization will finally make the sample more representative.

Finally, under the German DRG system, each hospital receives the same reimbursement per case irrespective of the level of care provided by a hospital. For instance, academic medical centres receive the same DRG payment for a given patient as a community hospital on the countryside, even though the facilities provided by the hospitals may differ especially at the cost level. The council of experts therefore recommends that the DRG system evolve to consider the variation of hospital costs per case at the different levels of care provision (such as acute care, specialized care, or highly specialized care), for instance, by using multipliers on the relative weights (Advisory Council on Health Care, 2018).

### **Germany still lacks instruments to control inpatient care volumes**

As already mentioned, Germany has experienced steady increases in volumes of inpatient care, while many other OECD countries have observed declining inpatient volumes in recent years. The expansion of volumes is particularly high among patients with lengths of stay of 1-3 days (approx. +50% over the past decade) or without overnight stay (roughly +20% over the past decade) but attempts to treat these patients in outpatient settings have failed thus far. Current reimbursement incentive systems for hospitals to substitute inpatient care with outpatient care are low. Additionally, the country faces a structural overprovision of hospitals and hospital beds. At the same time, it maintains a DRG system with a large number of DRGs (1292), with half of them being driven by at least one medical procedure, which sets strong incentives on volume growth and surgical interventions. In addition, states only partly fulfil their financial obligations to cover infrastructural costs. This exerts financial pressure on hospitals. As a result, hospitals expand volumes beyond what is medically necessary to cross-finance infrastructural costs. Sickness funds argue that they find themselves in a disadvantageous situation to exert budget control. As they still enjoy financial surpluses, they have limited power to reasonably call for cost containment.

As part of the Hospital Structure Reform Act, or *Krankenhausstrukturgesetz* (KHSG) from 2015, policy-makers have developed an instrument to address the problem of rising inpatient volumes. Since 2017, hospitals have received a so-called "deduction for the cost digression of fixed costs" (*Fixkostendegressionsabschlag*) of 35% on DRGs that feature economies of scale. This deduction only applies to *additionally*

negotiated services, meaning a share of the additional 1-2% negotiated between the individual hospital and its sickness funds. This instrument is in place to disincentivize hospitals to ask for ever-growing budget increases, particularly on interventions that are subject to economies of scale, such as hip and knee replacements. This instrument was introduced in 2016 and replaced the former "deduction on additional services" (Mehrleistungsabschlag), which operated in a similar way, but occurred at irregular intervals and with varying rates. Originally, the DKG, the GKV-Spitzenverband, and the PKV-Verband were set to negotiate individual deductions for all DRGs that feature economies of scale. Because the parties failed to close agreements and because negotiations ended at arbitration boards on a recurring basis, the legislature intervened and set a digression of 35% for all DRGs that are subject to economies of scale. In addition, a second opinion procedure has been introduced for selected procedures that underwent sharp increases in volumes in the past. Although, in 2017, volumes reduced slightly, it is still unclear if this is the start of a new development or just a short break in the trend of rising inpatient volumes.

The KHSG has also introduced broader reforms of the German DRG system. It has made a first attempt to improve quality of care in the inpatient sector. It introduces structural quality indicators for selected hospital units, allows selective contracting on the grounds of quality, and introduces pay-for-performance (P4P). The design of the latter, however, is still in process; P4P should have been introduced by the end of 2017 already.

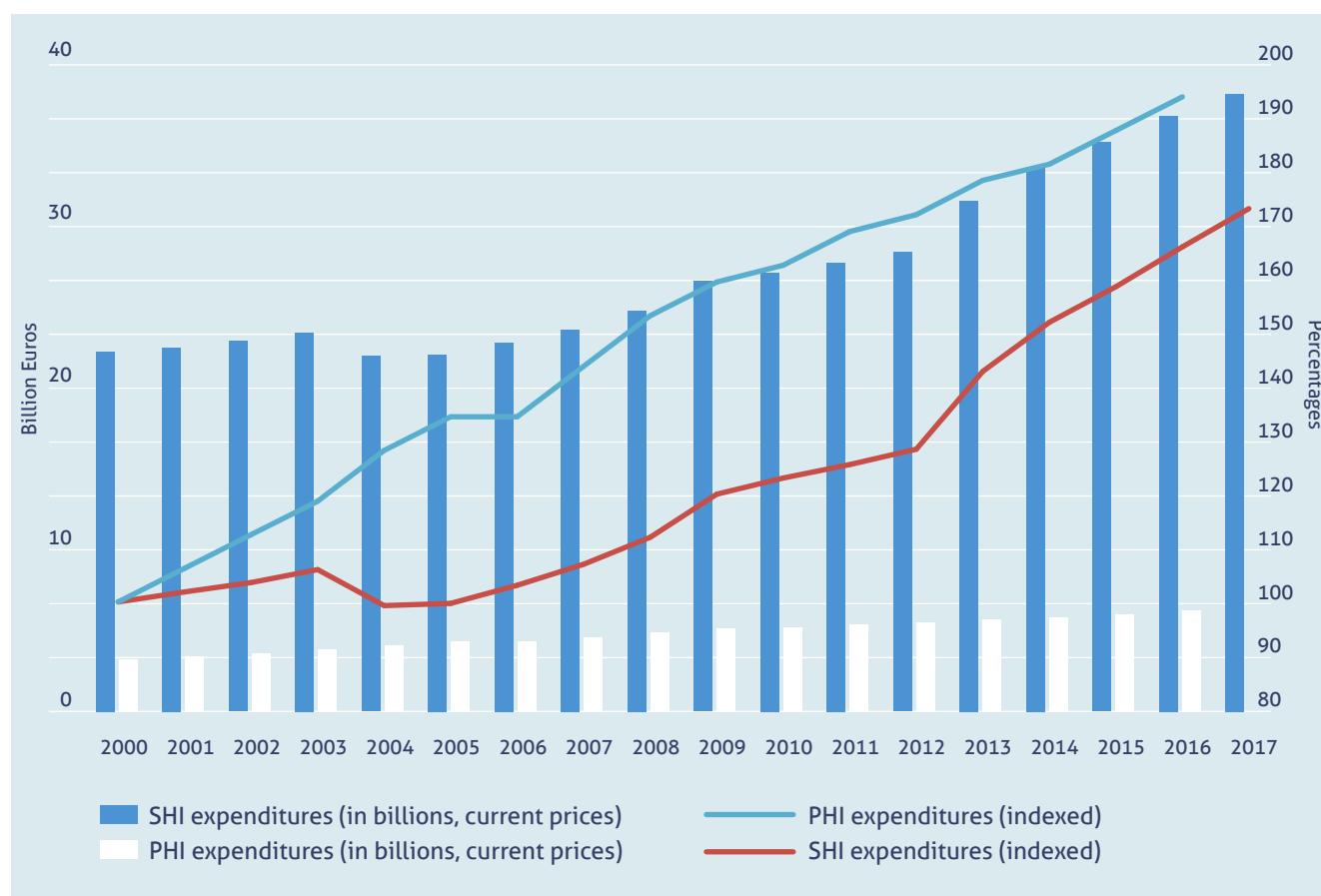
The 2018 Nursing Workforce Strengthening Act (*Pflegepersonalstärkungsgesetz*) represents a notable change to the DRG system. Thus far, the DRG system has set incentives to increase the number of physicians who directly contribute to hospital volumes, while keeping constant the number of nurses. According to nurse representatives, this has led to a significant deterioration of working conditions of the nursing workforce. A policy report (Schreyögg and Milstein, 2016) indeed found that in several hundred hospitals, nursing ratios largely deviated from the median of nursing ratios in German hospitals. The report also confirmed for Germany that low nursing ratios are associated with low quality of care. In 2016, the legislature has introduced minimum nurse staffing ratios, which will come into effect on 1 January 2019. This was deemed insufficient by nursing unions and left-wing parts of the government. As a result, the legislature has decided to exclude nursing costs from the DRG system. The latter will effectively come into force in 2020.

### Primary care and outpatient specialist services

In 2016 and 2017, expenditures for outpatient services in the SHI system amounted to €36.53 and €38.09 billion, respectively. In 2016, the PHI system spent €4.59 billion on outpatient services (2017 data was not available) (Figure 8).

From 2000 to 2017, PHI expenditures have almost doubled. SHI expenditures have increased by 80% over the same time. Up to 2012, expenditure growth in the SHI system had been significantly lower than in the PHI system (Figure 9). Since 2012, however, the growth rate of the SHI system started to overtake the growth rate of the PHI system.

**Figure 8**  
SHI and PHI outpatient expenditures in current prices and price-indexed (2000=100) from 2000 to 2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 was not available.

**Figure 9**  
Growth rates of SHI and PHI outpatient expenditures from 2001-2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 was not available.

In contrast to the inpatient sector, the reimbursement of outpatient services provided to SHI patients differs from the services to PHI patients. Both systems use a different fee schedule. Services in the SHI system are limited by budget restrictions, but not in the PHI system. Within both systems, the reimbursement of primary and outpatient specialist care follows the same structure. This section first reports on the SHI system and next on the PHI system.

### Reimbursing outpatient services: Statutory Health Insurance

In Germany, the KBV and the GKV-Spitzenverband have formed a nationwide collective agreement: all SHI funds annually and prospectively pay an aggregate lump-sum to the KV for all enrollees which they insure in that given state. The aggregate budget is roughly based on the volume of all services of the preceding year. In return, the KV guarantees the provision of outpatient services to all SHI enrollees. KVs distribute the aggregate budget among their SHI physicians in quarterly intervals. This chapter first reports how prices in the SHI system are calculated. Then, it guides through the stepwise approach from the determination of the aggregate budget to the individual reimbursement physicians receive for providing services to SHI patients.

### **The distribution of physicians is regulated at the KV level**

In 2017, there were 147 350 outpatient physicians practicing in the SHI system. A bit more than a third of them practiced as GPs (37%, or 54 741) (KBV, 2017). The distribution of physicians is regulated by the KV in accordance with the national planning guideline to ensure sufficient and equal access to SHI physicians (*Bedarfsplanungsrichtlinie*). The planning differs between GPs and specialist physicians. To plan the distribution of GPs, the country is divided into roughly 950 planning regions. A region is designed as “100% served” if a ratio of 1 GP to 1671 inhabitants times a demographic weight is met (GBA, 2018). A region is designated as a looming shortage area and a shortage area if the quota falls below 90% and 75%, respectively. KVen employ a range of measures to attract physicians to those areas, such as scholarships for medical students in exchange for a return-of-service obligation or financial support for practice openings in those areas. If the density exceeds 110%, no additional licensures to practice are granted. In 2016, there were 86 planning areas with a percentage share of less than 90% and eight areas with less than 75% in contrast to 384 areas with a coverage of 110% and more (Klose and Rehbein, 2017). For specialists, the ratio and the size of the geographic planning entity varies depending on the specialty in question. KVen can deviate from this regulation in selected instances if necessary.

### **Physicians are reimbursed by the SHI medical fee schedule**

Physicians are predominantly reimbursed on a combination of FFS and global budgets. They bill their services at the patient’s SHI fund based on the nationwide medical fee schedule of the SHI system (*Einheitlicher Bewertungsmaßstab*) (Figure 10). Prices in the SHI schedule are similar to DRGs, albeit for procedures rather than for diagnoses. The prices are composed of points, which reflect the intensity of a service (similar to cost/relative weights for DRGs) and a base rate, which is expressed in euros (corresponds to the base rate for DRGs). An increase in the number of points for a selected service increases the intensity of that service compared to other ones. An increase in the base rate increases the reimbursement of all services. In 2018, one point equalled €0.106543. The SHI medical fee schedule was introduced in 1978 to harmonize different fee schedules. Prior to that, SHI funds had negotiated their own schedules with the KBV and the KVen.

**Figure 10**  
Simplified excerpt of the physicians' fee schedule

Number	Service	Points	Euros
01102	Consultation of SHI physician on Saturdays between 07:00 and 14:00 h.	101	10.76
03000	Flat rate for general treatment of patients aged 19-54. Coordination of medical treatment. Data collection and diagnostics. Has to include personal contact. GP-only.	122	13.00
03220	Add-on to No. 3000 if patient suffers from at least one clearly identified chronic disease. Treatment of chronic disease in accordance with medical guidelines. Support of treatment of chronic disease. Revision of pharmaceutical plan, if necessary. GP-only.	130	13.85

Source: KBV, 2018.

There are three types of services in the schedule. First, there are services which can be billed by all physicians irrespective of their medical specialty. Second, there are services which can only be billed by physicians with the corresponding specialty. This section is subdivided into primary care and 23 specialties and covers the vast majority of services. Third, there are services which can be provided by all physicians, but require additional approval by the KV, such as additional education and training, and specific structural prerequisites in the medical practice.

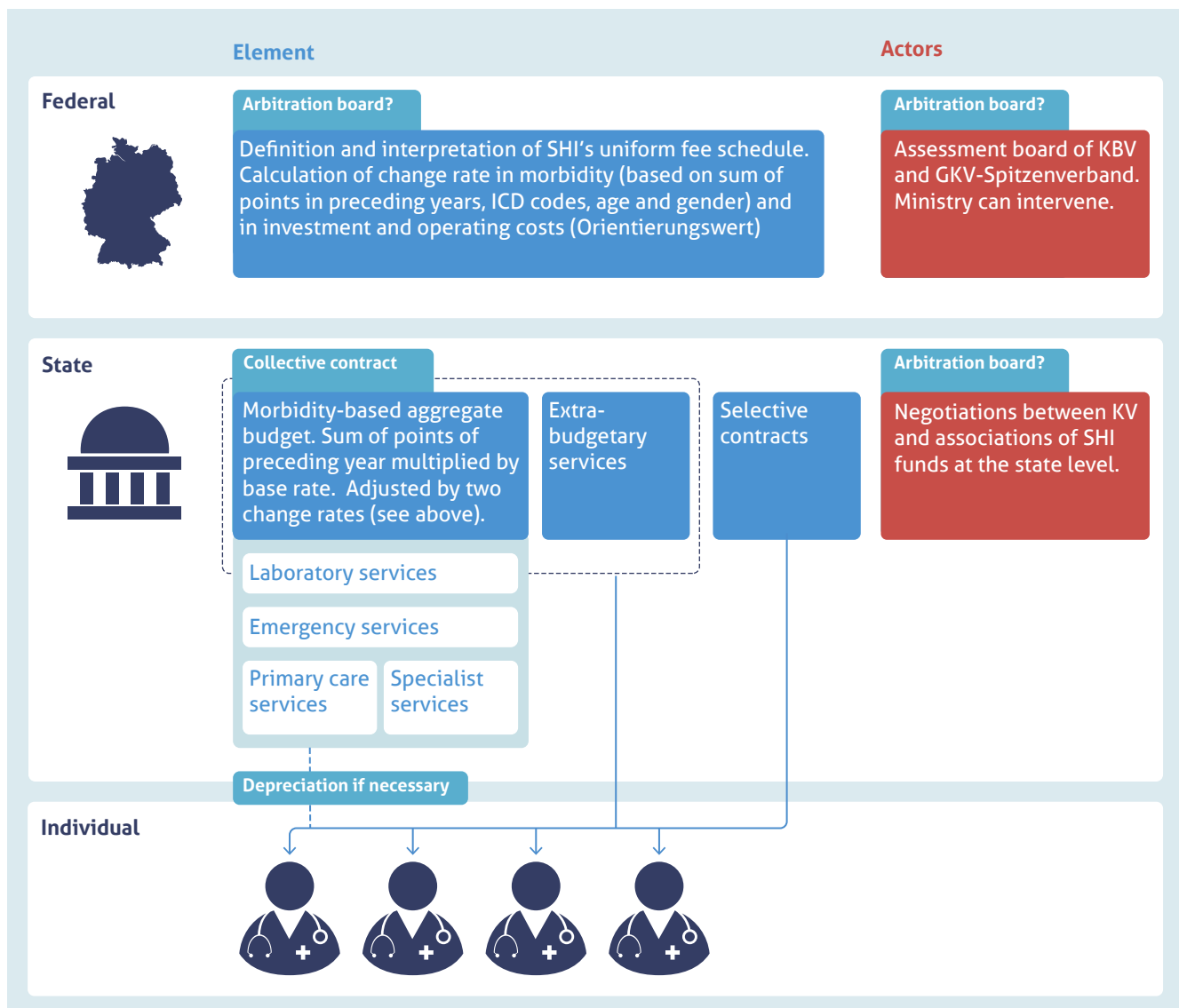
### **Prices shall reflect real prices physicians incur**

The services in the SHI medical fee schedule, their definition and interpretation, and their corresponding points and base rate are defined at the federal level by an assessment board (*Bewertungsausschuss*), which is a joint decision-making body of the KBV and the GKV-Spitzenverband (Figure 11). Points are defined by working groups of the assessment board. For this purpose, the board collects claims and cost data to determine the resource intensity of services. Medical associations can submit proposals to the working groups. Working groups invite external experts to support their work. The base rate was introduced in 2009 based on cost data from the two preceding years. The annual change rate of the base rate is determined based on the cost data of SHI physicians. It reflects increases in investment and operating costs while taking into account inefficiencies and economies of scale. It is determined by a working group as well.

The assessment board consists of three representatives from the KBV and three representatives from the GKV-Spitzenverband. Decisions have to be made unanimously and should be finalized by 31 August of the given year. If the board fails to reach an agreement, decisions are handed over to the extended assessment board (*erweiterter Bewertungsausschuss*),

which adds three non-partisan members – one at the decision of the KBV, one at the decision of the GKV-Spitzenverband, and a chair, which is determined in a joint decision of the KBV and the GKV-Spitzenverband. The entire process is supervised by the German Federal Ministry of Health. The extended assessment board can file a complaint or entirely revoke the mandate. The KBV and the GKV-Spitzenverband can file a suit against interventions by the Ministry at the Superior State Social Court. Vice versa, the KBV and GKV-Spitzenverband can also sue the assessment board at that Court. Both have taken place on a recurring basis in the past.

**Figure 11**  
From aggregate price setting to the individual physician's reimbursement in the SHI system



Source: Adapted by the authors based on KVRLP, 2017, and KVT, 2017.

## **SHI funds pay aggregate budgets to the KVs based on the preceding year**

Every KV annually receives an aggregate budget from SHI funds for all enrollees who live in that given KV. The aggregate budget consists of a morbidity-adjusted part and extra-budgetary services. The morbidity-adjusted part represents about 70% of all services. It is based on the sum of all points of services which have been provided to SHI patients in the preceding year (similar to the case mix), multiplied by the base rate. This budget changes annually based on two factors: the sum of points is adjusted to accommodate changes in age, gender and morbidity composition of enrollees in a given KV; the base rate is adjusted annually to reflect changes in investment and operating costs.

The change rates are proposed by the aforementioned assessment board, which calculates the KV-specific changes in morbidity for every KV separately, as well as the federal change rate of the base rate (see section above). Following from that, KV negotiates with all state associations of SHI funds on the aggregate budget of their KV. They define their regional base rate based on the change rates proposed by the assessment board. They can deviate from the board's calculations and decide on how to weight both change rates or choose entirely different rates. Furthermore, the parties can add additional services to the medical fee schedule, which only apply to their KV, and negotiate add-on payments to services and service providers, which are understood to need additional financial support. Negotiations on a state level should be finalized by 31 October of the given year. If the negotiating parties fail to reach an agreement, an arbitration board, which consists of representatives of the KV and state associations of SHI funds on equal terms, decides. All parties can sue the arbitration board's decision at the respective state's Superior State Social Court.

The remaining 30% of services are not morbidity-adjusted and not subject to budget constraints. This part includes, among others, outpatient surgeries, prevention, pain therapy, rheumatology, or selected anaesthetics. Additionally, it covers additional services which result from agreements on a federal or state level, for example, vaccinations or the provision of outpatient services to cancer patients.

## **The KV breaks down the aggregate budget to the individual physician**

Following from the agreement on the aggregate budget, the KV distributes the morbidity-adjusted part among its physicians on a quarterly basis. This follows a step-wise approach.

In the first step, services are split into four subgroups, namely laboratory, emergency, primary care, and specialist services. Primary care services are subdivided into GP services and paediatrics, whereas specialist services are subdivided into 14 medical speciality groups. The financial volume of these groups is distributed separately from one another. There is no financial

redistribution from one subgroup to another, such as from GPs to specialists. This shall guarantee that expenditure increases in one subgroup do not take place at the expense of another one.

### **Financial deductions shall disincentivize volume growth**

In a second step, the KV determines the quarterly service volume (so-called standard service volume (*Regelleistungsvolumen*)) for every SHI physician. All SHI physicians have their own financial budget, which is dependent on the average number of cases physicians from that medical specialty treat. This budget is reassessed in quarterly intervals.

To determine the standard service volume, the amount of cases of the individual physician of the preceding quarter is multiplied by the case value of the specialty and a demographic weight to reflect the age composition of the physician's patient cohort. To calculate the case value, the financial volume of all standard service volumes of a specialty is divided by the number of patients. If a physician outperforms his colleagues within his specialty by more than 150%/170%/200% of the average number of cases, the service volume of these additional services receives a deduction of 25%, 50%, and 75%, respectively. As such, the deduction is roughly comparable to deductions on additionally negotiated cases in the inpatient sector. This intends to reduce incentives of SHI physicians to augment the number of services beyond the average volume of their peers. At the same time, as the overall budget for all physicians of that specialty is fixed, an increase in the total number of patients treated leads to a reduction of the financial amount a physician receives per patient. Due to that, physicians are dependent on the notion that their colleagues do not excessively increase their number of patients. The thresholds of the stepwise depreciation apply to all KVen. However, selected KVen have decided to suspend the depreciation for selected specialties, and GPs and/or physicians who practice in medical shortage areas.

If physicians exceed their quarterly service volume, the reimbursement of services beyond that is depreciated as well. It follows a stepwise depreciation as described in the step above. Each KV determines the steps for each group individually. As the number of physicians changes quarterly, the steps change accordingly. The reimbursement of services which exceed the individual service volume can also be entirely suspended. This penalty shall incentivise physicians to remain within their predefined volume.

In addition to their reimbursement stemming from the morbidity-based aggregate budget, SHI physicians separately receive reimbursement for extra-budgetary services. In general, these services are not budgeted. However, in the past, this has been subject to change. For example, in 2011 and 2012, the total financial volume growth rate of extra-budgetary services was limited to 0.75% following larger growth rates in the years before. As a result, selected KVen introduced cost-containment measures on extra-budgetary services. Furthermore, they

receive financial contributions from selective contracting agreements. The specificities of these reimbursements are based on the individual arrangements in these contracts. By and large, they are similar to the reimbursement for extra-budgetary services.

KVen only have to inform SHI funds on how they distribute their aggregate budget. KVen and SHI funds inspect whether physicians bill their services correctly. Individual physicians can sue their KV for reimbursement at the Social Court and do so on a recurring basis.

### **The German reimbursement system is overly complex and fragmented**

The current reimbursement system is extremely complex and bureaucratic. Attempts to improve the SHI's outpatient system have increased its complexity and led to diverging incentives. Since 2005, the reimbursement of SHI services has moved from a pure FFS-system to a combination of FFS, budgets, and bundled payments. Since then, physicians receive a lump-sum payment per patient, which they can bill on a quarterly basis. The share of lump-sums was increased considerably in 2008 and 2013. For GPs, it ranges around 60% and is generally lower for specialists (KVRLP, 2017; KVSH, 2013).

Since the early 2000s, the legislature introduced various modes of selective contracting to increase competition in the SHI system that bypass the collective agreement (Milstein and Blankart, 2016). For example, since 2000, SHI funds and physicians can close integrated care contracts to experiment with innovative forms of delivery of care. There are more than 6400 integrated care contracts, but this number has not been updated since 2012 (Milstein and Blankart, 2016). In 2004, Germany attempted to introduce a gatekeeping system by introducing GP contracts. Enrollees enjoy slightly lower premiums but have to use gatekeeping services. In 2017, there were at least 1200 GP contracts in Germany (BVA, 2018).

KVen have to disentangle services provided in selective contracting arrangements from those under the collective agreement, have to reimburse neighbouring KVen if patients have accessed medical services there, and subtract various exceptions from the individual physician's standard service volume. This poses a significant bureaucratic burden on KVen. The low financial volume of many of these contracts raises the questions whether the bureaucratic burden might be worth disentangling costs.

### **Budget control performs below potential**

The GKV-Spitzenverband criticizes the lack of cost containment. According to the association, physicians provide an increasing number of extra-budgetary services as a loophole to escape budget constraints. In the past 5 years, the share of services which are not subject to budgeting has increased from 25% to 33%. In addition, KVen suspend budget restrictions for

selected groups of physicians, such as GPs and physicians who practice in underserved areas. Finally, physicians exceed their individual budgets despite financial deductions.

Price negotiations between the KBV and the GKV-Spitzenverband lead to severe disputes on an annual basis despite having established a joint institute for the calculation of the different price components. The GKV-Spitzenverband argues that the reimbursement of physicians has increased at a much steeper rate than expenditures (GKV-Spitzenverband, 2018d). In return, the KBV argues that increases in the reimbursement do not keep up with increases in investment and operating costs.

The KBV and its corresponding organisations on a state level are also confronted with disagreement from within the medical community and find themselves in a difficult situation. On the one hand, they represent the interests of SHI physicians vis-à-vis the GKV-Spitzenverband and other interest groups, but on the other hand, they have to enforce budget restrictions, control medical bills, and revoke medical licensures of their own members. The split of the aggregate budget by medical specialty and the prices for selected services within the SHI medical fee schedule are much contested. For example, over the past years, GPs have called for an increase in reimbursements for home visits and higher lump-sum payments for the provision of basic services.

### **Reimbursing outpatient services: Private Health Insurance**

Similar to the SHI system, PHI physicians are also reimbursed on a FFS basis. Physicians use a medical fee schedule to translate their services into points. This schedule is also used for services which are not provided by SHI and paid on an out-of-pocket basis by the patients themselves. In contrast to the SHI system, where the benefit-in-kind principle is applied, PHI uses the cost-reimbursement principle. Thus, patients insured under PHI pay their physicians directly. Following from that, they hand in their bills to their respective PHI fund to claim the refund of their medical expenditures. Because physicians are paid directly by PHI patients, they can sue patients for payment. Patients, in return, can sue their PHI fund to refund their payments. There is no budget ceiling in place. For civil servants, the state uses the same reimbursement mechanism as the PHI.

The medical fee schedule for PHI services is set by the German Federal Government and has to be approved by the Bundesrat. In 2018, one point equals €0.0582873. This value dates back to 2001, when prices in Deutsche Mark had to be converted into euros. It has not been adjusted since then. The PHI medical fee schedule consists of roughly 2000 services and more than 900 add-ons for the provision of services to children, during out-of-office hours, additional diagnostic services, and use of additional technologies. It functions like the SHI medical fee schedule.

**Figure 12**  
**Thresholds of weighting factors for PHI prices**

	Physician services	Technical services	Laboratory services
Simple factor	1.0	1.0	1.0
Standard maximum (threshold) factor	2.3	1.8	1.15
Maximum factor	3.5	2.5	1.3

Source: PKV-Verband, 2008.

Physicians can weigh the points for the provision of medical services with a factor of up to 3.5 (maximum factor) depending on the medical complexity and time needed to provide the service (Figure 12). The weighting factors are defined in the fee schedule as well. For physician services such as personal consultations, physicians can weight their services with a factor of up to 2.3 (standard maximum/ threshold factor) without explanation. Weighting factors beyond this threshold have to be explained in a written note to the patient and agreed between both parties. The same applies to technical and laboratory services, with the thresholds being set at 1.8 and 1.15, respectively. If physicians exceed the maximum factor of 3.5 (2.5 for technical services and 1.3 for lab services) and if patients want to claim refund for these expenditures, physicians need written consent from the patient. The patient has to negotiate with his PHI to confirm whether the PHI covers the higher medical costs. In 2016, 77.43% of physicians used the standard maximum threshold factor, 4.18% as a lower one and the remainder a higher one (PKV-Verband, 2017). The simple and threshold factor for physician and technical services were defined in 1982 and have not been changed since. The maximum factor and factors for lab services were added in 1995 and have not been modified since.

Disputes on how to interpret the PHI medical fee schedule are resolved by the "central commission on questions concerning the medical fee schedule" of the BÄK. This commission consists of four representatives from the BÄK, one member of the German Federal Ministry of Health, one member of the German Federal Ministry of the Interior, and one member of the PKV-Verband. It is headed by a physician who has been appointed by the board of the BÄK. Next to the interpretation of the medical fee schedule, this commission is mandated to add further items as so-called analogue services. These are listed in a separate list and allow physicians to bill services which are not officially listed in the PHI medical fee schedule. To some extent, these items have been proposed by the BÄK and agreed upon by the German Federal Ministry of Health, the German Federal Ministry of the Interior, and the PKV-Verband.

## **The PHI medical fee schedule is outdated, and reforms are stuck**

The current medical fee schedule of the PHI is outdated. It dates back to 1982, and the latest proper revision of parts of the medical fee schedule took place in 1995. As a result, many new procedures, such as minimally invasive surgical interventions, are not included. Physicians criticize the medical fee schedule because the value of a point has not been increased since 2001, and the weighting factors originate from 1982 and 1995.

The BÄK and the PKV-Verband officially began revising the fee schedule in 2013. This reform attempts to update the schedule to the latest state of medical innovation. It shall make the billing of services more transparent, less disputable, and easier to understand. Furthermore, it is expected to properly reflect expenditures physicians incur without putting a necessary financial burden on patients. In a first step the BÄK, the PKV-Verband, and state representatives (on behalf of civil servants) agree on a draft proposal which is then reviewed by the Federal Ministry of Health. All partners have to agree on one joint proposal, with the German Federal Ministry of Health having the final decision-making power on the proposal. Upon approval by that Ministry, the German Government and the German Bundesrat jointly adopt the new medical fee schedule. Thus far, 137 medical associations have revised the fee schedule in working groups and commented on proposals. The latest proposal adds 2444 new services, increasing the number of services from 2916 to 5360 (Rheinhardt, 2018). In late 2017, negotiations on the schedule concluded.

Negotiations on how to price services are still in process. New prices shall reimburse real costs physicians incur. The weighting of services will be composed of the labour intensity of the physician and other staff, technical resources, and overheads (Rheinhardt, 2018). Each of the four categories will be composed of a time and a severity factor. The commission investigates claims data from physicians as well as data on physician characteristics from the physicians' registry, the PHI's supervising authority, and the Federal Statistical Office, among organizations. The entire process is accompanied by roughly 300 representatives from medical associations who disentangle cost data and services from one another. The new schedule will not include a weighting factor at the physician's disposal anymore. Instead, there will be a uniform pricing system which will be equal to the former prices times a cost weight of 2.3.

To date, it is not clear how comparable prices in the SHI system are to those in the PHI system. PHI prices which are not weighted are understood to be roughly similar to SHI prices. Due to weighting factors in practice, however, expenditures for PHI services are about two to three times higher than for comparable services within the SHI sector (Niehaus, 2009). Besides different price levels, services within the SHI service are subject to a budget ceiling. This is not the case in the PHI system, where budgets restrictions do not apply.

PHI funds have little means for cost containment. The PHI system relies on a reasonable consumption behavior by patients, which is a very optimistic assumption. Patients are responsible for controlling their medical bills and to object when they question selected items, such as the provision of a service or its weighting factor. PHI funds can close contracts, which include cost-containing elements with their enrollees. For example, PHI funds can decide to refund only 80-90% of the expenditures enrollees incur, and/or only beyond a predefined deductible, or to only reimburse specialist services if patients have consulted a GP before.

### **The dualist system is contested**

The dualist structure of prices is highly contested by policy-makers, patients, physicians, and sickness funds alike; thus, there have been attempts to change it. The status quo has led to a heavily distorted outpatient system with preferential treatment of PHI patients at the expense of SHI patients.

Physicians enjoy considerably higher reimbursements for services to PHI patients compared to SHI patients for roughly the same services, and the provision of services is not limited by budget controls. As a result, PHI patients enjoy lower waiting times than SHI patients (Roll, Stargardt and Schreyögg, 2011). Physicians reduce their services to SHI patients at the end of each billing quarter, such that patients can face difficulties scheduling appointments with a physician if the physician's budget has been exhausted (Himmel and Schneider, 2017). Thus far, providers and payers have rejected attempts to merge both systems or to harmonize the reimbursement structure. The GKV-Spitzenverband fears higher prices and a cost increase for their enrollees without any substantial gains. The PKV-Verband fears losing its competitive advantage of low waiting times and additional services, but at the same time aims to limit its expenditure growth. The KBV desires to suspend the budgeting of services. Their position to a joint medical fee schedule remains unclear. The BÄK has been very outspoken in rejecting a joint schedule. It fears an overall decrease in the reimbursement of services, increased supervision, and interference by the legislature.

The German Federal Ministry of Health has established an expert commission (KOM-V), which has been mandated to draft a proposal on how to reform the reimbursement of outpatient services. A federal reform is earmarked for 2021.

### **Nursing homes and long-term care**

In Germany, LTC forms a separate sector with its own insurance system. LTC insurance is compulsory for everybody. Those who are enrolled in the SHI system are automatically enrolled in the SHI's LTC insurance as well. Those who are enrolled in a PHI fund choose among private LTC insurance providers. By and large, both SHI and PHI funds have to follow the same rules and regulations. LTC insurance was introduced in 1995. In 2017, 3.5 million inhabitants enjoyed contributions from LTC insurance,

out of which 3.3 million were covered by SHI and the remainder by PHI (BMG, 2018b). Of all cases, 2.7 million received contributions to outpatient services, whereas 0.8 million profited from support for inpatient facilities (BMG, 2018b). As of 2017, Germany had 14 480 nursing homes. Nursing homes form a contract with LTC funds at the state level in accordance with the respective regional authority of social services in which the nursing home is located (generally, counties). Nursing homes have to meet infrastructural and staffing prerequisites, which are set on a federal and state level to be eligible to close an agreement. Upon successful closing, nursing homes can bill the SHI's LTC funds and enrollees. In return, they have to adhere to federal and state regulations and are subject to quality inspections by the medical service of the SHI and its counterpart of the PHI. The following section focuses on inpatient services in the SHI system.

In contrast to SHI funds, which still enjoy financial surpluses, LTC insurance incurs losses and has had difficulties to keeping up with cost increases due to the ageing population. Since its introduction, the number of people who are dependent on outpatient facilities in the SHI's LTC has more than doubled, from 1 million in 1995 to 2.5 million in 2017. Furthermore, the amount of people receiving inpatient support doubled from 0.4 million in 1996 to 0.8 million in 2017. In line with these changes, expenditures have more than tripled from €10.25 in 1996 to €35.54 in 2017 and more than doubled since 2000 (€15.86 billion) (BMG, 2018b).

Financial contributions by LTC insurance are limited depending on the enrollee's need for nursing care. If enrollees want to receive contributions from their LTC insurance, they have to apply to their insurance and must have contributed to the insurance for at least two years to be eligible. If so, the medical service of the SHI assesses the patient's need and allocates the patient to one of five levels based on the physical, medical, cognitive, and psychological assessments, and the ratings of the patient's ability to live independently as well as the patient's social interactions. Patients are graded on a scale from 0 to 100 and allocated to one of the levels, accordingly. All patients who receive care in an outpatient setting receive monthly lump-sum contributions of €125 for short-term inpatient care, semi-inpatient services at night, or for services which support relatives (Figure 12). In addition, they receive a monthly contribution of €316 to €901 if services are entirely provided by the family and relatives at home, €689 to €1995 for professional outpatient services, and €700 to €2005 for inpatient services.

**Figure 13**  
Monthly contributions to LTC services depending on the care level in euros

Care level	Short-term care (outpatient)	Care provision by relatives	Professional outpatient services	Professional inpatient services
Level 1	125	-	-	-
Level 2	125	316	689	700
Level 3	125	545	1298	1262
Level 4	125	728	1612	1775
Level 5	125	901	1995	2005

Source: BMG, 2018c.

### **Nursing care charges are negotiated between LTC funds and individual nursing homes**

LTC funds cover nursing and medical care up to the monthly limit displayed in table 4. Prices are calculated on a per diem basis, and nursing homes are generally reimbursed monthly with one month counting as 30.42 days. Prices differ between levels and mostly reflect the staffing costs of the nursing workforce, additional personnel, and medical devices and other material costs. If the monthly sum of nursing care charges is higher than the monthly lump-sum payment (Figure 13), a patient has to pay the average difference irrespective of his level (see section below). Furthermore, the medical service of SHI funds investigates whether nursing homes bill the services correctly.

Nursing care charges are negotiated individually between a nursing home, welfare organisations, and LTC funds whose enrollees contribute to at least 5% of the nursing home's nursing days. These negotiations are subject to state rules and regulations. Nursing homes can apply for negotiations on their nursing care charges whenever they deem it necessary. Nursing homes submit all cost data to the opposing parties including among others, staffing costs, aggregate patient data, and infrastructural and material costs. To date, it is not clear which data nursing homes have to submit. Thus far, only few states have implemented state-wide regulations on the matter.

By and large, negotiations follow a two-step approach. In the first step, nursing homes explain why higher nursing care charges have become necessary and are appropriate, for example, due to tariff increases, additional personnel, and increases in material costs ("plausibility check"). If approved, nursing home cost data is benchmarked with other nursing homes of similar size in the same county ("external comparison"). Nursing homes with costs in the lower third are deemed cost-efficient. Nursing homes above that benchmark are further investigated.

Negotiations on nursing care charges are limited to six weeks. If the parties fail to reach an agreement, an arbitration board decides as the second step. The board is composed of representatives of nursing insurance funds (both public and private) and the nursing home on equal terms, a non-partisan chair, and two non-partisan members. The non-partisan members are appointed by the decision of the two parties and drawn by lot if necessary. If they fail to reach an agreement, the State Ministry of Health appoints. It also supervises the arbitration board and defines its rules of operation. Both parties can sue the decision of the arbitration board at the Superior State Social Court.

### **Patients contribute to nursing care charges, cover housing and utilities, education and infrastructural costs**

Patients in nursing homes contribute to nursing home costs in five different ways. First, they contribute to nursing care charges with a nursing-home-specific copayment. It is the same for all patients within the nursing home irrespective of their severity and reflects the average difference of the sum of nursing care charges minus the sum of lump-sum contributions by LTC funds. More precisely, nursing homes and LTC funds take the sum of all nursing care charges at a given date and multiply it by 30.42 to receive the monthly rate. Then, they deduct all monthly financial contributions by LTC funds in relation to the patients' care levels. Finally, they divide the remainder by the number of inhabitants.

Copayments have only been harmonized since 2017 to improve the price transparency and comparability of nursing homes. Prior to that, copayments increased by level of care. As a result, patients refrained from applying for level upgrades despite a deterioration of their health status. Copayments remain contested, because patients in less expensive care levels cross-finance more expensive patients. Furthermore, LTC funds expect a severe cost increase on top of their already problematic financial situation (Vdek, 2018b). Second, patients cover costs for housing, including utilities, and meal plans. The nursing home-specific copayment and costs for housing and utilities are negotiated between every nursing home on the one side and LTC funds on the other. As a result, prices vary between nursing homes. However, they do not vary between patients within a nursing home, or between a nursing home and different LTC insurances. If the parties fail to reach an agreement, an arbitration board decides. Third, patients cover investment costs of nursing homes including costs for the building, equipment, and maintenance. In contrast to nursing home-specific copayments and costs for housing and meal plans, investment costs are not negotiated, but calculated by the nursing home in accordance with state law and requires approval by the relevant authority. The nursing home can sue the state at the Social Court. Fourth, patients pay a training levy. This levy varies among states and nursing homes, and the precise details are set by the state. For example, in selected states, the training levy only applies to nursing homes which

train nurses, whereas in other states, all nursing homes pay into a training fund. Fifth, nursing homes can charge patients for additional costs, such as wellness services, superior housing, and individual meal plans.

### **Prices are very heterogeneous**

Because prices are negotiated individually and because rules and regulations are generally often defined at the state level, prices are extremely heterogeneous. In January 2018, average prices per stage varied between €1082 in Saxony-Anhalt and €2331 in North Rhine-Westfalia, excluding training levies (Vdek, 2018b). Average copayments ranged from €214 in Thuringa to €841 in Berlin, housing and meal plan costs from €531 in Saxony-Anhalt to €1004 in North Rhine-Westfalia, and infrastructural costs from €280 in Saxony-Anhalt to €636 in North Rhine-Westfalia.

The LTC system was subject to comprehensive reforms in 2016 and 2017. The criteria to quality nursing care have been widened and loosened. Stages were subdivided from a three-level scale to a five-level scale to better reflect differences in care needs. The legislature considerably increased contributions by LTC funds and added new services to and stricter regulations on nursing homes, for example, staffing ratios. As a result, more enrollees have qualified for LTC contributions, and LTC funds face a much higher financial burden. Following these reforms, in 2018, calls to increase the financial contributions by enrollees to LTC funds have emerged. Different modes on how to distribute the burden have been put on the table.

## **4**

### **Conclusions**

Thus far, Germany has given preference to high volumes and low waiting times over cost containment and potential overprovision of care. It entertains a high density of providers, comparatively low prices, and reimbursement systems that support high turnover of patients. This combination has ensured that the country's targets are met. This approach works well if countries want to explore the full potential of the service provision of their health care providers, but less so if cost containment is a higher priority.

For the time being, the growth rate of the health care sector and its subsectors is not anchored to the federal level as it is in the case of England, France, or the Dutch inpatient sector. Instead, the growth rates of the inpatient and outpatient sectors are an aggregate of budget negotiations at lower levels. Germany records three different ways of negotiating its healthcare budgets. Budget negotiations in the inpatient sector and nursing homes take place at the individual level between the respective hospital or nursing home and the sickness funds or LTF care funds that cover their residents or patients and are largely based

on the preceding year. Budget negotiations in the PHI's outpatient sector are non-existent. Budget negotiations in the SHI's outpatient sector take place between the KV and the SHI funds at the state level and are largely based on the preceding year plus an increase calculated by a third party. Subsequently, the KV is tasked with distributing resources among its physicians. This puts the KV into a delicate position. On the one side, it represents its SHI physicians and negotiates in their favour. On the other hand, it has to organize the distribution of financial resources, making it vulnerable to fights between specialists and GPs and between specialists. Given that the budget growth factor is largely calculated at the federal level, the KV is limited in its potential to succeed in budget negotiations and reduces the risk that budget negotiations are misused for political purposes. This dualist role shifts the responsibility for mediating conflicts among physicians from the government level to the physicians themselves. It also, however, requires a clear framework within which the KVen operates. Compared to other OECD countries, if budget constraints are the overarching priority, setting a national cap on budget growth rates might be a more powerful tool than negotiations at lower levels.

In the inpatient sector and the SHI's outpatient sector, Germany entertains sophisticated price-setting mechanisms, which are largely based on real costs providers incur. The calculation of both the price level and cost weights are executed by a third party within a defined framework, which reduces the influence of providers and sickness funds on price setting. These processes lead to generous data collection that can be used to monitor and compare the behavior of providers. It is worth noting that Germany's inpatient data is the *result* of the DRG introduction rather than a prerequisite. To date, Germany could improve considerably on a more representative sampling of providers who submit their data. This is particularly apparent in the inpatient sector. The legislature has responded to this issue and equipped the InEK with the competency to mandate hospitals to submit data, but it is not clear yet whether this will make the price calculation sufficiently representative. In contrast to other OECD countries, the inpatient reimbursement is not adjusted based on hospital and environmental characteristics, such as a Market Forces Mechanism or a wage index or an adjustment for hospital size. This leads to a significant distortion in the inpatient sector, and add-on payments have not sufficiently succeeded in softening it.

The price calculation is accommodated by a complex system to resolve conflicts. The parties involved can invoke for arbitration boards at virtually every step of price setting and budgeting. This may lead to lengthy and cumbersome price setting but originates from Germany's historic experience of the partial suspension of a functioning and objective legislative. Henceforth, limiting the role of arbitration courts will not take place. Price setting the PHI's outpatient sector is largely outdated and rather opaque in the nursing home sector. In the PHI sector, however, reforms to update the fee schedule are being undertaken.

Germany has a chequered history with policy attempts to contain hospital costs and volumes. Because the country is still financially sound, policies to reduce budget growth have difficulties to find a majority. In the inpatient sector, attempts to reduce the high density of beds, to anchor hospital volumes, or to limit growth rates have performed below potential. Hospitals have generally found a way to bypass budget restrictions, but reductions in hospital beds are countered by severe political pressure. From a financial point of view, the introduction of DRGs has gone unnoticed. Attempts to shift surgeries to ambulatory care settings have resulted in an increase in outpatient surgeries *and* inpatient stays because hospitals could use the increased capacities from the newly opened beds for additional inpatient stays. Based on Germany's experience, if cost containment is the preceding policy goal, singular policies to target selected parts of the health care budget should be viewed with caution. England, France, and the Netherlands have a much more successful experience with setting global budget growth targets at the federal level, but these have to be broken down among providers.

In the past, the quality of care has not been understood to be an integral part of price setting but is an integral part of other health policy areas. In the inpatient sector, hospitals are obliged to annually and publicly report their quality results. These "structured quality reports" have improved quality of care, albeit not due to changed patient preferences or flows, but thanks to increased comparisons and benchmarking of hospitals with their competitors. However, these efforts have been deemed insufficient. In response, the KHSG has introduced three federal policies to improve inpatient quality of care: quality contracts, quality criteria for hospital planning, and P4P. As of March 2019, the design of a P4P programme is still under discussion.

In the SHI's outpatient sector, KVen are responsible for ensuring the quality of care of their physicians. Physicians are subject to a rigorous quality assessment. All physicians have to participate in continuous education or face penalties ranging from financial deductions to the total revocation of licensures to practice. Physicians who offer additional services, for example, diagnostic procedures such as ultrasound, long-term ECG, and MRI, or perform additional treatments and procedures, such as disease-management programmes and surgeries, have to apply for additional licensure to bill these services and have to undergo additional training and meet infrastructural requirements. Furthermore, they can be subject to annual quality checks, which can include inspections of the practice and its infrastructure, or the investigation of patient data and footage of the procedures. Sanctions range from written notifications to the entire revocation of the license to practice. In contrast to the inpatient sector, the results of individual physicians or practices are not published. In the PHI's outpatient sector, there is no quality control. In the past, price setting in the SHI's outpatient setting has been used to harmonize the delivery of care and first attempts to enhance a more comprehensive understanding of

service provision have been made. This, however, has led to a confusing mixture of different reimbursement schemes with diverging policy goals. For example, the introduction of lump-sum payments to SHI physicians has coincided with a perceived increase in waiting times. As a result, the Ministry of Health now discusses and experiments with policy options to lower waiting times.

For the time being, Germany's healthcare sectors remain strictly separated and are financed from entirely different budgets. To improve transparency and continuity of care, the Ministry of Health has installed a commission to reaffirm the reimbursement of outpatient SHI and PHI and a working group of federal and state governments to foster the integration of the different healthcare sectors (*Bund-Länder-Arbeitsgruppe zur sektorenübergreifenden Versorgung*). The first results are expected in 2020. If countries are serious about the integration of health services, they should upfront consider harmonising the different healthcare budgets.

In summary, Germany's price setting ensures that the budget increase in health care costs is limited due to limited price growth rates. Germany has built a sophisticated and rigorous way to determine prices in the inpatient and SHI's outpatient sector, albeit with much room for improvement. However, because Germany still enjoys a financially sound situation and has not set cost containment as its overriding policy goal, it does not operate with caps on aggregate budget growth rates. The introduction of quality of care and integration as components of price setting are relatively new and thus still under construction.

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