Understanding the German Health Care System

Editors: Konrad Obermann, Peter Müller, Hans-Heiko Müller, Burkhard Schmidt, Bernd Glazinski
Preface

The German health care system, established in the late 19th century, is historically the first universal health care system. After World War II, in line with the “Universal Declaration of Human Rights” of 1948, other universal health care systems emerged all over Europe, some following the German example, some coming up with new ways to administer and finance health care for their people.

The development of individual health care systems in Europe created a wide variety of variations, e.g. concerning the way systems are financed, the organization of the public health care system, the extent to which different stakeholders are involved (e.g. the state, insurance providers, professionals etc.), the main contributors and other interesting distinctions. In trying to understand the complex health care systems that have evolved, a large number of aspects need to be taken into account. On a governmental level, one of the most important aspects is cost-effectiveness. Although the German health care system is among the systems providing a very high quality of health care, it is also one of the most expensive and keeps undergoing reforms to reduce costs and maintain or improve quality.

This book aims to provide an interested international audience with insight into the “German way” of providing universal health care with all its advantages and disadvantages. We hope it will contribute to facilitating a better understanding of the German health care system by providing information on a multitude of aspects for scientific and practical discussions and exchange.

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Foreword

Over the years, all of us have had numerous occasions where we were asked to provide an overview or details about the German health care system. This happened during teaching, when exploring business opportunities in one of the world’s largest health care markets, when debating the merits and disadvantages of social health insurances, or when it came to technical issues about quality, access to care, and the like.

We realized that firstly, the German system was rather complex and could only be understood when combining a historical perspective with major current approaches to reform. Secondly, we were not well prepared to give answers that would put things into perspective. When searching for a concise overview, it became clear that there was a gap between brief overviews (in leaflets and brochures) and scholarly, in-depth presentations. In addition, publications in English were even more rare.

None of the literature we found, however, provided graphical presentations that would give a quick overview and pointed towards major distinguishing elements of the German system.

With this book, we aim to present a novel approach that will hopefully allow students, foreign scholars, and practitioners alike to gain a quick grasp and understanding. We present sets of graphics/tables with short explanations of key aspects of the health care system that will allow the reader to put any particular aspect into perspective and have a solid basic understanding before reaching out for more detailed accounts.

Obviously, we had to limit the amount of information and data in this book. Experts in any of the fields will notice limitations and we could not cover all intricate and interesting
details. For this, we refer to the scholarly accounts and detailed papers on specific aspects of the German system.

Our heartfelt thanks go to the students with whom we had an intense workshop on the German health care system; from this workshop the book subsequently developed.

Jasper Scheppe provided invaluable research assistance.

We learned new things and got a better understanding when putting together the overview. We hope the reader will benefit from reading and browsing through this book.

Finally, our deep gratitude goes to pfm medical Institute gGmbH, Cologne, which provided generous and unrestricted financing for making this booklet possible.

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How the System Evolved: History, Principles, and Reforms

1.1 History
1.2 Principles & Corporatistic Structures
1.3 Recent Reforms
1.1 History
The earliest forms of (health) insurance developed during medieval times in the form of guilds and miners’ associations. This was due to a combination of facing substantial risks, being relatively well off, and for trying to instill some form of solidarity.

Major reforms were undertaken in the 1880s amidst a turbulent industrial development.

Industrialization had led to a massive labor migration from the countryside to the cities. Large parts of the population suffered from insufficient health care, which led to pauperization due to the inability to work.

The traditional systems of social support, e.g. family, village communities or feudal systems, could not handle the “industrialized population”, and improved health care became a focus of the labor movement.

The “social question” also was raised by an encyclical of Pope Leo XIII in 1891. In addition there was a strong movement from academics, mostly economists, (“Kathedersozialisten” e.g. Gustav von Schmoller, Werner Sombart) to develop a coherent social policy in order to curtail the influence of revolutionary social democrats.

Chancellor Bismarck, under political pressure from workers’ associations, initiated legislation for social security systems. A tax-financed system was not viewed favorably by the influential East-Elbian nobility as they feared increased responsibility and correspondingly, higher taxes.

Bismarck himself, although deeply rooted in Christian tradition, looked at social policy primarily from a state perspective: “What is favorable for the Prussian State and the German Empire?” was his guiding principle and overarching goal.

Also, he felt that it would be prudent to allow for participation and self-administration in order to reconcile workers to the established political and economic order.
The German Health Care System

Health Care Before Bismarck

- First hospitals maintained by church and cities
- First university hospitals founded
- Church is prohibited from providing medical treatment
- Foundation of the first company health insurance fund at Krupp steelworks
- Miners’ guilds (Knappschaften) establish professional based social insurance (illness, disability)
- Imperial Message: Birth year of the welfare state

- 1220 1241 1710 1794 1803 1811 1833 1839 1850 1854 1881

- Separating the medical and pharmacist profession (Friedrich II)
- Prussia brings all hospitals under state control
- First psychiatric hospital
- Start of occupational health and safety measures in Prussia
- Compulsory miners’ guild insurance
The 1881 Imperial Message (“Kaiserliche Botschaft”)

“Already in February of this year We voiced our conviction that the healing of the social damage cannot only be sought through the repression of social riots, but equally on the positive promotion of the welfare of the workers. We consider it our Imperial obligation to again recommend warmly this task to the Reichstag, and We would look back with much greater satisfaction to all the success with which God has obviously blessed Our government, if We were to raise awareness on this issue and bring the fatherland new and permanent guarantees of its internal peace and to help those in need with greater security and efficiency of the assistance to which they are entitled.

[...]

For such assistance it is a difficult task to find the right ways and means, but also one of the highest responsibilities of any community, based on the moral foundations of Christianity. The close connection to real life forces of this nation and the merging of the latter in the form of corporate co-operatives under state protection and state support will, as We hope, make the solution of tasks possible that the state alone to the same extent could not provide.”

[...]
A Clear-Cut Conceptional and Ethical Basis to Establish Social Protection

Wilhelm I, German Emperor

Otto von Bismarck, Chancellor
Social Security Develops

• 1881: “Imperial Message” as foundation of social security system
• 1883: Establishment of statutory health funds by Bismarck.
• Establishment of the “Accident Fund” in 1885 and the “Pension Fund” in 1891.
• In 1885: about 11% of the total population is covered by more than 18,000 sickness funds – the average number of contributing members per fund was below 300.
• At the beginning, payments primarily covered loss of income during sickness – the ratio between monetary payments and medical service costs was 1.7 to 1
• In 1892, first comprehensive regulations between health funds and health care providers were established. Health funds could decide whom to contract as a statutory health insurance physician (SHI-physician).
• 1896: The Prussian medical fee schedule came into effect.
• From then on, coverage was continuously expanded with major parts of the population, e.g. students and farmers, included up until the 1960s and 1970s.

Health, pension and accident insurance became integrated into the “Imperial Insurance Code” (“Reichsversicherungsordnung”, RVO) of 1914. As of 1989, the RVO was transformed into the Code of Social Law (“Sozialgesetzbuch”, SGB), divided into 12 sections. The fifth section (SGB V) covers social health insurance.
German Social Security Viewed as Strong and Encompassing
Hermann Hartmann founded the “Hartmann-Bund” in 1900 as a medical self-help organization. In 2009, its membership stood at around 62,000.

The “Berlin Treaty” of 1913 regulated for the first time the number of insured per statutory health insurance (hereafter also “SHI physician”) with one doctor per 1,350 insured persons and thus limited the influence of the funds.

Creed: “The patient is the one to choose the doctor, not the insurance company.”

In 1932, the “Berlin Treaty” expired, and doctors were asked to provide the most economic medical care. A major “strike” broke out – doctors asked patients to pay directly for services received. The health plans set up their own medical practices.

In 1932, the first collective treaties shifted the monopoly for ambulant outpatient care to the physicians. In 1933, the National Socialists established a unified association of SHI physicians.

To the present day, the Association of SHI Physicians (“Kassenärztliche Vereinigungen”, KVs) is exclusively charged with the delivery of outpatient care, but this is slowly changing.

In Germany, physicians in hospitals are not allowed to provide outpatient care unless they have special clearance and are contracted by an SHI fund.

Huge successes of scientific medicine:

1882 Robert Koch identifies the cause of tuberculosis
1893 Emil von Behring develops a serum against diphtheria
1895 Wilhelm Conrad Röntgen discovers X-rays
1899 “Aspirin” put on the market
1909 Paul Ehrlich develops “Salvarsan” against Syphilis
1924 Comprehensive regulation on the relationship between SHI and providers. An “Imperial Committee for Doctors and Health Funds” was founded.
1935 Discovery of sulfonides by Gerhard Domagk
Famous German Physicians

Robert Koch

Ferdinand Sauerbruch

Gottfried Benn

August Bier

Ludolf von Krehl

Rudolf Virchow
Social Engineering (1950–1970)

An underlying assumption of this era was that an idealistic society could be designed by technocratic means (e.g., behaviorism in psychology found human behavior to be shapeable).

The main idea was to create institutions that specialize in solving specific problems in certain areas.

For the health care system, this meant the re-establishment of self-administration (1951 Law on Self-administration and 1955 Law on Association of SHI Physicians) as well as a stabilization of the welfare state (e.g. preventing old-age poverty).

1956: The Laws on Statutory Health Insurance for Pensioners came into effect.

New laws also modernized the financing and management of hospitals (1972 Hospital Financing Law KHG).

1974: Self-employed farmers, artists, students and disabled living in sheltered facilities received coverage from SHI.

The development of the welfare state was based on the optimistic assumption of continuous economic growth as well as the extensive ability to control the system and its participants.

The 1973 Oil Crisis and subsequent economic stagnation led to changes: in 1977, the first of many cost containment / cost dampening laws came into effect.
Massive State Investments into Medical Care and Effects of the Oil Crisis

Expansion of services

Technology-driven health care – the new Göttingen University Hospital

Göttingen University Hospital

Oil crisis in Germany: empty motorway

Rising health care costs led to on-going discussions and reforms with the goal of cost containment including

- Income-oriented expenditure policy
- Reference price for pharmaceuticals
- Restrictions on high-cost equipment and treatments
- Limits on the total number of physicians
- Co-payments

Between 1977 and 1983 several cost control laws were enacted.

The goal was to conserve the basic structure of the health care system while stabilizing non-wage labor costs.

The Healthcare Reform Act (GRG) of 1989 led to the SHI being the Fifth of the 12 Books in the Code of Social Law.
Steady Growth in Health Care Expenditures

Total Health Care Expenditure, in % of GDP, 1970–2009

Total Number of Working Physicians, 1960–2009
Centralized planning meant that the provision of care was organized through the state via hospitals, polyclinics and medical practice, with only few private practice physicians.

The central union and the government financed the health care system through a unified social insurance scheme.

After reunification, almost all ideas from the GDR health care system (e.g. polyclinics, public health initiatives) fell out of favor, but nowadays they are again part of the debate on improving patient-centered care in Germany.

Already in April 1945, a central committee was established for administrating health care in the Soviet occupation zone.

Health and health care was looked at in an encompassing way, and there was a close link between providing population-based care and supporting the state.
Focus on Public Health and Hospital-Based Care
1.2 Principles and Corporative Culture
Solidarity

The main idea of the statutory health system is the principle of solidarity. Membership in statutory health insurance is compulsory. The contributions are based on income in order to ensure that the cost of health care is shouldered primarily by the better-off, and everybody is able to access services. However, employees with an income above a certain threshold and the self-employed can opt out of the statutory system and insure themselves privately.

### Income threshold for compulsory insurance (2012)

- **> 50 850 Euros**: PHI
- **< 50 850 Euros**: SHI

### 1880 - 2006

<table>
<thead>
<tr>
<th></th>
<th>1880</th>
<th>2006</th>
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<tbody>
<tr>
<td>Life expectancy</td>
<td>38 years</td>
<td>78 years</td>
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<tr>
<td>Working life starts with</td>
<td>15</td>
<td>above 20</td>
</tr>
<tr>
<td>Old age pension starts with</td>
<td>70</td>
<td>65*</td>
</tr>
<tr>
<td>Children per woman</td>
<td>3,5</td>
<td>1,3</td>
</tr>
<tr>
<td>Inhabitants / km</td>
<td>110</td>
<td>230</td>
</tr>
<tr>
<td>Contribution rate</td>
<td>3 %</td>
<td>15 %</td>
</tr>
<tr>
<td>Coverage</td>
<td>&lt; 10 %</td>
<td>90 %</td>
</tr>
</tbody>
</table>

* (usually earlier)
Solidarity

SHI Membership by Group

- Mandatorily Insured Paying Members: 17,900,000
- Voluntarily Insured Paying Members: 30,000,000
- Family Members of Paying Members: 4,970,000
- Pensioners: 16,700,000

The German Health Care System
Basic Principles

German social health insurance is characterized by five structural principles.

1. Solidarity
2. Benefits in kind: Beneficiaries receive direct treatment, they do not have to pay upfront
3. Financing from employers and employees (see chapter 5)
4. Self-Administration (see above)
5. Plurality: Patients can choose amongst hospitals and private providers

In fact, SHI is less of an insurance (which is based on the principle of risk-equivalent premiums) but rather a fund, in to which member have to pay according to their ability. Thus the term “Krankenkasse” (health fund) is better suited than the nowadays predominant “social health insurance”.

Obermann, Müller, Müller, Schmidt, Glazinski
Social vs. Private Health Insurance

**Statutory Health Insurance**

- **Contribution** according to level of income
- **Solidarity Principle**
- **Benefits** according to need
- **Cost transfer**

**Private Health Insurance**

- **Premium** according to risk and benefits agreed upon
- **Equivalence Principle**
- **Benefits** according to contract
- **Reimbursement**

- **Rich** vs. **Poor**
- **Healthy** vs. **Sick**
- **High premium** vs. **Low premium**
Governing Principles: Subsidiarity, Self-Administration, and Corporatism

Subsidiarity

- Subsidiarity = the smallest and most local institution addresses a problem
- Health insurance companies are self-administrated
- State only provides framework and supervision
- Principle of decentralisation
- The “Enzyklika Quadragesimo” of the Catholic Church (1931) defines subsidiarity

Self-Administration

- The state grants autonomous regulation of a defined part in society via associations
- The state is not involved in negotiations but has a supervisory role
- Inpatient care is regulated via contracts between the Association of SHI Physicians and the regional health insurance associations
- The main actors in the German system therefore are the associations, not the insurance companies or the physicians themselves

Corporatism

- Shifting responsibilities to professional associations
- Participation of organized interests in formulating and executing political decisions
- The state is a negotiating party

The statutory health insurance (SHI) covers about 85% of the population and thus holds a strong influence over the German health system.

The SHI is predominantly financed by the income of job-holders.

The SHI and Associations of SHI Physicians (KVs) are self-administered corporate entities.
Balancing Self-Administration and Corporatism

Leave the state out of the daily management: resulting in flexibility, better understanding of local needs, less bureaucracy.

Goal: Optimal Provision of Health Care
1.3 Recent Reforms
## More than 35 Years of Reforms

<table>
<thead>
<tr>
<th>Year passed</th>
<th>Name of the Act</th>
<th>Year passed</th>
<th>Name of the Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>First law regarding cost containment in health care (&quot;Kostendämpfungsgesetz&quot;)</td>
<td>2002</td>
<td>Pharmaceutical Expenditure Limitation Act</td>
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<tr>
<td>1994</td>
<td>Code of Social Law XI (Statutory Long-Term Care Insurance)</td>
<td>2007</td>
<td>Act to Strengthen Competition in Statutory Health Insurance</td>
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<tr>
<td>1996</td>
<td>Health Insurance Contribution Rate Relief Act</td>
<td>2009</td>
<td>Introduction of the Health Fund</td>
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<tr>
<td>1997</td>
<td>First and Second Statutory Health Insurance Restructuring</td>
<td>2010</td>
<td>Act for Sustainable and Socially Balanced Financing of Statutory Health Insurance</td>
</tr>
<tr>
<td>2000</td>
<td>Infection Protection Act</td>
<td>2012</td>
<td>Act to Reimburse Psychiatric Care (&quot;Psych-Entgeltgesetz&quot;)</td>
</tr>
<tr>
<td>2001</td>
<td>Code of Social Law IX (Rehabilitation and Participation of Disabled People)</td>
<td>2012</td>
<td>Case Fees Act</td>
</tr>
<tr>
<td></td>
<td>Reference Price Adjustment Act</td>
<td></td>
<td>Contribution Rate Stabilization Act</td>
</tr>
<tr>
<td></td>
<td>Act to Reform the Risk Structure Compensation Scheme in Statutory Health Insurance</td>
<td>2003</td>
<td>First Case Fees Amendment Act</td>
</tr>
<tr>
<td></td>
<td>Act to Newly Regulate Choice of Sickness Funds</td>
<td>2007</td>
<td>Statutory Health Insurance Modernization Act</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2009</td>
<td>Introduction of the Health Fund</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2010</td>
<td>Act for Sustainable and Socially Balanced Financing of Statutory Health Insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>Act on the Reform of the Pharmaceutical Market (AMNOG)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012</td>
<td>SHI Health Care Delivery Structure Act, Rural Physician Act (&quot;GKV-Versorgungsstrukturgesetz,Landarztgesetz&quot;)</td>
</tr>
</tbody>
</table>
Markets and Pushing for Competition

Problems of the SHI in German health care

Erosion of revenues
- Decrease of the number of persons liable to compulsory insurance and migration of higher income groups towards private insurance
- Income portfolio of households less wage dependent
- Demographic change (aging society)

Rising of expenses
- Progress of medical technology
- Inefficient structures in the public health system
- Extreme rise in costs in selected sectors (e.g. pharmaceuticals)
The Need for Reform Remains

**Challenges**

- Oversupply
- Undersupply
- Wrong incentives
- Separation between outpatient and inpatient care
- Quality and outcomes neglected

**Possible Options**

- Selected contracting of providers, coupled with outcome indicators
- Innovative health care approaches in rural areas and underserved urban areas
- Budgets, coupling payment with results
- Flexible integrated care and disease management
- Standards, directives, quality management
At Present, Three Reform Thrusts

**Manage Competition**
- Since 1995, free choice amongst health funds
- Elaborate structural risk adjustment scheme
- Selective contracting
- Negotiation with physicians about providing defined outpatient care

**Improve Efficiency**
- Health technology assessment
- Gain and retain qualified staff
- Further development of DRGs including psychiatric care
- Use of internet and telemedicine
- Local solutions and exchange of ideas

**Secure Quality**
- Mandatory quality management in inpatient and outpatient settings
- Additional payments (pay-for-performance)
- Quality circles, continuous medical education

The German Health Care System
Current Reforms and Discussions

Before the most recent reform in 2011, SHI contributions were split almost equally between employers and employees. In light of rising health care expenditures, and thus rising non-wage labor costs, the reform froze the employers’ share of SHI contributions. There is now a difference of around 0.9%. The employer pays 7.3% and the employee 8.2% of pre-tax income into SHI. All future cost increases will have to be borne by the insured.

The often quoted “cost explosion” in health care is a myth. Health care costs do rise but at a rate similar to overall economic growth. The key issue is the relative reduction in the sum of gross wages, which is the payroll tax base from which SHI contributions are deducted. In addition, the SHI Health Care Delivery Structure Act aims to improve the medical care in rural areas, whereas the Psych-Reimbursement Act incorporates psychiatric care into the Diagnosis Related Groups (DRG)-system.

Current ongoing discussions are about ...

... eHealth

... universal SHI (encompassing all citizens) and health premium (standard premium per head, subsidies based on income)

... prioritization of special medical services

... the role of the European Union in health care regulation

... competition between statutory and private health insurance

... introducing innovative care and stronger competition
Rising Expenditures but at a Rate Similar to Economic Growth

Health Care Expenditures in bn € and in % of GDP
1992–2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Care Expenditures in bn €</th>
<th>Health Care Expenditures in % GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>150</td>
<td>5.0</td>
</tr>
<tr>
<td>1995</td>
<td>180</td>
<td>5.5</td>
</tr>
<tr>
<td>1998</td>
<td>200</td>
<td>6.0</td>
</tr>
<tr>
<td>2001</td>
<td>220</td>
<td>6.5</td>
</tr>
<tr>
<td>2004</td>
<td>240</td>
<td>7.0</td>
</tr>
<tr>
<td>2007</td>
<td>260</td>
<td>7.5</td>
</tr>
<tr>
<td>2009</td>
<td>280</td>
<td>8.0</td>
</tr>
</tbody>
</table>
**Incentive Systems as the Basis to Combine the Art of Medicine with the Need for Efficiency**

<table>
<thead>
<tr>
<th>Traditional model</th>
<th>New paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentives are primarily based on collective goals and are to a large extent monetary. Results are predominantly economically defined and measured; these indicators are used for policy and management purposes.</td>
<td>Incentives are holistic and are primarily non-monetary; there is no one overall control-indicator</td>
</tr>
<tr>
<td>Physicians and patients as actors in a health care market based on the following principles:</td>
<td>Appropriate resources are determined by the individual patient-physician relationship (bottom-up)</td>
</tr>
<tr>
<td>• The market is solely comprised of individuals</td>
<td>Holistic view of utility, taking into account the individual biography and needs of participants (the art of medicine)</td>
</tr>
<tr>
<td>• Individual behaviour determines cost</td>
<td>Expenditures are determined by perceived responsibility for the patient coupled with appropriate medical care which leads to optimal results for the individual patient</td>
</tr>
<tr>
<td>At the same time, individuals are categorized and treated as members of defined groups</td>
<td></td>
</tr>
<tr>
<td>Management is top-down: the general, collective perspective determines rules and regulations for the treatment of individual patients</td>
<td></td>
</tr>
</tbody>
</table>

**Combining both approaches via congruent incentive systems for all relevant participants in the health care system**
Modeling Patient-Physician Interaction as the Basis for a New Health Care Paradigm

Physicians’ Behavior, e.g. Treatment Plan

Physician-Patient Interaction

Patients’ Behavior, e.g. Compliance

Medical Knowledge

Cognition (Understanding)

Emotion (Experience)

Physical Health Status of the Patient

Medical Standards

Professional Attitude

Health Literacy

Trust

Needs
2

Environment, Lifestyle & Health Indicators

2.1 Environment
2.2 Lifestyle
2.1 Environment
Life Expectancy

Health in Germany continues to improve. Between 1990 and 2004, life expectancy at birth increased in Germany for both males and females as well as in all age groups.

Since 1990, women’s life expectancy has risen by 2.8 years to 81.6 years; men’s life expectancy increased by 3.8 years reaching about 76 years. The difference between male and female life expectancy has decreased from 6.5 to 5.6 years.

The gain in life expectancy was substantially higher in East Germany.

However, the difference between states with the highest and lowest life expectancy remains significant: 2.2 years for females and 3.6 years for males.

Life expectancy in Germany is slightly lower than the European (EU-15) average, but is converging towards it.
Life Expectancy: Closing the Gap

Life Expectancy Gap, East and West Germany

Life Expectancy Germany and EU Average

Source: Katharina Diehl
Demographic Change

The demographic composition of the German population has changed markedly since the middle of the 20th century.

For more than three decades now, age cohorts have been shrinking due to lower birthrates. Since 1972, mortality rates have exceeded birth rates, which, at 1.38 births per woman, are among the lowest in the world.

During the last years, immigration has declined and does not even come close to compensating for the low birth rates and changing age structure. The population has been continuously shrinking since 2003. In 1970, there were 25 pensioners (age 65 and above) for every 100 members of the working population. Today, this number has reached 32 and is expected to exceed 50 by 2030. However, if one looks at the total number of dependents (i.e. the young and the old), this number was the highest in 1970 with 78 dependents per 100 workers. This ratio will not reach a similar level until around 2030.

These trends have led to an intense debate about the future of social security in Germany.

Not only will there be an ever smaller portion of the population working and thus paying into the SHI, but aging is also expected to increase the demand for health care services and related expenditures.
Demographic Change

Population Structure by Age

2010

Men

Women

2040

Men

Women

The German Health Care System
Key Indicators of Health

In the Key Indicators published by the OECD, Germany performs rather well compared to its peers. The life expectancy of the German population is higher than the average of OECD countries. Germany does well in providing acute care for people with life-threatening conditions such as strokes, achieving lower mortality rates than most other OECD countries, although some Nordic countries have even lower rates. Germany also avoids hospital admissions for people with chronic conditions such as asthma and diabetes. Like most OECD countries, Germany has a decreasing rate of cardiac diseases and a low infant mortality.

The German population displays somewhat less risky behaviour than other countries, as evidenced by smoking rates and alcohol consumption rates, which are at or below the OECD average.

As a result of an aging population, Germany has to deal with an increasing number of chronic diseases like diabetes. Moreover, obesity is increasing in Germany, as it is in all OECD countries.

Data from the DEGS-Cohort (German Adult Health Survey, 2012, Robert Koch Institut) showed that 67% of men and 53% of women were overweight with prevalences growing. The total number of people with diabetes has risen from 5.2 % (1998) to 7.2 % (2012). The increase is partially explained by the aging of the German society, better diagnoses and treatments but also by growing health risk factors.

Another major problem in Germany involves the growing number of mental illnesses, e.g. depression and burnout and their psychosomatic consequences. One reason reported is the chronic stress which is associated with burnout and sleep disturbances, especially in people on a higher socioeconomic level.
Key Indicators of Health

- Absence from work due to illness
- Infant health
- Dental health
- Maternal and infant mortality
- Cancer
- Morbidity
- Injuries
- Perceived health status
- Communicable diseases
- Potential years of life lost
- Life expectancy
- Causes of mortality
While most children and adolescents in Germany grow up healthily, many studies have shown a substantial effect of socioeconomic status on health-related development in children and adolescents.

Children from families with a lower socioeconomic status are more likely to develop deficits and early health difficulties, often associated with the implementation of long term treatment.

The risk of accidents, environmentally determined diseases and poor dental health is higher for those children. Low socioeconomic status is correlated with poorer general health, psychological and behavioural disadvantages and overweight.

Socioeconomic status also effects other areas of child and adolescent health, such as motor development, levels of physical activity, nutrition and eating disorders, smoking and exposure to passive smoking. Children and adolescents growing up in socially disadvantaged circumstances are an important focus group for prevention and health promotion.
Children’s Health Outcomes by Socio-Economic Status

Children and Adolescents
with Mental Health Problems, by Social Status

Overweight Children and Adolescents,
by Social status
Prevalence of Chronic Diseases

Chronic diseases are conditions that last for a longer period of time and cannot be totally cured. Continuous or recurrent use of health care is needed.

In Germany, these diseases account for three quarters of all deaths, and approximately one forth of all sickness costs are due to chronic conditions (e.g. cardio-vascular diseases, stroke, diabetes, cancer or chronic respiratory diseases).

Furthermore, chronic musculoskeletal disorders, psychiatric disorders, seeing and hearing impairments as well as genetic disorders also contribute considerably to the burden of disease in the population.

Malnutrition, lack of physical activity, tobacco consumption and excessive alcohol consumption are major causes of cardio-vascular diseases, cancer, diabetes and pulmonary diseases.

The prevalence of chronic diseases is therefore an important measure of a population’s health and mirrors the effectiveness of preventive care.

The prevalence of chronic diseases increases with age, while higher socioeconomic status shows a protective effect on chronic diseases.
Prevalence of Chronic Diseases

Women with Chronic Disease (%)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>All /Total</th>
<th>15</th>
<th>25</th>
<th>35</th>
<th>45</th>
<th>55</th>
<th>65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low educated class</td>
<td>All women</td>
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<tr>
<td>18–29 years</td>
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<td>30–44 years</td>
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<td>45–64 years</td>
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<td>65+ years</td>
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</table>

Men with Chronic Disease (%)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>All /Total</th>
<th>15</th>
<th>25</th>
<th>35</th>
<th>45</th>
<th>55</th>
<th>65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low educated class</td>
<td>All men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>18–29 years</td>
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<tr>
<td>30–44 years</td>
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<tr>
<td>45–64 years</td>
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<tr>
<td>65+ years</td>
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</tbody>
</table>
Cardiovascular diseases and cancer are the most important causes of death in Germany. See the overview on page 66. While the incidence of cancer is still on the rise, cardiovascular diseases are combatted more and more effectively. Mortality from myocardial infarcts has generally decreased since 1990. Scientific progress and advances in effective medical care have also led to decreasing mortality rates for other chronic diseases such as coronary heart disease and cerebrovascular diseases.

Other diseases are gaining in importance. Because of the increasing number of old people, the prevalence of dementia is expected to double until 2050. Furthermore, there will be rising incidences of diseases like cancer, diabetes, osteoporosis and stroke.

Mental illnesses, such as depression and anxiety disorders, have become a major concern and play a leading role in the inability to work and necessity of early retirement.

Infectious diseases have been declining during the last decades but are again gaining in importance. In particular, the proportion of drug-resistant tuberculosis pathogens has increased in recent years. The number of people killed or seriously injured in car accidents has decreased over the last decades.
Health Risks

Mortality from Coronary Heart Disease (CHD)

- EU-15 (Women)
- Germany (Women)
- EU-15 (Men)
- Germany (Men)

Annual New Cancer Patients >65 Year (Predicted)

- Women
- Men

Mortality from Cerebrovascular Diseases

- Women
- Men

Killed or Seriously Injured in Car Accidents

- Women (seriously injured)
- Women (killed)
- Men (seriously injured)
- Men (killed)
2.2 Lifestyle
## Alcohol Consumption, Percentage, Germany 2009

### Lifestyle: Alcohol Consumption

The graph illustrates the percentage of total population with different alcohol consumption levels by age group in Germany in 2009. The categories are divided into 18 to 30 years, 30 to 45 years, 45 to 65 years, and Above 65 years.

- **18 to 30 years**:
  - Risk: 37.7%
  - Moderate: 46.1%
  - No Alcohol: 16.2%

- **30 to 45 years**:
  - Risk: 25.9%
  - Moderate: 57.2%
  - No Alcohol: 16.8%

- **45 to 65 years**:
  - Risk: 22.2%
  - Moderate: 56.2%
  - No Alcohol: 16.6%

- **Above 65 years**:
  - Risk: 22.2%
  - Moderate: 51.1%
  - No Alcohol: 26.7%

The graph shows a higher percentage of moderate consumption in the younger age groups compared to the older age groups, with a notable decrease in the older age groups. The risk of alcohol consumption is generally lower in the younger age groups, with a slight increase in older age groups.
Lifestyle: Smoking

Prevalence of Smoking
(Women, Older Than 18 Years, 2005)

Prevalence of Smoking
(Men, Older Than 18 Years, 2005)
Lifestyle: Body-Mass-Index

BMI by Gender, Percentage, Germany 2009

Male
- Underweight: 0.8%
- Normal Weight: 39.5%
- Overweight: 43.4%
- Obesity: 16.3%

Female
- Underweight: 3.0%
- Normal Weight: 29.2%
- Overweight: 52.0%
- Obesity: 15.7%
Lifestyle: Illegal Drug Abuse

Illegal Drug Abuse, Percentage, Germany 2010

% of Population

0 5 10 15 20 25 30

14 to 18 years 18 to 21 years 21 to 25 years 25 to 30 years 30 to 40 years Above 40 years

The German Health Care System
Lost Working Years

Working Years Lost to Illnesses, in 1,000 Years, Germany 2002-2008
(The number of years being absent from work due to illness)

- All disorders: 4,251
- Mental health disorders: 763
- Cardiovascular disorders: 382
- Respiratory problems: 271
- Digestive disorders: 189
- Musculoskeletal disorders: 506
Structures & people

3.1 Governmental Structures
3.2 Self-Governing Structures
3.3 Hospitals and Professionals
3.1. Governmental Structures
Public Health

Federal Ministry of Health
(“Bundesministerium für Gesundheit”, BMG)

The BMG is primarily a regulatory and supervisory authority. It does not employ curative care doctors nor does it own hospitals. The spheres of activities are (i) health (ii) prevention, and (iii) long-term care. The safeguarding and further development of the SHI is a core task. In addition, the BMG is responsible for international and European health policy.

State Ministries of Health

The Ministries of Health in the 16 Federal States are primarily concerned with the provision of health care, especially hospital planning; they manage disease registries and are active in prevention and management of infection outbreaks. All state ministries are members of the “Gesundheitsministerkonferenz der Länder” (Conference of Health Ministers, a forum for addressing technical and political issues).

Public Health Service
(“Öffentlicher Gesundheitsdienst”, ÖGD)

The ÖGD refers to the German public health services, including the so called “Gesundheitsämter” (public health departments). The “Gesundheitsamt” is a local public health service. Each department is directed by a so-called public health officer. Public health departments are responsible for hygiene, monitoring of institutions (hospitals, retirement homes, kindergartens, schools, campsites etc.) They provide various kinds of counseling services (social, pregnancy, dietary, etc.) and monitor narcotic use.
BMG and Federal Authorities

Bundesministerium für Gesundheit (BMG)
Federal Ministry of Health
Supervisory role for the governmental institutions, statutory health insurance, social insurance, prevention & the effectiveness of the health care system.
Federal Minister of Health
Daniel Bahr

Bundesinstitut für Arzneimittel & Medizinprodukte (BfArM)
Federal Institute for Drugs and Medical Devices

Deutsches Institut für Medizinische Dokumentation & Information (DIMDI)
Federal Institute of Medical Documentation & Information

Robert-Koch-Institute (RKI)
Federal Institute for Disease Control and Prevention

Paul-Ehrlich-Institute (PEI)
Federal Institute for Vaccines, Sera, and Blood Products

Bundeszentrale für gesundheitliche Aufklärung (BZgA)
Federal Center for Health Education

Federal Government’s Commissioner on Narcotic Drugs

Federal Government’s Commissioner for Patient’s Affairs
Faculties and University Clinics are Organized at the Federal Level

Medical Faculty Association ("Medizinischer Fakultätentag", MFT)

The MFT represents the interests of the medical schools in public. Its goal is to ensure an optimal framework for the faculties, in order to optimize the research and teaching conditions.

The members of the MFT consist of the deans of each medical faculty in Germany.

Association of the University Hospitals ("Verband der Universitätsklinika", VUD)

The VUD is responsible for the quality assurance of university hospitals and deals inter alia with working hours legislation, reforms of employment terms at universities and reforms of the support and management structures.
Universities and Medical Faculties

Medical faculties in Germany and enrolled students (2008)

- 34 public medical universities, 2 private
- First-year medical students in 2010: 8 629
- Total number of medical students in Germany: 75 463
- Medical graduates in 2006: 8 724
- Degree type: State examination (min. 6 years)
- Restricted admission by grade point (numerus clausus)

The German Health Care System
The Scientific Committees to Advise the BMG

Council of Experts on Health ("Sachverständigenrat für Gesundheit", SVR)

The SVR has the task to submit every 2 years a report on recent developments in the German health care system to the BMG.

This report should cover:

- The development of health care and its medical and economic effects
- Priorities for reducing undersupply and inadequate services
- Suggestions for medical and economic datasets
- Options for further development of the system

Since 1987, a total of 16 reports have be published.

The German Ethics Council ("Der deutsche Ethikrat")

The German Ethics Council consists of 26 members who meet monthly in order to discuss ethical issues such as the Embryo Protection Law and the topic of euthanasia. They give advice to the BMG and publish statements on ethical debates and issues.

Deutscher Ethikrat
Ethical Issues in Germany

(Selected Topics of the German Ethics Council 2009–2012)

- Biobanks
  - Human genome banks (bioethics)
  - Enhancement medicine
  - Resource allocation in health care
  - Availability of health care
  - Chimera and hybrid research (cloning)
  - Brain research
  - Dementia & autonomy
  - Assisted dying
  - Anonymous turning in of children for state care
  - Personalized medicine
Financial Supervision

Federal Institute for Statutory Health Insurance ("Bundesversicherungsamt", BVA)

BVA Tasks:
- Supervision of federally regulated social security insurance providers and other institutions
- Petitions and grievances
- Audit of contract awarding procedures
- Approval of insurance provider regulations
- Approval or criticism of budget plans and staff regulations
- Auditing of the business, accounting, and operational management of federally regulated health insurance providers
- Management of subsidies and other allocations made to the social security system
- Implementation of a risk structure equalization scheme and administration of the health care fund
- Approval of disease management programs

The BVA is supervised by the Federal Ministry of Labor and Social Affairs

Bundesanstalt für Finanzdienstleistungsaufsicht (BAFin) (private insurance)

Federal Financial Supervisory Authority

BaFin is an independent public law institution. Its primary objective is to ensure the proper functioning, stability and integrity of the German financial system.
Cashflow of the German Health Care Fund 2010
(report by the federal social insurance authority – BVA)

<table>
<thead>
<tr>
<th>CASHFLOW OF THE HEALTH CARE FUND 2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution of insurants</td>
<td>159.0 bn €</td>
</tr>
<tr>
<td>+ Other revenues</td>
<td>15.5 bn €</td>
</tr>
<tr>
<td>= Total revenues</td>
<td>174.6 bn €</td>
</tr>
<tr>
<td>- Payments to SHI</td>
<td>170.3 bn €</td>
</tr>
<tr>
<td>- Administrative costs</td>
<td>0.04 bn €</td>
</tr>
<tr>
<td>= SURPLUS 2010</td>
<td>4.2 bn €</td>
</tr>
</tbody>
</table>

The health care fund, controlled by the BVA, is the combined balance sheet of the SHI. It collects the revenue and distributes it to the individual SHIs.

Currently (1.1.2012) there are 146 statutory health insurance companies.
The IK-Number (“Institutionen-Kennzeichen”= German institutional ID) is a nine-digit number identifying a social institution and mandatory for each institution so that the provided services can be accounted for and payments can be made.

The BSNR (“Betriebstättennummer”= establishment number) identifies the physician’s office as an accounting unit and allows the assignment of medical services to the specific location of their provision.

The LANR (“Lebenslange Arztnummer”= lifelong physician number) is a personal identification number for each physician. This nine-digit number must be specified on each physician’s account or prescription.
Where to Use Monitoring Numbers
3.2 Self-Governing Structures
Federal Joint Committee ("Gemeinsamer Bundesausschuss", G-BA)

The Federal Joint Committee is the highest board in the hierarchy of self-governing structures of physicians, dentists, physiotherapists, hospitals and insurances.

Its members consist of delegates from the Doctors’ National Association of Statutory Health Insurance (physicians/dentists), the German Hospital Federation and delegates representing patients and the government.

Its function is the establishment of guidelines for the SHI as well as quality assurance in health care. The G-BA decides on including new treatments and procedures in the SHI benefit catalog. The G-BA decisions are the legal basis for all health insurance companies and medical providers.

Subcommittees specializing in certain topics make propositions to the G-BA plenum that, after approving, forwards them to the ministry. The ministry can then endorse or reject the proposals.
G-BA with Key Role in the German Institutional Setting

Actors in the German Health Care System

Federal Legislation
e.g. BMG

State Legislation
e.g. State Ministries of Health

Communal Supervision
e.g. Public Health Service

Self-Administration

G-BA

IQWiG

KBV

KVs

GKV-SV

BA, INBA

LÄK

BÄK

Patient Representatives

Associations
of Care Providers and
Hospitals

DKG
The Institute for Quality and Efficiency in Health Care (“Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen”, IQWiG) is an independent research institute with the aim to objectively examine the advantages and disadvantages of medical services.

Its function is to write independent, evidence-based reports on drugs, non-drug interventions, methods for diagnosis and screening, treatment guidelines, and disease management programs.

The IQWiG provides health information to the Federal Joint Committee, the Federal Ministry of Health and the general public.

It is financed by financial contributions from the insured, whereas the budget is determined by the Federal Joint Committee.
Institute for Quality and Efficiency in Health Care

- Federal Joint Committee
  - Institute for Quality and Efficiency in Health Care
    - Institute Board
    - Board of Directors
    - Institute Director
      - Deputy Director
        - Steering Committee
          - Institute Management
            - Department Heads
              - Administration
              - Drug Assessment
              - Medical Biometry
              - Non-Drug Interventions
              - Health Economics
              - Quality of Health Care
              - Communications
              - Health Information

- Board of Trustees
  - Scientific Advisory Board
    - advises

- Federal Ministry of Health
  - commissions

The German Health Care System
Central Federal Association of the Sickness Funds

The Central Federal Association of Health Insurance Funds (“GKV-Spitzenverband”, GKV-SV) is the central representation of interests of all statutory insurances of Germany at the federal level.

Its responsibility is the determination of payments for each medical treatment and the costs for medical goods. The GKV-SV represents the SHI in the G-BA and distributes the assets held in the health care fund. It further defines the diseases that are part of the Morbi-RSA, a risk adjustment mechanism for SHI depending on costs for chronic diseases among the SHI (see section 5.3). The decisions of the GKV-SV apply to all SHI and their associations.

The GKV-SV is financed by payments from the statutory insurance companies.
Central Federal Association of the Sickness Funds

General Meeting of Members
- Election
- General issues

Administrative Board (41)
- Election & Control

Board of Management (3)
- Advisory service
- Nomination

Consulting Committee
- Advisory service
The Medical Review Board of Statutory Health Insurance Funds („Medizinischer Dienst der Krankenversicherung“, MDK) is an advisory service for all Statutory Health Insurances in each state.

Its function is to give advice and provide expertise for medical and social issues of health insurance companies (e.g. disability to work) and ensure high quality, availability and effectiveness of modern medical care (e.g. improvement of prevention of diseases; prohibition of unnecessary and inefficient medical treatments; support of medical advancement).

The Medical Review Board of the Federal Association of Statutory Health Insurance Funds („Medizinischer Dienst des Spitzenverbandes Bund der Krankenkassen“, MDS) is an advisory service for the Federal Joint Committee.

It is an advisory service for medical and social issues to the Federal Joint Committee, which in turn governs the collaboration of the MDKs.
Functioning of MDK and MDS

MDS + MDK = MDK-Association

- advises
- controls
- advises
- members

- drawing up the budget
- external representation

- issuing of statutes
- definition of working guidelines

- group of experts for each department
- medical advisory service

The German Health Care System
Representation of Hospital Interests

German Hospital Federation
(“Deutsche Krankenhausgesellschaft”, DKG)

The German Hospital Federation is the association of Federal Hospital Councils. It seeks to improve the efficiency of hospitals through the advancement of research and exchange of experiences.

The DKG’s function is to represent the interests of hospitals at the federal level. Furthermore, it ensures that modern technologies and practices that are more efficient are implemented in hospitals. It consists of 16 hospital federations and 12 sponsoring organizations and is funded by its members.
Growth in Hospital Expenditures Above Average

By comparison, administrative costs were 9.44 billion € in 2010.
Regional Associations of Statutory Health Insurance Physicians ("Kassenärztliche Vereinigungen", KVs)

The Regional Associations of Statutory Health Insurance Physicians are associations in which membership is mandatory for all practicing SHI physicians and psychotherapists in Germany.

The KVs manage and administer the budget allocation and the individual reimbursement to each SHI physician, regulate the number of physicians allowed to practice as an SHI-physician, control the compliance of physicians with the code of conduct and oversee the quality assurance of medical treatment. The KV management is democratically elected by all KV members.

Any fully-qualified doctor in Germany can set up his or her practice wherever (s)he wants. This allows for treating self-paying patients and those with private health insurance. In order to be eligible for reimbursement from the SHI, (s)he has to become an SHI physician.

National Association of Statutory Health Insurance Physicians ("Kassenärztliche Bundesvereinigung", KBV)

The National Association of Statutory Health Insurance Physicians represents the political and medical interests of the 17 Regional Associations of Statutory Health Insurance Physicians at the federal level.

It represents all German SHI physicians, negotiates with the statutory health care insurance companies, supervises the fulfillment of quality management standards established for the medical care provided by SHI physicians, and determines the size of transfer payments between various regional associations of SHI physicians (KVs).

General Assembly of Delegates of the KBV elects the two members of the Board of Management of the KBV: one representing family physicians, one representing specialists.
KVs and KBV

- **Patient**
  - duty to treat
  - right to be treated

- **SHI Physician**
  - doctor’s fee
  - account of services provided (special accounting system)

- **SHI**
  - compensation package
  - guarantee of service provision

- **KV**
  - information & attestations

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**The German Health Care System**
Dentists and Pharmacists

**National Medical Council / National Dental Council**
(“Bundesärztekammer”, BÄK / “Bundeszahnärztekammer”, BZÄK)

Every qualified medical doctor has to be a member of the State Chamber of Physicians / Dentists. The National Medical Council and the National Dental Council are the highest boards of self-governing institutions of physicians and dentists. They consist of the 17 State Chambers of Physicians/Dentists. The main task of these institutions is to represent the political and medical interests of these occupational groups at the federal level.

The other functions are the regulation of the medical association’s professional code of conduct, quality assurance, and contributions to political, legal and ethical discussions on medical care.

**Federal Chamber of Pharmacists**
(“Bundesapothekerkammer”, BAK)

The Federal Chamber of Pharmacists is a special interest group representing every approbated pharmacist at the federal level. The stated goal of this institution is to ensure the quality of pharmaceuticals and to promote the continued education of pharmacists.

**German Association of Pharmacists**
(“Deutscher Apothekerverband”, DAV)

The German Association of Pharmacists is the federal representation of all heads of pharmacies. In contrast to the Federal Chamber of Pharmacists, this institution focuses on the commercial interests of pharmacists.
ABDA Represents Professional and Commercial Interests of Pharmacists

Federal Joint Association of Pharmacists ("Bundesvereinigung Deutscher Apothekerverbände", ABDA "Arbeitsgemeinschaft der Berufsvertretungen der Apotheker")

The Federal Joint Association of Pharmacists is the highest board in the hierarchy of self-governing structures of all pharmacists. It is a well-connected and influential body.
3.3 Hospitals and Professionals
In Germany, the study of medicine takes 6 years and is generally divided into three parts.

During the first two years, students study basic natural science and the human body. In the second part, which lasts for three years, students learn about the various medical subdisciplines as well as medicine-related subjects, such as biostatistics or the history of medicine. Moreover, students have to complete three month-long internships in hospitals and practices (“Famulaturen”). In the third phase, students work for one year in a hospital under the supervision of fully trained doctors. They complete their studies with a state-administered examination.

Doctors who wish to specialize in a subfield (dermatology, ophtalmology, etc.) must undergo an additional four to six years of postgraduate training while practicing medicine.
About One-Third in Private Practice, One-Third in Hospitals, and One-Third Elsewhere

- Working in private practice: 139,600
- Working in administration: 9,500
- Working in hospitals: 158,200
- Not exercising their profession, e.g. retired: 104,000

Total number of doctors: 429,900

- Private physicians: 4,800
- SHI physicians: 120,500
- Employed physicians: 14,300
- General practitioners: 58,100
- Specialist physicians: 62,400
- Department Heads: 13,100
- Chief physicians: 10,600
- Attending physicians: 145,100
- Other: 18,600
Training

- **Student** (5yr + 1yr Internship)
- **Licensed Attending Doctor** (during specialization: 4–6 yr)
- **Specialist**
- **Head of Department**
- **Chief Physician**

State Examination (End of the 6th Year)  
Medical Specialist Exam

**Specialization of Doctors in Germany**

Without Specialization (33%)  
General Practitioner (15%)  
Internal Medicine (15%)  
Surgery (7%)  
Anesthesia (7%)  
Gynecology (6%)  
Orthopedics (4%)  
Psychiatry (3%)  
Radiology (2%)  
Dermatology (2%)  
ENT (2%)  
Urology (2%)  
Ophthalmology (2%)  
Radiology (2%)  
Surgery (7%)  
Internal Medicine (15%)
Dentists in Germany

Total Number
84,400

Practicing Dentistry
66,318

- Working in Own Practice
  55,173

- Employed in a Practice
  8,312

- Not Working in a Practice
  2,833

Not Practicing Dentistry
18,082

Education: 5 semesters preclinical + 5 semesters clinical training, followed by a state examination
Due to a perceived lack of doctors and a growing administrative burden, the question of task distribution is gaining importance. Medical assistants (nurses, medical-technical assistants...) are supposed to become more involved in the health care system and to assume more responsibilities in order to support doctors and to reduce their non-medical workload.

For instance, one initiative is the “Arztentlastende, gemeindenahe, E-Health-gestützte, systemische Intervention” (Agnes), a system in which specially qualified nurses replace doctors in carrying out house calls house visits. The main idea is to augment the expertise of nurses or medical secretaries so that they can take over some of the physician’s tasks.

Rural areas in particular could benefit from this service, as fewer and fewer general practitioners are attracted to a career in the countryside, and elderly patients increasingly experience difficulties when trying to reach a doctor’s practice.

German Council of Nurses (“Deutscher Pflegerat”, DPR)

The German Council of Nurses represents medical and political interests of all state nursing associations at the federal level.

The DPR coordinates all German nursing organizations and is included in the overall discussions about the structural changes in health care with a focus on the improvement of quality in health care. It is also a member of the Federal Joint Committee.
Nurses in Germany

**Education:** 3 years

Nurses are responsible for:
- treatment
- recovery and
- safety
  of chronically or acutely ill patients.

They provide the basic medical and hygienic care and carry out the measures initiated by the physician. 85% of German nurses are women.
Hospitals as Health Care Providers

At present, there are around 2100 hospitals in Germany with a little more than 500,000 beds. Around 1250 of these hospitals are preventive or rehabilitation clinics.

The majority of all hospitals (ca. 1200) have up to 200 beds and only 88 hospitals have more than 800 beds.

Hospitals, irrespective of ownership, provide services to SHI members and/or to the privately insured. There are only very few institutions (e.g. military hospitals) not open to the general public.

Hospital costs are dominated by personnel costs.

Personnel: 60 %  
(of which doctors 13 %, nurses 19 %)

Medical consumables and drugs: 17 %

Other material costs: 19 %

Other costs: 4 %
The German Health Care System

Total Hospital Beds and Average Length of Stay in Steady Decline

- **Length of Stay**
- **Total Number of Beds**

Days: 14, 12, 10, 8, 6, 4, 2, 0
Beds: 70,000, 60,000, 50,000, 40,000, 30,000, 20,000, 10,000, 0

Pharmacists in Germany

A pharmacist is a health professional who possesses expertise in the appropriate use, side effects and interactive effects of medicines. Pharmacists most commonly work as either hospital pharmacists, delivering medicine to the various departments, or as community pharmacists running a pharmacy. Other career opportunities lie in the pharmaceutical industry and in health administration. In Germany, there are currently 49,892 pharmacists and 21,976 pharmacies.

Aspiring pharmacists have to study pharmacology at the university level for four years, followed by one year of practical training. Their training ends with a state-administered exam, after which they can obtain their license to practice pharmacy.
Increasing Drug Sales in Germany, but Stable Number of Pharmacies

Net Sales at Pharmacies

Number of Pharmacies
Other Professionals

**Elderly care nurses** (388 000 in 2009) can work on an outpatient basis (“Sozialstation”) or care for inpatients. The training takes 3 years and ends with a final exam.

**Midwives** (20 000 in 2009) provide care to childbearing women during pregnancy, labor, birth and during the period after delivery. The training takes 3 years and ends with a final exam.

**Podiatrists** provide services concerning the treatment of feet, e.g. in the case of patients suffering from diabetes. The training takes 2 years.

**Physiotherapists** (121 000 in 2009) are charged with restoring the mobility and functionality of the human body – for example the joints after operations. The training takes 3 years and ends with a state degree.

**Occupational therapists** improve the autonomy, the productivity and the participation in social activities of patients. The training takes 3 years.

**Physician assistants**
This is a professional certification based on a university education allowing its holders to practice (limited forms of) medicine in a team with physicians.

**Doctor’s assistants** (“Medizinische Fachangestellte”, formerly called “Arzthelfer(in)”) Usually a female assistant with primarily administrative tasks and some limited rights to attend to patients.

**Technical assistants** (Laboratory, X-ray, pharmacy) These are specialized assistants with often a very high level of expertise.

Both the doctor’s and the technical assistant involve a 3-year dual vocational training program.

Obermann, Müller, Müller, Schmidt, Glazinski
Quality, Outcomes and Efficiency

4.1 Utilization and Quality of Care
4.2 Managing Processes & Risks
4.3 International Comparisons
4.1 Utilization and Quality of Care
## Comprehensive Legal Basis for Social Security and Social Welfare

### Sections of the Code of Social Law (SGB) Concerning Public Health

- **SGB I** General Section
- **SGB II** Basic Social Care for Workseekers
- **SGB III** Employment Promotion
- **SGB IV** Combined Rules for Various Types of Social Insurance
- **SGB V** **Statutory Health Insurance**
  - **SGB VI** Statutory Pension Insurance
  - **SGB VII** General Accident Insurance
  - **SGB VIII** Child & Youth Welfare
  - **SGB IX** Rehabilitation and Participation of Disabled People
  - **SGB X** Administration & Data Protection
  - **SGB XI** Compulsory Long Term Care Insurance
  - **SGB XII** Social Welfare

Sections of the SGB that concern health
Ensuring Quality of Care in Germany – the Legislative Basis

State Committee and Federal Joint Committee

§ 91 Federal Joint Committee
§ 92 Directives of the Federal Joint Committee

Relationship between Hospitals and SHI contracted physicians

§ 115b Ambulatory Surgery in Hospitals
§ 116b Ambulatory Treatment in Hospitals

Ensuring Quality and Provision of Services

§ 135a Obligation to Quality Assurance
§ 136 Supporting Quality by the Association of Statutory Health Insurance Physicians
§ 137 Directives and Resolutions in Quality Assurance
§ 137a Implementation of Quality Assurance
§ 137b Supporting Quality Assurance in the Medical Field
§ 137f Structured Treatment Guidelines for Chronic Illnesses
Quality Management in Germany

**Quality of Results** relates to the results of the undergone treatment in relation to the intended aim. One appropriate measurement is patient satisfaction.

**Quality of Structures** states the quality of care by taking certain conditions into consideration, such as qualification of employees, medical equipment and working environment. Other indicators for quality of structure are participation in quality surveillance and options for further education.

**Quality of Processes** is directly linked to medical questions. It states the health care procedures that need to be undertaken against certain illnesses with regards to diagnostics and therapy.

**External Quality Management** measures the quality of 20% of all treatments performed by hospitals. All hospitals that treat statutory insured patients are forced to participate in this process. Results are published annually in a quality report and based on the evaluation of quality indicators. Since 2010, the certification process has been performed by AQUA.

**Internal Quality Assurance** is the self-administered way for medical facilities to evaluate their quality of care in order to identify areas of improvement. Sometimes, an internal quality assurance is the first step to be eligible for an external accreditation.

**BQS, AQUA and KTQ** are independent companies that evaluate and certify medical facilities, partly on behalf of the Federal Joint Committee. For details see overleaf.
Quality Management in Germany

AQUA

Federal Joint Committee

External Quality Assurance

Quality of Structures

Quality of Processes

Quality of Results

Internal Quality Assurance

Medical Facilities

BQS

Quality Criteria
Quality Indicators

KTQ
Independent Quality Assurance Institutes

The Federal Office for Quality Assurance ("Bundesgeschäftsstelle Qualitätssicherung", BQS) is a non-profit limited company and was in charge of the surveillance of quality assurance in hospitals between 2001 and 2010. The main task of the BQS was to create expert reports with respect to medical quality. It has been replaced by AQUA.

Cooperation for Transparency and Quality in Hospital Care ("Kooperation für Transparenz und Qualität im Krankenhaus", KTQ) is a provider for measuring quality assurance in medical facilities, especially hospitals.

The Institute for Applied Quality Support and Research in the Health Care Sector ("Institut für Angewandte Qualitätsförderung und Forschung im Gesundheitswesen", AQUA) has specialized in quality assurance services in the health care sector. Its main focus is the development of indicators for measuring quality assurance, documentation programs, and surveillance as well as publishing the results of the executed quality assurance measures.

Cross-Sectoral Quality in the Health Care Sector ("Sektorenübergreifende Qualität im Gesundheitswesen", SQG) is a project by the AQUA Institute on behalf of the Federal Joint Committee in order to establish nationwide and cross-sectorial quality assurance, combining outpatient and inpatient care.
Independent Quality Assurance Institutes

Federal Joint Committee

SQG  →  AQUA

Medical Facilities in General

BQS  ←  Only Hospitals  →  KTQ

The German Health Care System
Quality Criteria and Indicators

**Quality criteria** in health care are defined standards that are expected to be met when a medical treatment of high quality is performed. A list of those criteria was issued by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in 1988 and is internationally recognized. Quality criteria may be used in the internal quality assurance to define certain quality goals. Examples of quality criteria are waiting time, education of employees, timeliness of treatment, management and completeness of patient files, etc.

**Quality indicators** serve as a measurement tool to evaluate quality. However, quality is not directly measured but indirectly represented by values and ratios. This way, average values are obtained annually and comparisons can be drawn between different health care providers. Furthermore, quality indicators serve as an indirect measurement tools which foster the management and improvement of quality standards. Examples of quality indicators for a specific operation are the number of reinterventions due to complications, mortality, the number of correct indications, etc. – always relative to reference values.
Health Care Utilization in Germany

In 2008, the utilization rate of all hospital beds was 76.2%.

In 2008, Germans visited doctors for outpatient care 18.1 times on average.

In 2008, Germans spent on average €3120 per capita on health care.

In 2008, 23.2% of all Germans had at least one hospital stay.

SHI covers in principle everything that is “adequate, appropriate and efficient” (§12, SGB V) including prevention, immunization, home nursing, maternity benefits, household help, spa treatment, orthodontic surgery for children.

Everyone will receive a heart transplant, if medically warranted (and if an organ is available).
4.2 Managing Processes and Risk
TÜV, DIN – Quality Management

The “Technischer Überwachungsverein” (TÜV) or Technical Monitoring Association, as one example of a private quality assurance institute, works in different fields within the health care sector, e. g. as an external consultant for health insurance companies and in corporate health management. Their task is to make case management more efficient and to deal with organizational structures and priorities. The TÜV is generally best known for being the technical inspection agency for cars in Germany.

The key objective of the private “Deutsches Institut für Normung” (DIN) is to implement industry-wide standards that generate economic benefits and promote worldwide trade, encourage rationalization, quality assurance and environmental protection, and also improve security and communication.
Anything to Learn here for Medical Practitioners?
Telemedicine

Telemedicine, as the name implies, refers to the use of information and communication technologies for the delivery of clinical care.

Two different kinds of technologies make up most of the telemedicine applications that can be seen around today. In the “store and forward”, medical data are transferred from one location to another. Evaluation of imaging techniques is its most common example.

For “real-time medicine”, patient data are made available to the specialist as soon as the local doctor receives them. Examples are live conferencing technology and surgical robotics with an external operator system. Despite the advantages, namely a reduction of costs by streamlining the workflow and increasing safety through evidence-based decision support, telemedicine has little practical significance.

Many parties in the sector are afraid of investing in a technology with high upfront costs and uncertain future benefits.
Telemedicine

**Electronic Health Record (EHR)**

EHR is a systematic collection of electronic health information about individual patients or populations, recorded in a digital format that can be shared across different health care settings. Being embedded in a network-connected global information system, it can include demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, personal statistics and billing information.

Caution should be exercised on issues of privacy and security in such a model.
Both the patient and the provider stand to benefit from a combined use of electronic communication and information technology. An increasing number of today’s patients are consumers of health information and medical topics on the internet. There also exist virtual health care teams, which consist of health care professionals who collaborate and share information on patients through digital equipment.

The term eHealth further describes health care information systems, which includes software solutions for appointment scheduling, patient data management, work schedule management and other administrative tasks surrounding health care. In essence, the term encompasses the use of digital data in the health sector – transmitted, stored and retrieved electronically – for clinical, educational and administrative purposes. The main goal is cost-effectiveness, which can be improved considerably when all participants contribute to an integrated use of telecommunications and information technology.
eHealth

Electronic Medical Record Systems
(GPs, specialists, hospitals)

Laboratories, Medical Imaging

Pharmacies

Home Care

Alliances

Third Party Payers, Public Authority

Citizens, Patients (Self-help Groups)

Pharmaceutical Industry

Directory Services

Public Websites

Knowledge Bases (Best Practice)

Expert Systems

Computer Assisted Construction

Telemedicine and Videoconferencing

Internet Services
Electronic Health Card (eHC) – Future Vision …

The introduction of the electronic health card in Germany is supposed to improve medical care and to make processes more efficient.

This project is supported by all stakeholders in the public health system, i.e. insurance companies, physicians, dentists, pharmacists and hospitals.

In addition to the information on the conventional health insurance card, the eHC may also contain documents such as discharge letters, findings and laboratory results. To hedge the system against abuse, e.g. pretense of false identity, the eHC uses a sophisticated data security program. The goal is to facilitate a closer network connection between different health care institutions and also increase the speed of data transfer. For example, the patient’s x-rays could be saved on the card and accessed for treatments.
The eHC as the Basis for Integrated Care

Data Availability at Treatment
... and Current Reality

A closer look reveals a highly unsatisfactory situation, because the development towards the introduction of the eHC has come to a standstill. After substantial investments into the development of the system, there is no consensus to establish it on a broad level. The conflicting interests between the participating political parties, insurers, the medical associations and many other interest groups make it very difficult to reach a common agreement. German political culture is based on finding consensus and thus prevents rapid implementation and overcoming obstacles. Another major issue is data sharing and data security. How much information access for whom is justifiable? The security of personal data and the possibility of abusing such personal data is looked upon with scepticism by many and will therefore need additional years of ongoing discussions.
Why the Current Health Card Does Not Make Use of Its Full Potential

Many key features for improved management not included

- Photo ✔
- Master Data of Insurant (date of birth, sex) ✔
- European Health Insurance Card ✔

- Electronic Prescriptions ✘
- Medical Data for Emergencies ✘
- Documentation of Current Medication ✘
- Electronic Physician Data ✘
- Electronic Patient File ✘
4.3 International Comparisons
The Joint Commission International (JCI) is the international division of Joint Commission Resources and has been working with health care organizations, ministries of health, and global organizations in over 80 countries since 1994. Formerly known as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), it imposed some internationally acknowledged criteria for quality of care in 1988. However, the World Health Report 2000, issued by the WHO, discusses these instrumental quality criteria controversially. It states that the overall conclusion on how good the quality of care is should rather focus on health in general, fair financing and patient-oriented care.

The world’s first World Health Organization Collaborating Center dedicated exclusively to patient safety solutions is a joint partnership between the WHO, The Joint Commission, and JCI.

OECD – Criteria for Quality of Care

The Joint Commission International (JCI) is the international division of Joint Commission Resources and has been working with health care organizations, ministries of health, and global organizations in over 80 countries since 1994. Formerly known as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), it imposed some internationally acknowledged criteria for quality of care in 1988.

The focus of JCI is on improving the safety of patient care through the provision of accreditation and certification services as well as through advisory and educational services aimed at helping organizations implement practical and sustainable solutions.
OECD – Criteria for Quality of Care

- Access to Care
- Adequacy of Care
- Coordination of Care
- Efficacy of Care, Effectiveness of Care, Efficiency of Care
- Patient - Centered Care
- Security of Care Environment
- Timeliness of Care
OECD – Health Care Quality Indicators

The OECD Health Care Quality Indicators Project is developing a set of quality indicators at the health system level. The approach is to establish a feasible toolkit to stimulate cross-national learning with regard to combining and coordinating efforts of national and international bodies for quality of care indicators. Over the last decades, there has been little uniform data available on health care quality in order to make solid comparable statements. This project tries to outline suitable indicators for international comparisons and to identify priorities in the development of the health care system for each country.
OECD – Health Care Quality Indicators

- Avoidable admissions for asthma
- Avoidable admissions for COPD
- Diabetes lower extremity amputation
- Diabetes acute complications
- Congestive heart failure
- Hypertension

- Acute myocardial infarction
- Hemorrhagic stroke
- Ischemic stroke

- Care for chronic conditions
- Care for acute exacerbation of chronic diseases
- Care for mental disorders
- Cancer care

- Breast cancer five-year relative survival rate
- Cervical cancer five-year relative survival rate
- Colorectal cancer five-year relative survival rate

- Bipolar hospital re-admission rate
- Schizophrenia hospital re-admission rate

The German Health Care System
From the existing data, we can see at a glance that Germany does relatively well at avoiding hospital admissions for asthma, chronic obstructive pulmonary disease, and diabetes. However, it has rather high admission rates for congestive heart failure and hypertension. Based on stroke mortality rates, German care for acute exacerbation of chronic conditions appears to achieve outcomes which are better than the OECD average in quality.

Unfortunately, Germany has not yet submitted reliable data on cancer care and mental health care to the OECD.
# OECD – Health Care Quality Indicators

<table>
<thead>
<tr>
<th></th>
<th>Care for Chronic Conditions</th>
<th>Care for Acute Exacerbation of Chronic Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(per 100 000 Inhabitants)</td>
<td></td>
</tr>
<tr>
<td>Asthma Admission Rates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease Admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes Acute Complications Admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congestive Heart Failure Admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension Admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic Stroke, In-Hospital Fatality Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemorrhagic Stroke, In-Hospital Fatality Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>21,1</td>
<td>184,3</td>
</tr>
<tr>
<td></td>
<td>14,4</td>
<td>352,4</td>
</tr>
<tr>
<td></td>
<td>212,9</td>
<td>7,7</td>
</tr>
<tr>
<td></td>
<td>19,7</td>
<td></td>
</tr>
<tr>
<td><strong>OECD Average</strong></td>
<td>54,6</td>
<td>201,4</td>
</tr>
<tr>
<td></td>
<td>21,1</td>
<td>229,7</td>
</tr>
<tr>
<td></td>
<td>97,0</td>
<td>8,9</td>
</tr>
<tr>
<td></td>
<td>23,6</td>
<td></td>
</tr>
</tbody>
</table>
5

Financing

5.1 Structures & Principles of Social Security
5.2 Current Status of SHI and PHI
5.3 Flow of Funds and Spending Patterns
5.1  Structures & Principles of Social Security
The Five Pillars of the German Social Security System

- Health Insurance (1883)
- Pension Insurance (1891) (initially called disability and old age insurance)
- Unemployment Insurance (1927)
- Long-Term Care Insurance (1995)
- Accident Insurance (1885)
Today’s Social Security Net

<table>
<thead>
<tr>
<th>Risk</th>
<th>Financed primarily via contributions</th>
<th>Financed from taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sickness</td>
<td>Long-term care</td>
</tr>
<tr>
<td><strong>Institution</strong></td>
<td>GKV</td>
<td>GPfV</td>
</tr>
<tr>
<td></td>
<td>Statutory Health Insurance</td>
<td>Statutory Long-Term Care Insurance</td>
</tr>
<tr>
<td></td>
<td>These are <strong>NOT</strong> means-tested, but benefits might depend on <strong>contribution rate</strong> (GRV, GUV, ALV)</td>
<td></td>
</tr>
</tbody>
</table>

**Self-help:** savings, family

**Means-tested** social welfare benefits – financed from taxes
Statutory Health Insurance

The statutory health insurance (SHI) is a mandatory insurance scheme. Enrolled in this scheme are employees and their dependents. The SHI is financed by members’ contributions which are paid as payroll taxes by the employer and employed. For unemployed individuals, the SHI contributions are paid by the employment agency. An exception are the self-employed, who are not covered by the SHI but can buy private insurance. People eligible for SHI with a high income have an opt-out option if they buy private insurance instead. Those not opting out are “voluntarily insured”. The only income subject to insurance contributions is income from employment.

The SHI operates under the principle of benefits in kind. This means that the insured receives health care services without being issued a bill for the services. The health care provider is through a complex mechanism further described in Section 6.2. reimbursed.
The 5 Principles of Statutory Health Insurance

- Solidarity
  - All citizens are required to partake. Those with little risk and more resources cross-subsidize the poor and sick.

- Benefits in kind
  - Services delivered without a bill to the patient

- Autonomy
  - The SHI is self-sufficient and self-governing

- Pluralism
  - Several insurance providers

- Parity financing
  - Contributions are paid by employers, employees and the federal government
The Core Principles

The principle of solidarity means that individuals do not have to insure their own risk, rather all insured share the risks. This is meant to create an equilibrium where the healthy and young cross-finance the elderly and the sick.

Furthermore the financing of the SHI operates under the principle of parity. Each member’s contribution is paid jointly by employer and employee.

SHIs are institutions under public law. They are owned by their members. The members are entitled to democratically elect the Board of Administration of the SHI (“Social Elections”). In practice, however, these elections have largely become irrelevant as employer associations and unions usually agree upfront whom to put up for election and there is de facto no competition.

SHI was established in 1883 after the Imperial Message of 1881 had outlined its key ideas and aims. In 1914, the health, accident and pension insurance funds were brought under one regulation (“Reichsversicherungsordnung”). This regulation was the basic foundation of social security until the health care reform law of 1989, which added a fifth book to the body of serial law which now contains the regulation of the SHI.

Due to inefficiency and structural aspects, there has been a steady decline in the number of statutory health insurance funds. The smaller insurers usually merge with one another or a larger insurer to reduce administrative costs and pool a larger group of insured. A driving factor in this development is the competitive pressure over contribution rates, which can vary around the baseline contribution set by the state.

European Law now influences German SHI and also relates it to other EU social security systems.
Solidarity and Pluralism in a Statutory Insurance Scheme

Solidarity based Insurance

Income-Related Contributions

Need-Related Service Provision

Low-income

High-income

High risk / sick

Low risk / not sick
The Market for Statutory Health Insurance

A total of 146 SHI of which

112 BKK (Company Sickness Funds)
covering 18.5% of all SHI members

12 AOK (General public Sickness Funds)
covering 34.8% of all SHI members

16 Other (Farmers Funds, Miners’ Guilds Fund, Guild Funds)
covering 11.3% of all SHI members

6 Ersatzkassen (Substitute Sickness Funds)
covering 35.4% of all SHI members

Largest SHI Funds

- Barmer GEK: 8.5 m
- Techn. Krankenkasse (TK): 7.7
- DAK: 5.7
- AOK Bayern: 4.3
- AOK Baden-Württemberg: 3.8
- AOK Rheinland/Hamburg: 2.8
- AOK NordWest: 2.7
- AOK PLUS: 2.7
- AOK Niedersachsen: 2.4
- IKK classic: 1.9
- KKH-Allianz: 1.8
- AOK Nordost: 1.8
- Knappschaft: 1.7
- Vereinigte IKK: 1.7
- AOK Hessen: 1.5
- BKK Gesundheit: 1.1
- AOK Rheinland-Pfalz: 1.0
- SBK: 1.0
- BKK Mobil Oil: 1.0
- Deutsche BKK: 0.8
Fewer Statutory Sickness Funds, More Insured

Development of Employees Contributing to the Social Security System in Germany
Membership in the SHI and Contribution Rate

SHI membership is mandatory for employees, students and pensioners and based on employment (non-mandatory: the self-employed, high-income earners and civil servants). Originally, membership in an SHI was tied to working in a certain profession. However, the health insurance funds have long since started to compete with each other to acquire more clients in the general market of the mandatorily insured. The employees get to choose their insurance freely, which offers the insurance companies incentives to come up with attractive packages.

The contributions are calculated as a part of the work-related income and are paid by employee and employer in part. Those employees earning a monthly wage over a certain upper limit can choose to buy private insurance or can remain in the public insurance system as voluntarily insured. Dependent family members of the insured are enrolled through the working household member and their contributions.

The actual contribution rate is calculated by a panel of experts ("Schätzerkreis") at the Federal Ministry of Finance, BMF. They take into account the overall economic situation, the wages and salaries paid, and relate the calculated payroll tax base to the expected expenditures.
Above a Certain Income Threshold, Employees can Choose

- **Employed Income < 50,850 €**: Mandatory choice for SHI.
- **Employed Income > 50,850 €**: Choice between SHI and PHI.
- **Self-Employed**: Choice for PHI.
- **Civil Servants**: Choice for PHI with additional insurance (most health care costs for civil servants are covered by the government and employer, “Beihilfe”).
Health Insurance for Pensioners

Health insurance for pensioners is mandatory. If a pensioner was formerly insured with the SHI, he is entitled to a membership in an SHI of his choice. If a pensioner was privately insured before his pension and did not fulfill the minimum of time in the SHI, he needs to insure himself privately.

The pensioners who are members in the SHI need to pay half of their contributions in relation to the amount of their pension. The other half is paid by the pension fund as long as the pensioner was insured before receiving his pension. While health insurance was free of charge for pensioners until the early 1980s, their insurance contribution is now set at the same percentage as that of employees.

Division of payments for the SHI contributions for pensioners is at the same contribution rate as any insured member who is not retired.
Members by Groups in SHI

- **Pensioners**: 17.9 m
- **Mandatory Members (Employed, Students, Unemployed, …)**: 29.9 m
- **Family Members of Insured**: 16.6 m
- **Voluntary Members**: 5.1 m
- **Civil Servants**:
  - **Self-Employed**:
  - **Employees with High Income**: total 8.9 m
- **85.0%* Insured via Statutory Health Insurance**
- **10.9%* Privately Insured**
- **+4.1%* Other**

*of total population
Employer’s Liability Set off Through Comprehensive Coverage in Statutory Accident Insurance

Contributions are entirely paid by employers with average rate: 1.31% of a company’s payroll (2009); concrete rate depends on the sector of industry, the risk class and the number and severity of accidents. Total amount of contributions in 2008: Euro 9.3 billion. On average stable contributions to BGs (Institutions for Statutory Accident Insurance and Prevention), not least due to successful prevention.

Reportable occupational accidents per 1,000 equivalent full time employees has been in constant decline over the last decades. Coverage against:

- Occupational accidents
- Commuting accidents
- Occupational diseases

BGs and public sector accident insurers are to prevent occupational accidents, occupational diseases and work-related health hazards, investigate their causes, provide effective First Aid and ease the effects of occupational accidents and occupational diseases with all suitable means. The German Statutory Accident Insurance is guided by the principles of (i) prevention before rehabilitation and (ii) rehabilitation before compensation.
Comprehensive Treatment Provided by Institutions of Statutory Accident Insurance and Prevention

- 600 authorized clinics
- 9 BG-accident clinics
- 2 BG-clinics for occupational diseases
- Patients in 11 BG-Clinics (in 2008):
  - 108,391 inhouse-patients
  - 300,249 ambulant patients
Combating Inappropriate Use of Services

A salient feature of any insurance scheme is the risk of moral hazard both from the provider’s and the recipient’s side. Given the political goal of allowing access to high-quality care irrespective of the ability to pay, moral hazard will always remain a challenge. There is good data showing that right from the beginning of the miner’s guild’s insurance fund, an inappropriate use of services arose, mainly reporting sick more often.

There is no ideal solution to combat this and in the German system, a multitude of mechanism are used, most of which not having undergone rigorous testing regarding their effectiveness, most notably the “Praxisgebühr” or practice fee.

In 1923, during the height of inflation, SHI members for the first time had to pay a 10% co-payment on prescribed medicines.

A special case involves the co-payment during an inpatient stay at a hospital. This has been introduced in order to prevent patients financially profiting from being in the hospital.

The co-payment essentially covers the cost of food, which the patient would otherwise have had to pay for.
# A Multitude of Mechanisms Used to Control Costs

<table>
<thead>
<tr>
<th>Access control</th>
<th>Price control</th>
<th>Volume control</th>
<th>Expenditure control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demand</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No direct access to specialists in certain tariffs.</td>
<td>Generics Providing defined standards (glasses, hearing aids, …)</td>
<td>Prescription required Co-payments (drugs, hospital, glasses, …) No marketing in the public media</td>
<td></td>
</tr>
<tr>
<td>No direct access to hospital care except in case of emergency.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBA rulings on reimbursement of drugs / services AMNOG procedure Negative / positive list</td>
<td>Price negotiations Rebates (drugs) DRGs Reference Price EBM Biddings</td>
<td>Rebates beyond certain volume thresholds</td>
<td>Budgets</td>
</tr>
</tbody>
</table>

Children under 18 years are exempted from virtually all restrictions.
5.2 Current Status of SHI and PHI
The German Health Care Fund

Collecting the Money

The German Health Care Fund (“Gesundheitsfonds”) was introduced in January 2009. The funding consists of 2 central pillars, the income-related payments and the federal grants.

Regarding the income-related payments, the government has set the health insurance contribution to 15.5% (2011) of monthly gross income. The insurance fee is the same for every insurant in the currently 148 (of 157, the agricultural health insurance are not participating) statutory health insurance companies in the health care fund. The employee’s share is 8.2% while the employer has to pay 7.3%. The rate of the employee has been fixed as of January 2011 to protect labor costs from a further rise.

In order to give the statutory health insurance funds the possibility to react to the rising health care costs, the SHI funds can charge extra fees independent of income. The government’s intention is to increase price competition between the insurance companies through this step.

The government has also implemented a social compensation if the extra fee exceeds 2% of the gross income of the insurant. The health care fund pays this social compensation, ideally from reserve assets.
Channeling SHI-Money via the Health Care Fund

**Income-related payments**
15.5% of the personal gross income until one reaches the contribution assessment ceiling of 3,825 € (2012) per month

**Employee 8.2%**  **Employer 7.3%**

**Health care fund**
Distributes funds to the statutory health insurance companies on a monthly basis

**Federal grants**
Are financed through taxpayer funds. Their purpose is to unburden health insurance funds from “extraneous insurance benefits”

**Statutory health insurance companies**
Are allowed to charge extra fees
Recent Developments

Statutory Health Insurance

In 2010, the statutory health insurance funds ran a combined deficit of 396 million €. This was the first time since 2004 that they did not achieve a surplus, and stands in contrast to the previous year, when a surplus of 1.4 billion € was realized. The expenditures for insurance-related payments increased by 2.9% per insurant, while the allocations from the health care fund rose by 2.0% (mainly resulting from federal grants).

Health Care Fund

The health care fund allocated 171.6 billion € to the statutory insurance companies, while receiving 174.8 billion € through income-related payments and federal grants. This resulted in a surplus of 3.2 billion €. This money is planned to be used for building up reserve assets, which now total 3.9 billion €. However, the accumulation of reserves has triggered a new discussion about lowering the allocation to the health care fund.
### Case I: Family of 4 (single earner, married couple, 2 children), income gross: € 3 000

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross income</td>
<td>3 000.¬</td>
<td>€</td>
</tr>
<tr>
<td>Contribution old age pension</td>
<td>298.¬</td>
<td>€ 298.¬</td>
</tr>
<tr>
<td>Contribution health insurance</td>
<td>246.¬</td>
<td>€ 219.¬</td>
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<tr>
<td>Contribution long-term care</td>
<td>29.¬</td>
<td>€ 29.¬ (children)</td>
</tr>
<tr>
<td>Contribution unemployment insurance</td>
<td>private</td>
<td>private</td>
</tr>
<tr>
<td>Contribution accident insurance</td>
<td>--</td>
<td>48.¬ (industrial sector)</td>
</tr>
<tr>
<td><strong>TOTAL social security contribution</strong></td>
<td><strong>618.¬</strong></td>
<td><strong>639.¬</strong></td>
</tr>
<tr>
<td><strong>TAX</strong></td>
<td>240.¬</td>
<td>€</td>
</tr>
</tbody>
</table>

### Case II: Single, income gross: € 10 000

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross income</td>
<td>10 000.¬</td>
<td>€</td>
</tr>
<tr>
<td>Contribution old age pension</td>
<td>547.¬</td>
<td>€ 547.¬</td>
</tr>
<tr>
<td>Contribution health insurance</td>
<td>private</td>
<td>private</td>
</tr>
<tr>
<td>Contribution long-term care</td>
<td>private</td>
<td></td>
</tr>
<tr>
<td>Contribution unemployment insurance</td>
<td>83.¬</td>
<td>€ 83.¬</td>
</tr>
<tr>
<td>Contribution accident insurance</td>
<td>--</td>
<td>160.¬ (industrial sector, no limit)</td>
</tr>
<tr>
<td><strong>TOTAL soc security contribution</strong></td>
<td><strong>610.¬</strong></td>
<td><strong>770.¬</strong></td>
</tr>
<tr>
<td><strong>TAX</strong></td>
<td>3 800.¬</td>
<td>€</td>
</tr>
</tbody>
</table>
Starting 1995, most employees in Germany were allowed to freely choose their statutory health fund. This led to an inequality in the insurant structure between the various health insurance providers. Therefore, at the same time a risk structure compensation scheme (“Risikostrukturausgleich”, RSA) was introduced. It provided a redistribution between companies regarding their revenues as well as their expenses. The only criteria were gender, age, whether an insured person received benefits for a reduction in earning capacity, and whether an insured person participated in an officially recognized Disease Management Program. Eventually, the health care fund was established in 2009.

Beside the criteria age, gender and reduced earning capacity, morbidity was introduced. A statutory health insurance company receives more money from the RSA per insurant if she suffers from one of 80 predefined chronic diseases.

In 2011, the contribution assessment ceiling (“Beitragsbemessungsgrenze”) was set at 3712 € per month. Up to this threshold, the insurant has to pay 15.5% of his gross income to the statutory health care fund. Any income above this threshold will not considered for contribution (the maximum amount of money an insurant has to pay is 575 € per month) – leading effectively to a regressive contribution scheme. The social security income threshold (“Versicherungspflichtgrenze”) was set at 4 237 € per month or 50 850 € per year in 2012 (s. page 153). If an insurant earns above this value, he has the option to switch to a private health insurance.
Flow of Funds in the Health Fund

**Income-Related Payments at Legally Fixed Rate**

- Employers
- Employee
- Voluntarily Insured
- OAI
- UI
- Taxes

---

**Fund with Reserve Assets**

- Contribution Needs: Age / Sex / Morbi-RSA
- Allocation for Administration Costs
- Fixed Amount per Insured in DMP
- Correction due to Convergence

---

**Revenues of SHI Companies**

- If allocations > expenditures: Member obtains bonus
- If allocations < expenditures: Member pays extra fee

**OAI:** Old-Age Insurance  
**UI:** Unemployment Insurance
Historical background

Statutory health insurance was initially set up to protect the workers from the risks of illness, i.e. the loss of income and burden of medical expenses. It was felt at the time that “white-collar workers” and the self-employed would not need such a system and would actually be unwilling to cross-subsidize blue-collar workers. Civil servants (“Beamte”) were compensated in an entirely different manner: their compensation package included (and still includes) pension payments and support in case of illness (“Beihilfe”). Civil servants thus require only supplementary health insurance – usually private health insurance.

Lately, some form of “competition” has been promoted, and the 2012 German Doctor Association Annual Meeting has called for keeping the “dual system” of SHI and PHI.

Given the fundamental structural differences, this does not make much sense. Whereas SHI has to accept any applicant and charges only according to income (up to the contribution assessment ceiling (“Beitragsbemessungsgrenze”)), a PHI calculates a risk-related premium.
## Differences Between SHI and PHI

<table>
<thead>
<tr>
<th></th>
<th>Statutory Health Insurance (SHI)</th>
<th>Private Health Insurance (PHI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population covered</strong></td>
<td>85%: 78.7% mandatory (employed up to income ceiling, unemployed, retired, …) +6.2% voluntarily</td>
<td>11%, mainly opted out from SHI (self-employed, above income ceiling)</td>
</tr>
<tr>
<td><strong>Benefits covered</strong></td>
<td>Uniform and broad: stationary care in hospital, ambulatory care, pharmaceuticals, dental care, rehabilitation, transport, sick pay, …</td>
<td>Depending on choice&lt;br&gt;Reimbursement of bills</td>
</tr>
<tr>
<td></td>
<td>Provision of care in kind</td>
<td></td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>Percentage on wages (15.5%), shared between employer and insured – NOT risk-related&lt;br&gt;Pay-as-you-go</td>
<td>Risk-related premium (better for high income)&lt;br&gt;Accumulation of capital stock</td>
</tr>
<tr>
<td><strong>Insurers</strong></td>
<td>About 140 sickness funds (self-governing not-for-profit entities under public law), risk-adjustment scheme</td>
<td>About 50 insurers under private law</td>
</tr>
<tr>
<td><strong>Regulation</strong></td>
<td>Code of Social Law (= law), detailed through self-regulation (main actor: Federal Joint Committee)</td>
<td>Insurance law</td>
</tr>
<tr>
<td><strong>Providers</strong></td>
<td>Choice among all providers contracting with SHI (ca. 97% in ambulatory care, 99% hospital beds)</td>
<td>Free choice</td>
</tr>
</tbody>
</table>
Citizens with an income that is below the income threshold for compulsory insurance are obliged to insure themselves via the SHI. They have to pay 15.5% of their income to the Health Care Fund, of which the employer has to pay 7.3% and the employee the remaining 8.2%. There is free coverage for non-working spouses and the children of the enrollees.

As opposed to the SHI, the PHI does not have an income-based contribution scheme. Instead, the PKV uses a risk-rated premium (i.e. the old, sick and chronically ill pay higher premiums). Each family member has to be insured separately, and women pay higher premiums than men. However, a unisex rate will be introduced starting in 2013, raising the fee for men and lowering it for women.

Additional voluntary PHI contracts for those with SHI insurance are offered:

- additional dental care
- treatments not covered by the SHI, e.g. certain vaccinations, treatment outside the EU, homeopathy, moxibustion

At present (2011), there are around 22.5 million supplementary health insurance polices. In addition, there are around 1.9 million supplementary polices concerning long-term care.
How are the Germans Insured?

- **SHI mandatorily insured including pensioners (58.5%)**
- **SHI voluntarily (6.2%)**
- **PHI (10.9%)**
- **Other (e.g. soldiers, police, judges, recipients of social welfare), uninsured, or no data available (4.2%)**
- **SHI insured as family members (20.3%)**

**Largest private health insurers**

<table>
<thead>
<tr>
<th>Insurance</th>
<th>Insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debeka</td>
<td>2.15 m</td>
</tr>
<tr>
<td>DKV</td>
<td>0.9 m</td>
</tr>
<tr>
<td>Axa</td>
<td>0.7 m</td>
</tr>
<tr>
<td>Allianz</td>
<td>0.7 m</td>
</tr>
<tr>
<td>Signal Iduna</td>
<td>0.6 m</td>
</tr>
<tr>
<td>Central</td>
<td>0.5 m</td>
</tr>
</tbody>
</table>

A total of 43 companies are members of the PKV (Association of PHI companies).
Financing Reform

The two central reform concepts of recent years were the capitation fee and universal health insurance.

The capitation fee is a concept to switch the financing structure of the German health care system from an income-dependent to an income-independent basis. The plan is to replace the income-dependent premiums with a contribution fee which is the same for everyone. The employees’ part is fixed at 7.3%. A social compensation for insurants with a low income is planned from taxpayer funds. Current plans do not intend to include the private health insurance system. The rationale behind this concept is that redistribution of income is properly left to the tax system and that the health insurance system should not be burdened with this task. Critics argue that the capitation fee is an inequitable social concept and that rising health care expenditures in the future will only be covered by the insurants.

The concept of universal health care is to include everybody in one insurance. Every insurant pays a contribution fee from his income. In contrast to the current system, every kind of income (e.g. investment income) would be included. A contribution assessment ceiling would also be part of the system. The rationale behind the idea is to reinforce the concept of solidarity in the statutory health insurance system. Critics argue that one statutory insurance for everybody will interfere with the idea of a competitive market in health insurance.
Capitation Fee vs. Universal Health Care

**Capitation Fee**

- Income-independent financing system
- One insurance premium, which is the same for everyone
- Social compensations from taxpayer funds

**Universal Health Insurance**

- One statutory health fund for everyone
- Improved revenues through the liability of every kind of income

<table>
<thead>
<tr>
<th></th>
<th>+</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capitation Fee</strong></td>
<td></td>
<td><strong>Universal Health Insurance</strong></td>
</tr>
<tr>
<td>Income-independent financing system</td>
<td>One statutory health fund for everyone</td>
<td></td>
</tr>
<tr>
<td>One insurance premium, which is the same for everyone</td>
<td>Improved revenues through the liability of every kind of income</td>
<td></td>
</tr>
<tr>
<td>Social compensations from taxpayer funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private insurance system not included</td>
<td>Income-dependent system</td>
<td></td>
</tr>
<tr>
<td>Rising health care expenditures of the future have to be covered by the insurants alone</td>
<td>No competitive market for health insurance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mixing allocating and (re)distributing tasks</td>
<td></td>
</tr>
</tbody>
</table>
5.3 Flow of Funds and Spending Patterns
Spending Patterns in the German SHI

The total expenditures for health care in Germany were 263,216 million € in 2008. This accounts for approximately 10.5% of the GDP.

What the money is spent for:

The greatest part of the running health care expenditures is spent on goods (73 € billion), doctoral costs (71.5 € billion) and costs for nursing care (62 € billion). Smaller parts are accommodation/catering (19.1 € billion), administration (13.5 € billion) and prevention (10.6 € billion).

Who provides the money:

The greatest part is provided by the SHI funds (151.5 € billion) followed by private outlays for procedures not covered by insurance (35.3 € billion) and amounts spent by the private health insurance companies (25 € billion).

Health expenditures amounted to € 287 billion in 2010, rising by € 8.9 billion or 3.2% compared to 2009. Per-capita expenditure was € 3,500.

Due to the overall economic situation, health expenditures as a percentage of GDP have risen in 2009 and 2010.

Total Sources of Funding = €263 bn (2008)
## Health Care Expenditures

<table>
<thead>
<tr>
<th>Health care expenditures 2008 – in million €</th>
<th>Total</th>
<th>Public authorities</th>
<th>Statutory health insurance</th>
<th>Social nursing care insur.</th>
<th>Statutory pension insurance</th>
<th>Statutory accident insurance</th>
<th>Private health insur.</th>
<th>Employer</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care expenditure</td>
<td>263 216</td>
<td>13 044</td>
<td>151 465</td>
<td>19 161</td>
<td>3 862</td>
<td>4 274</td>
<td>24 896</td>
<td>11 175</td>
<td>35 338</td>
</tr>
<tr>
<td>Investments</td>
<td>8 937</td>
<td>5 288</td>
<td>210</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>179</td>
<td>-</td>
<td>3 160</td>
</tr>
<tr>
<td>Running costs</td>
<td>254 280</td>
<td>7 756</td>
<td>15 1256</td>
<td>19 161</td>
<td>3 762</td>
<td>4 274</td>
<td>24 718</td>
<td>11 175</td>
<td>32 178</td>
</tr>
<tr>
<td>Prevention</td>
<td>1663</td>
<td>2 047</td>
<td>5 201</td>
<td>284</td>
<td>182</td>
<td>1 023</td>
<td>149</td>
<td>805</td>
<td>972</td>
</tr>
<tr>
<td>Doctoral costs</td>
<td>71 538</td>
<td>559</td>
<td>47 832</td>
<td>-</td>
<td>679</td>
<td>875</td>
<td>1875</td>
<td>4 987</td>
<td>5731</td>
</tr>
<tr>
<td>Costs for nursing care</td>
<td>61 947</td>
<td>3 475</td>
<td>27 925</td>
<td>17 802</td>
<td>1 273</td>
<td>785</td>
<td>3 204</td>
<td>1 917</td>
<td>5 565</td>
</tr>
<tr>
<td>Accommodation / Catering</td>
<td>19 108</td>
<td>1 161</td>
<td>8 958</td>
<td>-</td>
<td>1 122</td>
<td>203</td>
<td>1 183</td>
<td>760</td>
<td>5 721</td>
</tr>
<tr>
<td>Goods</td>
<td>73 005</td>
<td>457</td>
<td>49 160</td>
<td>413</td>
<td>150</td>
<td>560</td>
<td>2 930</td>
<td>2 614</td>
<td>14 115</td>
</tr>
<tr>
<td>- Pharmaceuticals</td>
<td>43 233</td>
<td>245</td>
<td>31 586</td>
<td>-</td>
<td>67</td>
<td>187</td>
<td>2 614</td>
<td>1 628</td>
<td>6 590</td>
</tr>
<tr>
<td>Transportation</td>
<td>4 510</td>
<td>58</td>
<td>3 793</td>
<td>-</td>
<td>94</td>
<td>182</td>
<td>219</td>
<td>91</td>
<td>73</td>
</tr>
<tr>
<td>Administration</td>
<td>13 509</td>
<td>-</td>
<td>8 387</td>
<td>662</td>
<td>262</td>
<td>647</td>
<td>3 551</td>
<td>-</td>
<td>-</td>
</tr>
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<td>For information only:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Education</td>
<td>1 604</td>
<td>1 574</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Research</td>
<td>3 151</td>
<td>3 133</td>
<td>3</td>
<td>-</td>
<td>15</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Compensation for consequences due to illness</td>
<td>16 670</td>
<td>13 200</td>
<td>357</td>
<td>-</td>
<td>729</td>
<td>173</td>
<td>-</td>
<td>4</td>
<td>2 207</td>
</tr>
<tr>
<td>Continued payments of remuneration to sick employees</td>
<td>63 419</td>
<td>1 963</td>
<td>7 394</td>
<td>-</td>
<td>15 809</td>
<td>3 913</td>
<td>1 377</td>
<td>32 962</td>
<td>-</td>
</tr>
</tbody>
</table>
Critical Appraisal of the Current Financing Scheme

Payments based on work related-income

As the population is growing older, the costs for health care will eventually increase. At the moment, there is no mechanism in the system which will be able to cushion these increasing expenditures. The current system functions on the basis of income-related contributions. The problem in the future: there will be fewer people working, thus lower income-related payments, while the expenditures are rising. A possible solution would be to make other kinds of income liable for contribution.

The principle of solidarity and the private health insurance

The statutory health insurance is based on the principle of solidarity. Insurants with higher income pay for the insurants with lower income. The problem: Insurants with an income higher than the social security ceiling frequently switch to private health insurance. The principle of solidarity is undermined if the insurants with high incomes are allowed to retreat from the statutory health insurance.

Successes

The establishment of local or group based funds and self-governance helped to keep the system in sync with the needs of the population, thus fostering trust and transparency

- High quality of care
- Very little inequity in coverage and access (monetary, geographically, exception: non-registered immigrants)
- In general, high level of satisfaction among the population
- Concept of social health insurance increasingly acknowledged and adopted worldwide
- Practically no waiting lists, little hidden denial of essential care
Rising Health Care Expenditures In Absolute Terms, but Expressed as Percent of GDP Shows Only Moderate Growth
Central Problems of the Financing Mechanism in the German Health Care System

Financing is based on a work-related income system. In the future, there will be fewer people working and paying contributions, but even more people receiving payments.

People with higher incomes are allowed to leave the statutory health insurance system. Thus, the principle of solidarity is undermined.

Cost Example SHI vs. PHI

<table>
<thead>
<tr>
<th>Example</th>
<th>SHI</th>
<th>Private HI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, 35 years, healthy, income p.a. 60000 €</td>
<td>506 €</td>
<td>230 €</td>
</tr>
<tr>
<td>Employer’s contribution</td>
<td>237 €</td>
<td>115 €</td>
</tr>
<tr>
<td>Out-of-pocket premium (single)</td>
<td>269 €</td>
<td>115 €</td>
</tr>
<tr>
<td>Dependent 1: Female, 35 years, healthy, no income</td>
<td></td>
<td>325 €</td>
</tr>
<tr>
<td>Dependent 2: Child, 5 years, healthy</td>
<td></td>
<td>130 €</td>
</tr>
<tr>
<td>Dependent 3: Child, 2 years, chronic condition</td>
<td></td>
<td>200 €</td>
</tr>
<tr>
<td>Employer’s Contribution</td>
<td>237 €</td>
<td>237 €</td>
</tr>
<tr>
<td>Out-of-pocket premium (family)</td>
<td>269 €</td>
<td>648 €</td>
</tr>
</tbody>
</table>
## Trends in Statutory Health Insurance (SHI), 1880–2011

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statutory sickness funds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>18 776</td>
<td>21 342</td>
<td>7 777</td>
<td>4 625</td>
<td>1 992</td>
<td>2 028</td>
<td>1 182</td>
<td>476</td>
<td>319</td>
<td>154</td>
</tr>
<tr>
<td>Contributing members per fund</td>
<td>229</td>
<td>636</td>
<td>2 345</td>
<td>4 832</td>
<td>10 141</td>
<td>13 383</td>
<td>30 917</td>
<td>91 782</td>
<td>159 780</td>
<td>335 082</td>
</tr>
<tr>
<td><strong>Membership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insured people to total population (%)</td>
<td>10</td>
<td>35</td>
<td>51</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>83</td>
<td>88</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Contributing members in population (%)</td>
<td>9</td>
<td>20</td>
<td>29</td>
<td>34</td>
<td>40</td>
<td>49</td>
<td>60</td>
<td>61</td>
<td>62</td>
<td>63</td>
</tr>
<tr>
<td>Mandatory members/working population (%)</td>
<td>22</td>
<td>44</td>
<td>57</td>
<td>66</td>
<td>62</td>
<td>67</td>
<td>76</td>
<td>78</td>
<td>76</td>
<td>75</td>
</tr>
<tr>
<td><strong>Contributions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of income</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>–</td>
<td>6</td>
<td>8.4</td>
<td>12.6</td>
<td>13.5</td>
<td>14.3</td>
<td>15.5</td>
</tr>
<tr>
<td>Ratio contributions by employees/employers</td>
<td>2:1</td>
<td>2:1</td>
<td>2:1</td>
<td>2:1</td>
<td>2:1</td>
<td>1:1</td>
<td>1:1</td>
<td>1:1</td>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td><strong>SHI expenditure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of GDP</td>
<td>0.2</td>
<td>0.7</td>
<td>1.7</td>
<td>1.9</td>
<td>2.6</td>
<td>3.2</td>
<td>6.2</td>
<td>6.4</td>
<td>6.8</td>
<td>7.0</td>
</tr>
<tr>
<td>Ratio monetary/service benefits</td>
<td>1.7:1</td>
<td>–</td>
<td>1:1</td>
<td>–</td>
<td>–</td>
<td>1:4</td>
<td>1:8</td>
<td>1:12</td>
<td>1:12</td>
<td>–</td>
</tr>
</tbody>
</table>
Costs of Illness

Costs of illness amounted to € 254 billion in 2008. Just four disease categories accounted for about half (50.7%) of the total costs. The highest costs resulted from cardiovascular diseases (€ 37 bn), followed by diseases of the digestive system (€ 34.8 bn), mental and behavioural disorders (€ 28.7 bn), and musculoskeletal diseases (€ 28.5 bn).

As the population ages, the costs of illness per capita will rise disproportionately: children under 15 years (€ 1 360) and people aged 15 to 29 (€ 1 320) have the lowest costs of illness per capita.

Up to the age of 65, the costs per capita remain below the average of the total population (€ 3 100 euro). Beyond that, costs exceed the average and rise rapidly with increasing age. For persons aged 65 to 84 years, the costs are already 2.1 times as high as the average, and for persons older than 84 years, even 4.8 times as high – € 14 840 per capita. However, one has to keep in mind, that the medical cost in the three month prior to death constitute a major part of lifetime medical costs. With growing longevity, the costs prior to death will have to be included more often in the higher age groups.

The differences between genders are also remarkable: € 3 440 euro per capita are spent on women and € 2 740 to men. The causes of the unequal distribution by gender are several: apart from gender-specific diseases and the costs of pregnancy and birth, women frequent the health care system longer due to their higher life expectancy.
Costs of Illness

- Diseases of the circulatory system (14.5 %)
- Diseases of the digestive system (13.7 %)
- Mental and behavioural disorders (11.3 %)
- Diseases of the musculoskeletal system and connective tissue (11.2 %)
- Other (49.3 %)

254.3 EUR bn (2008)
Social Welfare Expenditure

In 2010, the amounts spent on social welfare from all sources (government and private) totaled 766 billion euros. The social expenditure ratio, which denotes social welfare expenditure as a percentage of GDP, stood at 30.9%. When interpreting this ratio, it should be noted that portions of social welfare expenditure consist of transfer payments, which do not count towards GDP.

Old-age pensions and SHI expenditures are the two largest items and together account for over half of total social welfare expenditure. The remainder is divided among many smaller items, of which unemployment benefits and support payments to parents are the most significant.
The German Health Care System

Germany with Highest Percentage of GDP Spent on Health in EU-15

[Graph showing the percentage of GDP spent on health for various countries, with Germany consistently at the highest level from 1993 to 2003.]
Paying Providers and New Models of Providing Care

6.1 Paying Hospitals
6.2 Paying Private Practitioners
6.3 New Models of Providing Care
6.1 Paying Hospitals
The funding of German hospitals maintaining service agreements (91% of hospitals in charge of > 99% of cases) is based on a dual system, which means that the investment costs are to be borne ultimately by the state via subsidies (that is, by the taxpayer). In contrast, all operational expenses, i.e. patient care and cost of personnel, are absorbed by the statutory and private health insurance.

However, it has turned out that the apportioned subsidies are not enough to cover the investment costs. State subsidies have dropped from € 3 641 million in 1991 to € 2 722 million in 2006, while the investment costs accrued by hospitals have largely remained constant.

In 2009, about 54% of the investment costs had to be financed from alternative sources, with as much as 36% having been allocated from own existing resources that, for the most part, came from revenues from operations, i.e. from the health insurance.

The lack of subsidies causes a backlog of hospital investments, forcing them to come up with alternative concepts and utilize existing resources with increased efficiency.
Investment Goods: Sources and Uses of Funds

Revenues

- Government subsidies (46%)
- Hospital’s own funds (36%)
- Subsidies from hospital owners (4%)
- Other subsidies from third parties (3%)
- Other (1%)
- Credit (10%)

Expenditures

- Buildings (51%)
- Medical technology (22%)
- Equipment in patient rooms, operating theater etc. (11%)
- Technical equipment (4%)
- Other (6%)
- Soft- and hardware (6%)
- Other (1%)
The health care reform of 2000 stipulated the introduction of a lump sum compensation system in Germany. The self-administration partners from the sickness funds and the hospital association were to develop and introduce an appropriate system. A decision was made to adopt Australia’s Diagnoses Related Groups (AR-DRG) system in Germany and to adjust it step by step to German needs. The system is to accommodate adjustments and updates on an annual basis. The self-administration partners have established a national DRG institute, the Institut für das Entgeltsystem im Krankenhaus (InEK), to maintain and develop the German DRG system (G-DRG). In 2003 and 2004, the system was implemented in Germany and has since been mandatory for hospitals with service agreements.

**From hospital case to DRG**

The DRG system is based on a system of codes assigned to diagnoses and procedures. All relevant diagnoses, i.e. diagnoses having resulted in the expenditure of resources, may and must be encoded in a case-specific manner. The doctor must give a primary diagnosis, which by definition is the diagnosis that has led to the patient’s hospitalization in retrospect. Diagnoses are encoded by means of the International Statistical Classification of Diseases and Related Health Problems 10th Revision – German Modification (ICD 10 GM). The ICD 10 GM catalogue consists of 22 chapters with more than 12,000 diagnostic codes, which are based on an alphanumeric system. In Germany, the catalog is updated annually by the German Institute for Medical Documentation and Information (Deutsches Institut für Medizinische Dokumentation und Information, DIMDI), which is an agency of the Ministry of Health.
ICD-10 International Classification

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<td>I</td>
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<td>Certain infectious and parasitic diseases</td>
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<td>III</td>
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<td>VII</td>
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<td>XI</td>
<td>K00-K93</td>
<td>Diseases of the digestive system</td>
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<tr>
<td>XII</td>
<td>L00-L99</td>
<td>Diseases of the skin and subcutaneous tissue</td>
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<td>XIII</td>
<td>M00-M99</td>
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<td>XV</td>
<td>O00-O99</td>
<td>Pregnancy, childbirth and the post-portum period</td>
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<td>Certain conditions originating in the perinatal period</td>
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<td>XVII</td>
<td>Q00-Q99</td>
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<td>XVIII</td>
<td>R00-R99</td>
<td>Symptoms, signs and abnormal clinical and laboratory findings</td>
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<td>XIX</td>
<td>S00-T98</td>
<td>Injury, poisoning and other consequences of external causes</td>
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<td>XX</td>
<td>V01-Y98</td>
<td>External causes of morbidity and mortality</td>
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<td>XXI</td>
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<td>Factors influencing health status</td>
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<td>XXII</td>
<td>U00-U99</td>
<td>Codes for special purposes</td>
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Operations and Procedures

In addition to the diagnoses, surgical operations and procedures must also be assigned codes on the basis of the system for operations and procedures (Operationen- und Prozedurenschlüssel, OPS, which has evolved from the International Classification of Procedures in Medicine, ICPM). In its current version, the OPS catalog has six chapters with more than 18,000 mostly numerical codes. The catalog is updated annually by DIMDI.

In addition to the ICD and OPS codes, a patient’s age, sex, length of stay and other factors must be encoded as well. All data are entered into a so-called grouper software, which will then use the algorithm provided by the InEK to calculate the resulting DRG.
Gradual Move From Per-Diems (Day-Based Fee) to DRGs (Diagnosis Related Groups)

**Before 1996**
Within each hospital all per diems were equal
Differences in patient treatment were not accounted for in the per diems

**1996-2003 (Mixed system)**
75% of cases: reimbursement through a two-tier system of per diem charges: a base per diem (non medical costs) and a department-specific per diem (medical costs)
25% of cases: reimbursement through case fees or procedure-related fees

**Since 1.1. 2004 (DRGs)**
Reimbursement through case fees
Goal: The vast majority of services should be reimbursed through case fees

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The German Health Care System
DRG Codes

Out of the total number of circa 1,200, the grouping software then calculates a specific DRG. DRGs are also presented in the form of alphanumerical four-digit codes.

The purpose of the DRGs is to represent homogeneous groups of treatment cases. Homogeneous refers to both the similarity of cases from the clinical perspective and the comparability of costs within the respective DRG.
Details of the DRG Algorithm

Minor breast surgery with malignant neo-plasm without serious or grave complications

Yes → J25Z

No → Surgery for sinus pilonidalis and perianal

Yes → J09A

No → Other surgeries on skin, hypodermis or breast

Yes → Complicating diagnosis or para-/tetraplegia or selective embolisation for hemangioma

Yes → J11A

No → J11B

Yes → J11B

No → J11C

Age < 16 years

Yes → J09A

No → J09B

Para-/tetraplegia or particular surgery

Yes → J11A

No → J11B

Moderately complex procedure

Yes → J11B

No → J11C
For each DRG, there exists a score-based rating called relative weight. In addition, there are an upper and lower limit of stay for each DRG. If the patient is discharged within this period, the hospital bills the case’s full relative weight. However, if the patient is discharged at a very early stage, a deduction to the relative weight must be made based on the number of days before the limit was reached. In case the upper limit is exceeded, a surcharge will be added to the relative weight for each further day. Surcharges and deductions are calculated for the individual DRG. Deductions are higher than surcharges. Adding surcharges or subtracting deductions results in the so-called effective weight, that is, the score representing the value of the case.

\[
\text{Relative Weight} + \text{Surcharges} - \text{Deductions} = \text{Effective Weight}
\]
Limits of Stay and Effective Weights Illustrated on the Example of DRG F61A Infectious Endocarditis
From DRG to Revenues

In order to arrive at an amount in Euro, the effective weight has to be multiplied by the baserate.

The resulting amount in Euro can be charged to the respective health insurance. The health insurance are permitted to have these invoices checked by an expert, a possibility which is widely used. It has been assumed by the Central Federal Association of the Statutory Sickness Funds that the sickness funds incur annual damages of over € 1.5 billion through improper hospital billing.

Baserate
The introduction of a baserate became a necessity due to the conversion to a lump compensation-based DRG system. The introduction of the DRG has led to the grouping of a given hospital’s cases in accordance with the DRG system, and the sum of the effective weights of all cases which is also called the casemix.

Before the introduction of the DRG system, every hospital disposed of its own budget that had evolved historically.

This individual budget was divided by the hospital’s casemix, giving rise to the individual baserate.

However, a consequence of the baserate of individual hospitals was that the same treatment case and/or same DRG might have been much more expensive in one hospital than in the hospital across the street.

Example:
On 01.01.2004, 2 hospitals in Cologne received for 1 relative weight € 3452 (hospital A) and € 2285 (hospital B) respectively, which means the baserate varied by nearly € 1,200 between the two hospitals.

The introduction of DRGs aimed, among other things, at harmonizing these costs, for which purpose a convergence phase was introduced at the federal level: the state baserate.
Calculating the Revenues

Effective Weight $\times$ Baserate $= \text{Revenue in } \€$

The sum of all effective weights of a given hospital $= \text{Casemix}$

\[
\frac{\text{Budget}}{\text{Casemix}} = \text{Baserate}
\]
Convergence Phase and State Baserates

Hospitals were now to gradually converge their individual baserates at the state level up until 2009. The above example demonstrates that some emerged from the convergence phase as winners and some as losers: over the years, hospital A was compelled to cut down on its baserate and, consequently, the available budget while hospital B came out on top and was eventually able to increase the available budget.

The state baserates were recalculated and updated on an annual basis. Afterwards, implementing convergence on the federal level was considered, but this effort was halted when the health care reform went into effect by January 1, 2011.
Baserate Trends

The German Health Care System
The German DRG system is updated annually by the InEK, firstly in order to implement medical progress into the system, and secondly to adjust the entire algorithm. The effective weights are checked and adjusted with respect to costs, a process which is primarily based on an analysis of real-life case data and costs.

These data are submitted to the InEK by the so-called calculating hospitals. Today, there are about 300 hospitals in Germany that submit case information together with detailed cost data (broken down by cost center and category) to the InEK. With the submitted live data, these hospitals have a significant impact on the DRG system.

The InEK receives data from the previous year and processes them during the current year, with the aim of developing the DRG system for the following year.

A natural consequence is that the updated system is consistently based on the data collected during the preceding year. It was soon understood that this would result in the belated implementation of new developments, so the New Diagnosis and Treatment Methods (“Neue Untersuchungs- und Behandlungsmethoden”, NUB) approach was introduced to counter this problem.
Calculating Hospitals in 2010
New Diagnoses and Treatment Methods

The NUB approach (New Diagnosis and Treatment Methods) was introduced to allow for the accelerated implementation of innovations into the DRG system. Hospitals may file NUB applications for the subsequent year with the InEK by 31 October at the latest. The InEK will then review the application until 31 January. If a positive decision is issued, the hospital is entitled to negotiate the new service with, and charge it to, the health insurance funds.

For the year 2010, 545 NUB applications of varying content were filed, of which as few as 84 were accepted.

Share of Accepted and Rejected NUB 2010

- Unapproved (85%)
- Approved (15%)
Sequence of DRG Calculations

- **2010**: Hospitals collect DRG and cost data
- **2011**: Hospitals transfer data to InEk. InEk calculates DRG and cost data and creates the new DRG system
- **2012**: InEk publishes new DRG system. New DRG system comes into effect
Outpatient Hospital Billing

Besides the inpatient billing system (DRG), most hospitals also have a practice of outpatient billing because hospitals are increasingly providing outpatient services to patients. Here, billing is essentially identical with the system employed by physicians practices.

Outpatient Surgeries in Hospitals (“Ambulantes Operieren im Krankenhaus”, AOP)

Hospitals were first authorized to perform outpatient surgery in 1993. AOP is based on agreements between the health care fund associations, the German Hospital Association, and the Kassenärztliche Bundesvereinigung. The agreement defines the billable outpatient services.

Moreover, it is stipulated that, in contrast to the DRGs, almost all services may be billed individually rather than on a lump compensation basis. The level of remuneration for such individual services depends on the Einheitliche Bewertungsmaßstab (EBM) or uniform valuation benchmark, a catalog defining all services that can be billed and assigning scores and/or euro amounts.

Beside services, the AOP concept also allows for the billing of non-personnel costs in some cases. Indwelling implants, for instance are usually invoiced as separate material costs, less a contribution of € 12.50.

All services rendered as well as the aforementioned material costs are grouped in one invoice and directly charged to the health insurance providers.
Constant Rise in Ambulatory Operations

Number of Ambulatory Operations in Hospitals

Total Ambulatory Operations: 1,583,423

- 2005
- 2006
- 2007
- 2008
- 2009
- 2010

Ambulatory Operations in Hospitals (Total)
6.2 Paying Private Practitioners
KVs Central in Paying Private Practice Doctors

The remunerative system of practice-based physicians authorized to treat compulsory health insurance members is exceedingly complex. This system differs substantially from the inpatient billing approach in that the medical practices will charge their services directly to the appropriate Regional Association of Statutory Health Insurance Physicians or Kassenärztliche Vereinigung (KV) by the quarter rather than to the health insurance providers on a case-to-case basis. Moreover, remuneration in the outpatient care sector is based on a mixture of fee-for-service and not on lump-sum compensations. A diagnosis has no influence on reimbursement.

The principal duty of the KVs is to ensure a sufficient level of outpatient care for statutory health insurance members (“Sicherstellungsauftrag”), but they also defend the rights of the doctors against the statutory health insurance providers and supervise the doctors’ obligations.
Cash Flow from the Insured to the Doctor via Statutory Sickness Funds and KVs

Diagram:
- Patients
  - Sickness Fund A
    - Physician A
  - Sickness Fund B
    - KVs
    - Sickness Fund C
  - Sickness Fund C
    - Physician B
Regional System of the Associations of SHI Physicians (KVs)

Regional Associations of SHI Physicians ("Kassenärztliche Vereinigung", KV)

There are 17 KVs in Germany in total one KV per federal state except North Rhine-Westphalia, which has two. At the federal level, the KVs are organized into the Federal Association of the SHI Physicians, Kassenärztliche Bundesvereinigung (KBV) which, however, is not authorized to direct the KVs at the regional level.

The KVs and statutory sickness funds enter into collective agreements governing the compensation package for the respective KV district. This package covers all medical services provided to the insured, i.e. insurance providers do not pay directly for their insured. Rather than that, all payers will pool the designated funds into a joint budget which is then distributed by the KVs to the doctors based on distribution agreements (allocation formula).
17 Regional Associations of Statutory Health Insurance Physicians (KVs) in Germany

- Kassenärztliche Vereinigung Baden-Württemberg
- Kassenärztliche Vereinigung Bayerns
- Kassenärztliche Vereinigung Berlin
- Kassenärztliche Vereinigung Brandenburg
- Kassenärztliche Vereinigung Bremen
- Kassenärztliche Vereinigung Hamburg
- Kassenärztliche Vereinigung Hessen
- Kassenärztliche Vereinigung Mecklenburg-Vorpommern
- Kassenärztliche Vereinigung Niedersachsen
- Kassenärztliche Vereinigung Nordrhein
- Kassenärztliche Vereinigung Rheinland-Pfalz
- Kassenärztliche Vereinigung Saarland
- Kassenärztliche Vereinigung Sachsen
- Kassenärztliche Vereinigung Sachsen-Anhalt
- Kassenärztliche Vereinigung Schleswig-Holstein
- Kassenärztliche Vereinigung Thüringen
- Kassenärztliche Vereinigung Westfalen-Lippe
Payment Schedule Based on Complex Negotiation Process

Uniform Valuation Benchmark ("Einheitlicher Bewertungsmaßstab”, EBM)

For statutory health insurance members, the medical fees are based on the EBM, which is an exhaustive catalog of medical services. It is subdivided into a number of chapters that are, for example, related to organizational services (lump sum compensation for referral letters, home visits, etc.) or general medical services which may be billed by any doctor. In addition, it contains a section concerned with the field of medical specialists, where services may be billed only if a doctor holds the required qualification and runs a specialized practice.

Furthermore, the EBM lists the services pertaining to ambulatory / outpatient operations (AOP). AOP services provided in medical practices and hospitals are treated equally, i.e. they are invoiced directly to the health insurance provider rather than via the KV.

Score

EBM services are assigned rating scores. Representatives from the SHI and KVs define a national score on an annual basis. This score is multiplied by the EBM score to obtain an amount in euro budgeted for the respective service.

GKV-SV, BA, INBA, G-BA and IQWiG

GKV-SV – Spitzenverband der gesetzlichen Krankenversicherungen

The National Association of the German Statutory Sickness Funds, the GKV-SV, is a key player in the German health care system. It is the highest representative of the interests of the statutory sickness funds and creates binding collective regulations for the health care sector in Germany.

Committee for Rating Panel Doctors’ Services ("Bewertungsausschuss”, BA)

The Bewertungsausschuss is comprised of representatives from the self-administered organizations of doctors and statutory sickness funds, in particular three members appointed by the Federal Association of SHI Panel Doctors (KBV) and the National Association of the German Statutory Sickness Funds (GKV-SV) respectively. The function of the BA is to determine the Uniform Valuation Benchmark (EBM)
Payment Schedule Based on Complex Negotiation Process

and amendments to be made thereto, as well as on the medical fee schedule.

In addition, the BA also decides on the rules governing the remuneration of medical services provided by SHI physicians; both the Kassenärztlichen Vereinigungen and statutory health care funds, are bound by its decisions. The Bundesministerium für Gesundheit (BMG) (Ministry of Health) is responsible for legal supervision.

**INBA – Institut des Bewertungsausschusses**

The INBA (Institute of the Committee for Rating Panel Doctors’ Services) is responsible for arranging the BA’s decisions and preparing analyses/reports with regard to the impact on the health care sector these decisions may have. The INBA is sponsored in equal parts by the GKV-SV and the KBV.
G-BA and IQWiG

Federal Joint Committee ("Gemeinsamer Bundesausschuss", G-BA)
The duty of the G-BA is to issue decisions and practical guidelines to implement the framework conditions of the health care system stipulated by law, which is why the G-BA is also dubbed "minor legislator". The G-BA’s decisions are legally binding.

Its guidelines govern the supply of medicines, medical supplies and rehabilitation aids (see below) as well as the provision of medical, diagnostic and therapeutic services.

The G-BA has 13 members: the neutral chairman, two further neutral members and five members respectively appointed by the GKV-SV and the care providers (doctors, psychotherapists, hospitals).

While not a subordinate agency, the G-BA is under the legal supervision of the BMG.

Institute for Quality and Efficiency in Health Care ("Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen", IQWiG)
The G-BA established the IQWiG as an independent scientific organization, as required by the legislature, to evaluate the medical usefulness, quality, and efficiency of services in line with the current standard of medical knowledge on behalf of the G-BA. The foundation for this is evidence-based medicine. Another task area of the IQWiG is to issue generally understandable patient information material.

With its scientific expert opinions, the institute assists the G-BA in carrying out its functions under the law. Nevertheless, the IQWiG and G-BA are separate organizations operating independently from each other. The assessments performed by the IQWiG provide the G-BA with guidance to base its decisions, and they are legally required upon which to be incorporated in the guidelines. However they do not pre-empt the G-BA’s decisions.
G-BA and IQWiG

Fig. 14: Structure of G-BA and IQWiG
Reimbursement in the Outpatient Sector for Medical Supplies and Equipment

**Medical Practice Equipment ("Praxisbedarf")**

Praxisbedarf includes, for example, all necessary basic hardware (e.g. waiting room chairs) and technical equipment (e.g. ECG, ultrasound) of a medical practice; it is not patient-related. Praxisbedarf must be procured and paid for by the practitioner himself and is ultimately income-financed.

**Medical Practice Supplies ("Sprechstundenbedarf")**

This refers to means that in their nature are intended for use on more than one patient within the scope of medical services. These include, among others:

- dressings and suture material (gauze bandages, swabs)
- means of (local) anaesthesia
- disinfectants for use on the patient
- reagents and quick tests
- diagnostic and therapeutic means (e.g. plaster, disposable infusion sets)
- drugs for emergency cases and instant use

Each KV district has a so-called Sprechstundenbedarf agreement in place detailing which products are billable as Medical Practice Supplies.

**Hilfsmittel (Medical Aids and Appliances)**

are prostheses, orthopaedic gear, hearing aids or other products that serve to compensate or to prevent handicaps or to assist therapy. They include, among other items:

- walking sticks
- prostheses
- wheel chairs

All prescribable Hilfsmittel are listed in the Hilfsmittel index (positive list) and, if prescribed by a physician, are reimbursed by the patient’s health insurance fund.

The GKV-SV is responsible for compiling and maintaining the Hilfsmittel index as well as for defining reference prices for the Hilfsmittel. These prices cover both the actual costs for the Hilfsmittel and the associated service – the reference price for a bladder catheter, for instance, also includes the service of placing the catheter. The provision of services is subject to quality standards and falls within the responsibility of specially trained personnel (typically nursing staff). In Germany, services are mainly provided by so-called homecare companies specializing in the distribution and supply of Hilfsmittel and, where necessary, provision of instruc-
Providing Hilfsmittel via Home Care Companies

The health care providers maintain agreements with these companies, that is, patients may not choose care providers freely. Manufacturers can file a written application with the GKV-SV to have the new product included. GKV-SV will forward the applications to medical and nursing experts for a medical and technical evaluation.
Individual Health Care Services and Reimbursement for Private Patients

Individual Health Care Services ("Individuelle Gesundheitsleistungen", IGeL)

These are services that a doctor offers to statutory sickness fund members which are not billable to the insurance fund, i.e. the costs are to be borne by the patient. For the most part, IGeL refers to preventive and service-based medicine. IGeL have been criticized repeatedly over whether the offered services are actually necessary and reasonable. A study conducted in two German cities showed, among others, that these services are offered much more often than would be actively requested by patients.

Doctor’s Fee Schedule ("Gebührenordnung für Ärzte", GOÄ)

The GOÄ is a catalog for billing services provided to so-called private patients. In the broadest sense, the description of services in this catalog is comparable to the Uniform Valuation Benchmark (EBM), although the services are more extensive and have a higher value. Doctors can therefore charge higher amounts. The services are typically charged directly to the patient. Such patients are usually covered by a private health insurance with which to file the doctor's bill for reimbursement. The proportion of patients who were offered IGeL by their doctors vs. proportion of patients having asked for IGeL is shown below.
Individual Health Care Services

- Neither offering nor asking for IGeL (61%)
- Patient asked for IGeL (11%)
- Doctor offered IGeL (28%)
6.3 New Models of Providing Care
Integrated Care

Integrated care provides cross-sectional, patient-oriented, interdisciplinary health care by promoting a close collaboration foremost between the ambulatory and stationary sector as well as various other service providers such as general and specialized practitioners, medical and non-medical service providers, prevention and rehabilitation centers.

An innovation, realized within the concept of integrated care, makes care providers accountable for charges individually, which gives rise to new economic responsibilities and possibilities: the allocation of services can be distributed on a more individualized basis and providers can selectively contract with sickness funds, thus circumventing the regular contracting model with the KV. For example, hospitals can contract with sickness funds for the provision of highly specialized ambulatory care, tearing down boundaries between the ambulatory and stationary sector.

Selective contracting is thus a long-term measure taken to increase competition among providers and the statutory sickness funds. This in turn should lead to improved quality of care and reduced health care expenditures.
New Care Models Integrate Providers and Insurer Based on Patient Needs

- General Practitioner
  - Case and Disease Management Programs, (DMP)
- Acute Care Clinic
  - Ambulatory Health Care Centers ("Medizinisches Versorgungszentrum")
  - Integrated Care, Selective Contracting and General Practitioner Model ("Hausarztmodell")
- Health Insurance
  - Homecare, Ambient Assisted Living (AAL), cooperation with the long-term care insurance
- Specialist
- Rehabilitation Center
- Provider of Medical Devices
Disease Management Programs (DMP)

Disease management programs target the improvement of care for chronically ill patients. It is an approach to organize the health care of specific patient groups throughout the entire process of the disease and to coordinate and optimize the cross-sectional interaction of individual providers.

Programs for the following diseases are available:

- diabetes
- coronary heart syndrome
- cardiac insufficiency
- asthma
- breast cancer
- COPD (chronic obstructive pulmonary disease)

Benefits: Treatments in DMPs concur with the latest evidence-based medicine rationale and are regularly assessed on process and result quality by the Federal Insurance Authority (Bundesversicherungsamt). Furthermore, self-empowerment strategies help to increase the patients’ understanding of their conditions, and treatment options, which in turn furthers their compliance. This leads to a reduction of complications and consequential damages.

Overall, DMPs aim to provide a thoroughly structured and efficient care that averts medical treatment errors including over- or undertreatment, while significantly reducing health care costs.
Evidence-Based Medicine and Coordinated Treatment for Diabetes Led to Improved Medical Outcomes

HbA1c Glucose Monitoring

<table>
<thead>
<tr>
<th></th>
<th>DMP</th>
<th>UKPDS 33</th>
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<tbody>
<tr>
<td>7</td>
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<td>7,1</td>
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<td>7,2</td>
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Amputations

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<tr>
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<tr>
<td>1</td>
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Cardiac Infarctions

<table>
<thead>
<tr>
<th></th>
<th>DMP</th>
<th>UKPDS</th>
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<tr>
<td>0</td>
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<td>10</td>
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</table>

(intensive/not intensive insulin therapy)

(UKPDS: United Kingdom Prospective Diabetes Study)
Ambulatory Health Care Centers

MVZ are interdisciplinary ambulatory medical service centers, managed by at least two medical and non-medical cooperating health care professionals contracting as a unit with the sickness funds. Physicians can pursue their clinical work outside the traditional structures but evade the risks of self-employment. Innovative working models can be created, for example part-time employment. The MVZ provides single-centered, integrated health care through a group of physicians under one roof to enhance interdisciplinary working and cross-sectional coordination. The MVZ is designed to concentrate ambulatory care into a small number of efficient centers. The resulting coordination of diagnoses and therapies through health care providers facilitates the management of the challenging treatment of elderly and multi-morbid patients in particular.
Constant Rise of Ambulatory Health Care Centers (MVZs)

**MVZ contractual provider**
(physician, psychotherapist, pharmacist, clinic, prevention and rehabilitation facility)

- Medical director (Dr. med)
  - Medical Director, Internal Medicine
    - Specialists, Internal Medicine
  - Medical Director, Surgery
    - Specialists, Surgery
  - Medical Director, Laboratory
  - Rehabilitation Facility
  - Pharmacy, etc

**Graph:**
- MVZ total number
- thereof owned by hospitals

<table>
<thead>
<tr>
<th>Year</th>
<th>MVZ total number</th>
<th>thereof owned by hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2006</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>2/2006</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>3/2006</td>
<td>173</td>
<td></td>
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<tr>
<td>4/2006</td>
<td>210</td>
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<tr>
<td>2/2007</td>
<td>232</td>
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<tr>
<td>3/2007</td>
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<td></td>
</tr>
<tr>
<td>4/2007</td>
<td>295</td>
<td></td>
</tr>
<tr>
<td>1/2008</td>
<td>326</td>
<td></td>
</tr>
<tr>
<td>2/2008</td>
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<tr>
<td>3/2008</td>
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<td>4/2009</td>
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<tr>
<td>1/2010</td>
<td>554</td>
<td></td>
</tr>
<tr>
<td>2/2010</td>
<td>578</td>
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Selective Contracting – General Practitioner-Centered Care

General practitioners provide basic health care and are as such the first point of care for Germans covered by statutory health insurance. They are mandated to consider and decide about treatment options, e.g. the transfer of patients to specialists.

Patients who want to take part in the “Hausarztmodell” voluntarily submit to contracting with a single general practitioner as the first point of contact and central coordinator of their care. The patients need to commit to one general practitioner for one year (though waivers are granted in rare cases). Additionally, patients are obliged to consult one selected pharmacist.

A key aspect of the “Hausarztmodell” is the centralization of all personal medical data, which facilitates statistical analysis and quality assessment by the statutory sickness funds. Practitioners selectively contract with statutory sickness based on models negotiated with members of the Association of Statutory Health Insurance Physicians (“Kassenärztliche Vereinigung”, KV) when entering the “Hausarztmodell”.

How the “Hausarztmodell” Works:

The general practitioner is the primary point of contact for the patient. The transfer to specialists, therapists or hospitals is decided on an individual basis. Patients who are signed up for the Hausarztmodell are free to consult gynaecologists, eye specialists and paediatricians directly.
Increasing life expectancies and the decrease in birth rates create a shift towards an ever-aging population. One of the new models being introduced is home care.

Home care (also domiciliary care or social care) is health or supportive care provided at the patient’s home. Home care seeks to enable elderly people to receive care in the familiar surroundings of their home by health care professionals or family and friends. This provides an alternative to the rather cost-intensive institutional-based nursing care centers.

Professional home health services could include medical or psychological assessment, wound care, medication teaching, pain management, disease education and management, physical therapy, speech therapy or occupational therapy.
Demographic Shift 2000–2030

European Union, 2000, Total and Impaired Population

European Union, 2030, Total and Impaired Population
As a result of the demographic shift, there will be an increasing number of elderly, disabled and chronically ill individuals whose care requires new solutions. Ambient Assisted Living (AAL) involves the development and integration of intelligent systems and services adapted to the needs of an aging generation of patients.

Innovative AAL projects are realized in various areas, including the health care sector, medical device supply, technologies for the elderly, wellness, services, smart homes, smart textiles, robotics and consumer electronics. These solutions enable senior citizens to live an independent, self-determined and convenient life while remaining in familiar surroundings. The Federal Ministry of Education and Research and statutory health and pension funds encourage new concepts of home care which enable patients to lead active lives in their own four walls.

### Ambient Assisted Living (AAL)

### Wearable Technologies

#### Glove Sensors:
Register psycho-physiological data.

#### Fall Monitoring System:
The “SturzAlarm” system, camouflaged as a hearing aid, works with sensors and bluetooth connections.

#### Sensor Patches
Can be applied like a plaster, measures physiological data.

#### EEG-Headset

#### Intelligent Shirt
Allows for continual monitoring of vital data.

### Inbuild Sensors

#### Carpet Sensors:
Detect motion and falls.

### Care Robots

#### Care-O-Bot:
Designed to assist in the household and interact with patients.
AAL Solution – Model House

locating the sensor

Sensor Data
(vital signs, environmental data)

Medical Status
(planned therapy and activities, emergency case detection)

Assisting System
(memory, coordination, control)

External Data Sources

External Data Sources

Camera
Sensor
TV
Fridge
The Health Care Industry

7.1 German Health Care Business
7.2 Legal Framework
7.1 German Health Care Business
Health Care Regions in Germany

In Germany, a number of initiatives have emerged to establish networks of companies involved in the health care business. Some of these initiatives have received state grants while other networks have developed without state involvement. It is important to distinguish between the two models. Publicly subsidized projects are frequently designed to improve the economic strength of a region while private health care networks strive to better serve the market for health care in their respective region.

Healthy Kinzigtal

The Healthy Kinzigtal is a system of integrated care in Baden Wuerttemberg (BW) which created a network of doctors, clinics, physiotherapists and nursing homes. A closer cooperation between providers is expected to improve the quality of health care provided to the insured. The network is focussed on specific medical conditions such as heart failure or depression. It includes prevention programs as a part of the integrated care agreements concluded. The compensation provided to physicians varies depending on the health of the patients: the fewer the consultations given, the better the health care delivery, the more the physicians earn. The contracts with the statutory sickness funds, AOK BW and the LKK in BW have a 10 year term.

Healthcare Regions of the Future

The Federal Ministry of Education and Research (BMBF) sponsored a competition in Germany in 2008. Since then, the BMBF has provided grants to selected regions. The winners in each of the years 2009 and 2010 shared the proceeds of a grant totalling 22 million Euros. However, the victorious region needed to guarantee a 50% co-financing. The regions submitted concepts on how to bring together researchers, developers and health care providers in order to create innovations. In 2010, the BMBF awarded the grant to (i) the “Healthcare Metropolis Hamburg” for its network of mental health, (ii) the HIC@RE Healthcare Region Baltic Sea Coast for its united efforts against multi-resistant bacteria and (iii) the project “Room for Health” of the metropolitan area Rhine-Neckar.
Health Care Regions in Germany

Network of German Health Care Regions

The association, Network of German Health Care Regions, was founded in 2008. Its goal is to foster the coordination between the various health care networks in Germany. Within the framework of this organization, the members of the various regions are to gain from the experience, research projects and innovations from other regions. The association thus provides a useful overview of the different projects currently being implemented in Germany.
Types of Health Care Providing Businesses in Germany

Hospitals

In Germany, there are currently (2011) around 2,000 hospitals. These hospitals are held in roughly equal proportion by public entities, independent not-for-profit organizations, and for-profit companies. Publicly owned hospitals are owned by municipalities, states, or the federal government. The federal government only operates military hospitals, the states primarily own the university hospitals and mental health institutions. The municipalities are often the owner of the local general hospital in order to ensure the provision of health care in their districts. Independent not-for-profit hospitals are generally owned by charitable organizations including churches. The for-profit hospitals in Germany are largely comprised of hospital chains, with Asklepios, Sana, Helios, and Rhoen being the dominant chains.

The funding for the hospitals is derived from two sources: the reimbursement of the operating costs and the investment costs. The operating costs have to be recouped mainly through lump-sum reimbursements per case (DRG), which in many cases is no longer particularly lucrative. As a result, some hospitals generate more profit from their ancillary operations than the treatment of patients. Public funding for investments is in principle available to any hospital which is included in the official hospital plan.

Offices of Doctors and Dentists

The offices of doctors and dentists are businesses of self-employed professionals. There are private practices and statutory health care fund practices; both of these categories include practices for general medicine and practices for specialized medical care. Private practices only treat patients with private health insurance or self-payers. “Panel doctors”, i.e., doctors who have been recognized by the Association of Statutory Health Insurance Physicians as service providers to patients with statutory health insurance, are entitled to treat both types of patients. The treatment of private patients is nonetheless more lucrative. Panel doctors only receive a lump sum per quarter per statutory health care patient they treat. This lump sum is distributed by the Association of Statutory Health Insurance Physicians.
# Largest Hospital Chains Mainly Private

## Hospital Chains in Germany, Annual Sales (m €)

<table>
<thead>
<tr>
<th>Private Hospital Groups</th>
<th>2006</th>
<th>2010</th>
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<tbody>
<tr>
<td>Rhön-Klinikum</td>
<td>1,933</td>
<td>2,550</td>
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<tr>
<td>Helios Kliniken/Fresenius</td>
<td>1,673</td>
<td>2,520</td>
</tr>
<tr>
<td>Asklepios</td>
<td>2,150</td>
<td>2,305</td>
</tr>
<tr>
<td>Sana Kliniken</td>
<td>792</td>
<td>1,485</td>
</tr>
<tr>
<td>Schön Kliniken</td>
<td>348</td>
<td>558</td>
</tr>
<tr>
<td>Damp Holding</td>
<td>422</td>
<td>487</td>
</tr>
<tr>
<td>Mediclin</td>
<td>378</td>
<td>487</td>
</tr>
<tr>
<td>Ameos</td>
<td>244</td>
<td>377</td>
</tr>
<tr>
<td>SRH Kliniken</td>
<td>342</td>
<td>360</td>
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<tr>
<td>Paracelsus Kliniken</td>
<td>284</td>
<td>336</td>
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</tbody>
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<table>
<thead>
<tr>
<th>State-owned hospital groups</th>
<th>2006</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vivantes (Berlin)</td>
<td>718</td>
<td>837</td>
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</table>

<table>
<thead>
<tr>
<th>Church based hospital groups</th>
<th>2006</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agaplesion (Protestant)</td>
<td>329</td>
<td>610</td>
</tr>
<tr>
<td>St. Franziskus-Stiftung Münster (Catholic)</td>
<td>400</td>
<td>602</td>
</tr>
</tbody>
</table>
Types of Health Care Providing Businesses in Germany

The lump sum paid to physicians serving patients with statutory health insurance is determined ex-post based on a point system and the amount of funding available for primary care. Costs which exceed this lump sum are not reimbursed and must be borne by the physician. Private patients, which account for roughly 10 percent of all patients, are charged on a fee-for-service basis. Doctors and dentists earn roughly twice as much on the same service when treating private patients. Physicians are entitled to declare their form of cooperation as a partnership under the German Code of Civil Law or create a partnership company.

MVZ – Ambulatory Health Care Centers

Ambulatory Health Care Centers are inter-disciplinary organizations under the management of physicians which provide primary care to patients. MVZs can be owned by private investors or doctors/dentists. Pharmaceutical companies or device manufacturers are prohibited from owning medical treatment centers. A number of hospitals have set up their own Ambulatory Health Care Centers so that patients can be referred directly from these general practices to their own hospitals. See also above, p. 224.

Rehabilitation Clinics

As in the case of hospitals, rehabilitation clinics can be operated by governmental, not-for-profit or for-profit organizations. For-profit companies dominate this sector. About 56 percent of the roughly 1240 rehabilitation clinics are held by private owners, 26% by independent charitable organizations and 18 percent by public entities. In contrast to hospitals, rehabilitation clinics do not typically receive public grants and are therefore particularly exposed to competitive pressures. In order to save costs, the responsible payer generally prefers the rehabilitative care to be prescribed on an outpatient basis in the primary sector. Nonetheless, given the aging population, the long-term prospects for rehabilitation clinics are favorable. At present, rehabilitation clinics are increasingly providing the post-operative care following the hospital discharge. This is a result of the introduction of the diagnosis related groups and the incentive of the hospitals to discharge their patients as soon as possible.
Major Hospital Groups in Germany

**Additional faith-based and not-for-profit hospital groups**
- Alexius, Gesellschaften der Alexianerbrüder: 6 hospitals, 7 long-term-care facilities
- cusanus trägergesellschaft trier (ctt): 4 hospitals, 5 rehabilitation clinics, 20 long-term-care facilities
- Diakonissenhospitals
- edia.co nGmbH: 5 hospitals, 4 ambulatory care centers, 2 rehabilitation clinics and 2 long-term-care facilities
- Johanniter-Hospitals: 13 hospitals, 1 rehabilitation clinic
- Katholische Wohltätigkeitsanstalt zur heiligen Elisabeth: 8 hospitals, 6 long-term-care facilities
- Katholische Hospitalvereinigung Weser-Egge gGmbH (KHWE): 4 hospitals
- Marienhaus Kranken- und Pflegegesellschaft mbH Waldbreitbach: 27 hospitals, 29 long-term-care facilities, more than 25 other facilities
- MTG Malteser Trägergesellschaft gGmbH, 11 hospitals
- proDiako: 11 hospitals
- Paul Gerhardt Diakonie in Berlin, 7 hospitals, 3 long-term-care facilities

**Additional for-profit hospital groups**
- Allgemeine Hospitalgesellschaft: 45 hospitals and ambulatory care centers
- dk Deutsche Klinik GmbH: 5 hospitals plus 6 under management
- Johannesbad Unternehmensgruppe: 7 hospitals, 3 ambulatory care centers
- Marseille-Hospitals AG: 67 facilities, of which 58 long-term-care facilities and 8 rehabilitation clinics and 1 hospital
- Maternus Hospitals AG: 2 clinics 21 long-term-care facilities
- Median Hospitals: 2 hospitals, 32 rehabilitation clinics
- Medigreif Unternehmensgruppe: 5 hospitals, 5 rehabilitation clinics,
- RHM Hospitals und Pflegeheime: 12 hospitals, 7 long-term-care facilities
- Waldburg-Zeil Hospitals: 2 hospitals, 11 rehabilitation clinics

**Hospital groups owned by public institutions and local governments**
- Deutsche Rentenversicherung: 95 rehabilitation clinics
- Elblandhospitals: 4 hospitals, 1 rehabilitation clinic
- Krankenhäuser des Landschaftsverbands Westfalen-Lippe (LWL): 15 hospitals, 5 rehabilitation clinics
- Hospitals Ludwigsburg-Bietigheim gGmbH: 5 hospitals, 1 rehabilitation clinic
- Klinikum Region Hannover GmbH (KRH): 12 hospitals
- regioMed-Hospitals GmbH: 7 hospitals and other facilities
- Saarland Heilstätten (SHG): 4 hospitals, 5 rehabilitation clinics
Heilmittel and Hilfsmittel

Heilmittel

In Germany, the term Heilmittel refers to medical services that are prescribed by physicians and provided by specially trained therapists. They include, among other items:

- physical therapies
- logopaedic therapy
- occupational therapy

The G-BA is not authorized to lay down rules as to what Heilmittel may be prescribed for what indication (positive list). The framework is laid down by the GKV-SV and the national umbrella organizations of the Heilmittel providers by making recommendations, e.g. to ensure uniformity in the provision of services. The principle of benefits in kind is applicable here.

Hilfsmittel (Medical aids and appliances)

are medicinal products that serve to balance or prevent handicaps or to assist therapy. All prescribable Hilfsmittel are listed in the Hilfsmittel index (positive list) and, if prescribed by a physician, are reimbursed by the patient’s health insurance provider. See pages 214/5
SHI Expenditures for Heilmittel and Hilfsmittel Continually Growing
Complex and Large Pharmaceutical Market

The German market for pharmaceuticals is large and complex. In 2010, the total sales volume for SHI patients was 29.7 billion Euro. This means that 16% of SHI expenditures were allocated to the purchase of pharmaceuticals. On average, there is one prescribed medication per doctor’s visit, making pharmaceuticals the most frequent choice of therapy by far.

There are roughly 45,000 approved pharmaceutical products with 3,000 different active ingredients on the market. However, this includes only about 25,000 pharmaceuticals introduced after 1978, when a new pharmaceutical law increased the safeguards and testing requirements before approval. This has slowed the pace of new pharmaceuticals reaching the market.

Germany is an important location for the production of pharmaceuticals as well. There are more than 850 pharmaceutical producers and more than 350 biotech companies, employing around 100,000 people. With Bayer, Boehringer Ingelheim, and Merck KGaA, Germany boasts three of the world’s 25 largest pharmaceutical producers.
Reduced Number of Prescriptions but Overall Rising Expenditures

**SHI Expenditures for Pharmaceuticals, in € bn**

**Prescriptions per SHI Patient and Year**
Pharmaceutical Industry and Its Associations

Research-Based Pharmaceutical Companies ("Verband forschender Arzneimittelhersteller", VFA)

The VFA represents the interests of around 45 pharmaceutical companies involved in research with approximately 90,000 employees in Germany. The goal of the association is to extend the patent protection and the freedom to set the prices for prescription drugs largely on their own.

Federal Association of Pharmaceutical Producers ("Bundesverband der Arzneimittelhersteller", BAH)

The BAH represents 311 pharmaceutical companies and a further 150 companies such as pharmacies, legal firms, publishing companies or agencies. The member companies have approximately 80,000 employees. A major goal of the association is to limit rebate agreements between statutory health care plans (payers) and pharmaceutical companies.

Federal Association of the Pharmaceutical Industry ("Bundesverband der Pharmazeutischen Industrie", BPI)

The BPI represents around 260 companies with approximately 72,000 employees. The members include pharmaceutical companies and service providers to the pharmaceutical industry, biotech companies and suppliers of plant-based medication and homeopathic products. The association promotes the freedom of therapy and diversity in prescription drug delivery.
Pro Generics ("Pro Generika")

The members of this association consist of the large manufacturers of generic drugs. The 17 members have a market share of around 75% of the German generic market. Pro Generika supports short patent durations and the deregulation of the pharmaceutical market.

German Generic Association ("Deutscher Generikaverband")

The German Generic Association primarily represents the interests of small and mid-sized generic producers. The association has only limited public recognition.

Pharmaceutical Industry in Germany (2010)

- Pharmaceutical Companies: 877
- Biotechnology Companies: 387
- Total number of employees: 100,000
- Total Sales: 37.5 bn Euro
- Of which Exports: 26.6 bn Euro

SHI expenditures for pharmaceuticals

21% of total (around 29 billion €) in 2009

On average, there is one drug prescribed per visit to the doctor – by far the most frequent therapeutical measure.
In Germany, there are about 21,500 pharmacies. Whoever wishes to operate a pharmacy must receive a state approval. This approval is granted by the respective state authority. The legal function of the pharmacies is to ensure an orderly delivery of pharmaceutical products to the people. Only board-certified pharmacists are allowed to own pharmacies. Since 2004, a pharmacist may own 3 pharmacy branches in addition to his main pharmacy. The Pharmaceutical Product Price Ordinance regulates the price of medications. Prescription drugs are sold at a fixed mark-up. As a result, pharmacies earn a profit on both expensive and inexpensive drugs and have no economic incentive to promote the sale of expensive drugs. Since the onset of rebate agreements, pharmacies are nevertheless obliged to supply insured persons with the particular drug contractually stipulated by their statutory health insurance company.

Pharmacies, Federal Union of German Association of Pharmacists (“Bundesvereinigung Deutscher Apothekenverbände”, ABDA) and German Federation of Pharmacists (“Deutscher Apothekerverband”, DAV)

ABDA represents approximately 57,830 active pharmacists and is a union of all Chambers of Pharmacists and Associations. The German Federation of Pharmacists (DAV) is part of the ABDA. The DAV represents the economic interests of the pharmacists. It is comprised of 17 regional associations.

Pharmaceutical Wholesalers

Pharmaceutical wholesalers form the link between the approximately 1,500 pharmaceutical companies and the 21,500 pharmacies. PHAGRO, the Federal Association of Pharmaceutical Wholesalers, comprises all of the 15 pharmaceutical wholesalers who are independent of pharmaceutical manufacturers and full-range providers. The main function of the pharmaceutical wholesalers is to supply the pharmacies on a nationwide basis. The pharmaceutical wholesalers have a delivery entitlement. This means that pharmaceutical companies are required to deliver their products to each of the pharmaceutical wholesalers. The wholesale margin is fixed by the Pharmaceutical Product Price Ordinance.
Rebate Agreements

Since 2007, pharmaceutical companies have been entitled to conclude agreements with statutory health care insurers for the exclusive supply of their own pharmaceutical products to the insured. The statutory sickness funds select their contractual parties on the basis of bidding procedures for particular medications. Policyholders of the respective statutory health care fund receive the contractually agreed medication even if the physician prescribes a different medication. An exception is made if the physician cancels the aut-idem field (“or similar”) on the prescription. Pharmacists are required to check the pharmaceutical company and the medication stipulated by the rebate contract of the client’s health care fund. The pharmacists are obligated to supply the contractually agreed medication. If the pharmacist supplies the false medication, the health care fund is not required to reimburse them for the price of the product. In that case, the pharmacist has to bear the cost of the pharmaceutical.

Non-prescription Drugs

Pharmaceuticals subject to reimbursement are prescription drugs whose cost are borne by the statutory health care funds. The patients pay ten percent of the price, a minimum of 5 Euros and a maximum of 10 Euros. Since 2004, non-prescription drugs are no longer reimbursed by SHI. PHI companies reimburse the cost of medication to the extent agreed in the insurance policy – however, only when prescribed by a doctor and purchased in a pharmacy.

OTC Products

Over the counter products are freely available non-prescription drugs whose sale is not restricted to pharmacies. The SHI funds ceased to reimburse the cost of OTC products in 2004. Exceptions are made when they are for children up to the age of 12, for young people with developmental disorders or when OTC products are part of the standard therapy. The price control of OTC products was abolished in 2004.
More Than Average Increase in Pharmaceutical Spending …

**AMNOG – Law for the Reform of the Pharmaceutical Market**
(“Arzneimittelneuordnungsgesetz”, AMNOG)

The AMNOG Law came into force on the 1st of January 2011. It governs the market access of new medicines. For the first time in Germany, the AMNOG implemented the early evaluation of pharmaceuticals. Pharmaceutical manufacturers have three months time to submit evidence of the added benefit for patients of their product to the Federal Joint Committee (G-BA). The G-BA decides if and what added benefit a new medical product has to offer and under what circumstances it may be prescribed under SHI reimbursement. If an added benefit vis-à-vis existing pharmaceuticals is found, a price will be negotiated for the medicine. If no added benefit is determined, the product will be classified into a fixed price group. At the same time, the reward and penalty points system and the requirement for a second opinion in certain cases have been abolished – these two measures had been very contentious.
... Led to The Act on the Reform of the Pharmaceutical Market, AMNOG

This diagram illustrates the process of the German Health Care System, specifically focusing on the Act on the Reform of the Pharmaceutical Market, AMNOG. The process begins with the Market Launch, followed by the G-BA Benefit Assessment (Publication) which is assessed by IQWIG (Investigation & Assessment). Based on the assessment, the reference price is determined, followed by price negotiations and benefit assessment (Decision). If there is no added benefit, the agreement is not accepted, and the process continues with arbitrator’s decision and cost-benefit assessment. If the arbitrator accepts the benefit, the process concludes.

Key points:
- Manufacturer’s Price
- Market Launch
- G-BA Benefit Assessment (Publication)
- Benefit Assessment (Decision)
- Price Negotiations
- Arbitrator’s Decision
- Cost-Benefit Assessment
- Market Launch
- 3, 6, 12, 15 Months
- Accepted
- Not accepted
- Accepted
- Accepted
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Associations in Medical Technology

Federal Association of Medical Technology ("Bundesverband Medizintechnologie", BVMed)

The BvMed is a trade association which represents over 230 industrial companies and distributors accounting for 170,000 employees; it is thus the largest association in the area of medical technology in Germany. The members of BvMed include the world’s top 20 device manufacturers for the consumer market. The member companies are engaged in a wide range of sectors including biotechnology, tissue engineering and nanotechnology.

Spectaris – Association of the High Tech Industry

Spectaris represents 400 companies in the fields of consumer optics, photonics, laboratory technology and medical technology. With its members comprised primarily of small to medium sized companies, Spectaris campaigns against market regulation and resists efforts to introduce rebate contracts for medical equipment supplies, which would be patterned along the lines of the rebate contracts for generic drugs. In addition, Spectaris opposes granting greater authority to IQWiG.

Central Association of the Electrotechnical and Electronic Industry ("Zentralverband Elektrotechnik- und Elektronikindustrie", ZVEI)

The ZVEI promotes the interests of the German electrical industry with respect to business regulation, technology and environmental issues. The 1,600 member companies employ over 800,000 workers. The members include companies not involved in the health care market. As a result, the goals of the ZVEI are less focussed on specific health care issues. The association calls for tax subsidies for research projects and greater investment in energy efficiency.
Associations in Medical Technology

Association for Electrical Electronic Information Technologies ("Verband der Elektrotechnik Elektronik Informationstechnik", VDE)

The VDE has around 35,000 members, including 1,300 companies. The main focus of the association is to certify and standardize electronic products. The VDE seal of certification is one of the best known seals of approval in Germany. In addition, the VDE campaigns for greater support of innovative technologies such as nanotechnology and microelectronics.

Association of the Producers of IT Solutions for the Health Care Market ("Bundesverband Gesundheits-IT", bvitg)

The bvitg represents 40 IT companies involved in the health care sector. Most of the members provide administration software for medical practices and hospitals. The association promotes the creation of a common technological infrastructure in Germany. In this regard, it campaigns for the creation of a standardized interface for the transfer of data between disparate IT systems and fosters cooperation within the industry.
7.2 Legal Framework
SGB V – Code of Social Law V

The Code of Social Law V (SGB V) pertains to the statutory health care funds. It governs the health insurance obligation, the coverage involved and the legal relationship between the statutory health care funds and the insured. The main focus of political debate are family-practice-centered health care delivery and selective contracts.

Selective contracts enable statutory sickness funds to conclude agreements with particular service providers in order to organize health care delivery in a fashion which goes beyond the standard treatment. Since as a result, the treatment and reimbursement occurs without the involvement of the associations of statutory health care insurance physicians, the contracts are also referred to as direct contracts. Another way to conclude agreements directly with the statutory health care funds is via integrated care. Integrated care agreements apply to areas in which various medical service providers cooperate to improve patient care across primary and secondary sectors.

Pharmaceutical Law (“Arzneimittelgesetz”)

The Pharmaceutical Law governs the production and distribution of medicines. The main feature is the approval process including the proof of quality, effectiveness and health safety. For “special areas of treatment” such as homeopathy, phytotherapy and anthroposophy, special rules apply. With the health care reform act of 2004, the law permitted the mail order selling of pharmaceuticals under certain conditions.

Medical Product Law (“Medizinproduktgesetz”, MPG)

The Medical Product Law governs the way, place and duration in which medical products may be used in and on the human body. The law applies to the use of medical products in daily practice and in clinical studies. The MPG covers a wide range of products – from pacemakers and artificial joints to anaesthetic, ultrasound or imaging devices. Even software can fall under the category of a medical product.
Pharmaceutical Supply in Germany Extensively Regulated

The products are classified into risk groups I, IIa, IIb und III (highest risk group). Within the EU, medical products may only be sold if they carry the CE-Mark, thus conforming to European standards.

Pharmaceutical supply in Germany is governed by regulations including the following:

- Pharmaceuticals Law (AMG): This is the central legal regulation on the manufacture, approval and release of pharmaceuticals, as well as official monitoring of pharmaceutical provision.
- Pharmacy Law (ApoG) and Pharmacy Sales Ordinance (ApBetrO): These regulate the conditions for the authorization of pharmacies, as well as the requirements for operating pharmacies.
- Pharmaceutical Price Ordinance (AMPreisV): This lays down the allowed price surcharges for pharmaceutical wholesalers and pharmacies.
- Code of Social Law V (SGB V): This regulates the entitlements to benefits of persons with statutory health insurance, the responsibilities of the common self-government and the general conditions for pharmaceutical supply to insured persons.

The Federal Joint Committee (G-BA) decides on whether new medicines and technologies can be reimbursed by SHI or not. This has sometimes been dubbed the “fourth hurdle” – after efficacy, safety, and quality considerations stipulated in the Pharmaceuticals Law (AMG), the Federal Joint Committee (G-BA) then looks at efficiency.
The medical profession is among the most regulated of occupations in Germany. A large part of the regulations are codified in the Professional Code of Conduct for Physicians. The regulations are issued by various state medical associations and are mostly based on the model code of conduct issued by the German Federal Medical Association.

Free Profession – Not a Business

The model code of conduct codifies the most important duties of the physician. Some of these relate to ethics and morality, i.e. that the doctor is obligated to carry out his profession in a conscientious manner. Other parts stipulate specific rules which have wide ramifications, i.e. with respect to the physician’s duty of confidentiality. Paragraph 1, Section 1, Sentence 1 stipulates that the medical profession is not a business but a free profession. That means that the main objective of the physician may not be devoted to generating the largest possible financial profit but to healing patients and safeguarding public health. Accordingly, physicians may never be bound by the directives of non-physicians in connection with medical decisions. Even though there is growing competition among physicians, the profession is not designed to maximize profits.

Obligation to Continue Medical Education

Physicians are obliged to keep informed of their professional duties and maintain their continued education. Within a period of five years, physicians need to obtain 250 CME-Points (continuous medical education). The duty of further education enables companies to establish contact with the physicians by offering courses on medical indications or the management of practices. In the past, pharmaceutical companies used the duty of further education to offer continuing medical education in holiday resorts. Physicians were able to take part in these courses for a marginal fee or sometimes on a complimentary basis. By now, most pharmaceutical companies have adopted voluntary codes of conduct which preclude luxury CME courses.
The Professional Code of Conduct for Physicians

Informed Consent, Documentation and Confidentiality Duties

Some of the duties relate to the circumstances of the treatment: physicians are duty bound to thoroughly inform their patients so that the patients can freely decide whether to receive the treatment or not. In addition, physicians must document the treatment in detail and maintain records for a period of ten years. (For certain procedures, a longer or shorter term is required.) The most central aspect of the doctor-patient relationship is the physician’s duty of confidentiality. Even after the death of their patient, the physician is not entitled to disclose information about the patient. The relationship of trust held between a patient and a doctor is protected by law. Accordingly, a physician is only entitled to make statements in court regarding a treatment if her patient has released her from the duty of confidentiality.

Freedom to Choose a Doctor

Patients have the right to select their doctors freely. This also applies during the period of treatment. A physician may only decline services to a patient in the absence of an important reason if the physician is not certified for reimbursement by the SHI. A statutory health care insurance physician is subject to the duty to treat and may only decline to treat a patient if the relationship of trust has been irreconcilably destroyed – for instance if the patient has filed suit against the physician. In cases of emergency, all physicians are obliged to assist.
The Law on Advertising in the Health Care Sector contains the professional code of conduct, the law against unfair competition and the most important regulations on advertising for medical treatments. The law pertains to pharmaceuticals, therapy procedures and medical devices. Image marketing for doctors and clinics is – in contrast to a widely held view – not affected by this law.

Protection of Public Health

The HWG is designed to safeguard public health. The law is based on the assumption that the doctor – as a result of her profession – will have such authority over the patient that the patient will follow her recommendations even when she is advertising. As a result, physicians are not entitled to wear their occupational dress – surgical gown or the commonly worn white doctor’s coat – when they are advertising for a product or medical procedure.

Additional Restrictions in Advertising Outside of Professional Circles

Prohibitions in advertising include making false statements about a product, its inventor, the physician or the qualification of the physician or making guarantees (“works all the time”), advertising on the basis of the price of a product, providing gratuities above a nominal value, using thank you notes from satisfied patients, making statements which would cause anxiety or using samples of medicines or coupons for pharmaceuticals. Outside of professional circles, it is also prohibited to use pictures of patients “before and after”, to use photographs of body damage or body parts affected by disease, to use expert opinions, eyewitness reports or scientific publications, to recount the course of a patient’s disease and recovery given the successful treatment, to use foreign terms or jargon and to use photographs in occupational clothing.
Physician Advertising

Liberalized Physician Advertising ("Arzt-Auskunft-Urteil")

Whereas the medical associations continue to interpret the advertising prohibitions in a rigid fashion, the courts have become more liberal. In the past, physicians were not even entitled to present their therapeutic speciality. However, since the Physician Information Verdict of the Schleswig and the Dusseldorf state courts in the year 2000, case law has favored transparency. In the final instance, the Federal Constitutional Court and the Federal Supreme Court have ruled in favor of eliminating further barriers to physician advertising. According to these verdicts, an advertisement must be shown to at least indirectly endanger health in order for it to be prohibited. (Verdict of March 1, 2007) With this verdict, the court ruled against the wording of the Law on Advertising in the Health Care Sector (HWG).

Checklist for illegal marketing in health care

- False statement on the product, the developer, the physician or his qualification
- Healing promise (e.g. “works every time”)
- Advertisement with a contest
- Advertisement with gifts (of a certain value)
- Advertisement with letters of thanks from patients
- Advertisement that induces fear
- Advertisement with free giveaways or incentives
- Advertisement with a free treatment (e.g. diabetes checkup)
8

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8.2 Index
8.3 References and Further Readings
8.4 About the Editors and Contributors
8.1 Abbreviations
## Abbreviations

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<th>Full Form</th>
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<tr>
<td>AAL</td>
<td>Ambient Assisted Living</td>
</tr>
<tr>
<td>ABDA</td>
<td>Bundesvereinigung Deutscher Apothekerverbände</td>
</tr>
<tr>
<td>ALV</td>
<td>Arbeitslosenversicherung</td>
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<tr>
<td>AMG</td>
<td>Arzneimittelgesetz</td>
</tr>
<tr>
<td>AMNOG</td>
<td>Arzneimittelneuordnungsgesetz</td>
</tr>
<tr>
<td>AMPreisV</td>
<td>Arzneimittelpreisverordnung</td>
</tr>
<tr>
<td>AOK</td>
<td>Allgemeine Ortskrankenkassen</td>
</tr>
<tr>
<td>AOP</td>
<td>Ambulantes Operieren im Krankenhaus</td>
</tr>
<tr>
<td>ApBetrO</td>
<td>Verordnung über den Betrieb von Apotheken</td>
</tr>
<tr>
<td>ApoG</td>
<td>Apothekengesetz</td>
</tr>
<tr>
<td>AQUA</td>
<td>Institut für Angewandte Qualitätsförderung und Forschung im Gesundheitswesen</td>
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<tr>
<td>BA</td>
<td>Bewertungsausschuss</td>
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<tr>
<td>BAFin</td>
<td>Bundesanstalt für Finanzdienstleistungsaufsicht</td>
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<tr>
<td>BAH</td>
<td>Bundesverband der Arzneimittelhersteller</td>
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<tr>
<td>BAK</td>
<td>Bundesapothekerkammer</td>
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<tr>
<td>BÄK</td>
<td>Bundesärztekammer</td>
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<tr>
<td>BfArM</td>
<td>Bundesinstitut für Arzneimittel und Medizinprodukte</td>
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<tr>
<td>BG</td>
<td>Berufsgenossenschaft</td>
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<tr>
<td>BKK</td>
<td>Betriebskrankenkassen</td>
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<tr>
<td>BMBF</td>
<td>Bundesministerium für Bildung und Forschung</td>
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<td>BMF</td>
<td>Bundesministerium für Finanzen</td>
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<tr>
<td>BMG</td>
<td>Bundesministerium für Gesundheit</td>
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<tr>
<td>BMI</td>
<td>Body Mass Index</td>
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<tr>
<td>BPI</td>
<td>Bundesverband der Pharmazeutischen Industrie</td>
</tr>
<tr>
<td>BQS</td>
<td>Bundesgesellschaftsle Qualitätssicherung</td>
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<tr>
<td>BSNR</td>
<td>Betriebsstättennummer</td>
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<tr>
<td>BVA</td>
<td>Bundesversicherungsamt</td>
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<tr>
<td>BVMed</td>
<td>Bundesverband Medizintechnologie</td>
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<tr>
<td>BZÄK</td>
<td>Bundessanärztekammer</td>
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<tr>
<td>BZgA</td>
<td>Bundeszentrale für gesundheitliche Aufklärung</td>
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<tr>
<td>CME</td>
<td>Continuing Medical Education</td>
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<tr>
<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
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<tr>
<td>DAV</td>
<td>Deutscher Apothekerverband</td>
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<tr>
<td>DIMDI</td>
<td>Deutsches Institut für Medizinische Dokumentation und Information</td>
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<td>DIN</td>
<td>Deutsches Institut für Normung</td>
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<td>DKG</td>
<td>Deutsche Krankenhausgesellschaft</td>
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<td>DMP</td>
<td>Disease Management Programme</td>
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<td>DPR</td>
<td>Deutscher Pflegeverband</td>
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<tr>
<td>DRG</td>
<td>Diagnosis-Related Group</td>
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<tr>
<td>Acronym</td>
<td>Term</td>
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<tr>
<td>EBM</td>
<td>Einheitlicher Bewertungsmaßstab</td>
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<tr>
<td>eHC</td>
<td>Electronic Health Card</td>
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<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>G-BA</td>
<td>Gemeinsamer Bundesausschuss</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GDR</td>
<td>German Democratic Republic</td>
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<tr>
<td>GKV</td>
<td>Gesetzliche Krankenversicherung</td>
</tr>
<tr>
<td>GKV-SV</td>
<td>GKV-Spitzenverband</td>
</tr>
<tr>
<td>GOÄ</td>
<td>Gebührenordnung für Ärzte</td>
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<tr>
<td>GpfV</td>
<td>Gesetzliche Pflegeversicherung</td>
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<tr>
<td>GRG</td>
<td>Gesundheitsreformgesetz</td>
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<tr>
<td>GRV</td>
<td>Gesetzliche Rentenversicherung</td>
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<tr>
<td>GUV</td>
<td>Gesetzliche Unfallversicherung</td>
</tr>
<tr>
<td>HWG</td>
<td>Heilmittelwerbegesetz</td>
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<tr>
<td>ICD</td>
<td>International Statistical Classification of Diseases and Related Health Problems</td>
</tr>
<tr>
<td>ICW</td>
<td>InterComponentWare</td>
</tr>
<tr>
<td>IGel</td>
<td>Individuelle Gesundheitsleistungen</td>
</tr>
<tr>
<td>IK</td>
<td>Institutionen-Kennzeichen</td>
</tr>
<tr>
<td>INBA</td>
<td>Institut des Bewertungsausschusses</td>
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</tbody>
</table>
NUB  Neue Untersuchungs- und Behandlungsmethoden
OECD  Organization for Economic Co-operation and Development
ÖGD  Öffentlicher Gesundheitsdienst
OPS  Operationen- und Prozedurenschlüssel
OTC  Over the Counter
PEI  Paul-Ehrlich-Institut
PHAGRO  Bundesverband des Pharmazeutischen Großhandels
PHI  Private Health Insurance
PKV  Private Krankenversicherung
RKI  Robert-Koch-Institut
RVO  Reichsversicherungsordnung
SGB  Sozialgesetzbuch
SHI  Social Health Insurance
SQG  Sektorenübergreifende Qualität im Gesundheitswesen
SVR  Sachverständigenrat für Gesundheit
TÜV  Technischer Überwachungsverein
VDE  Verband der Elektrotechnik Elektronik Informationstechnik
VFA  Verband forschender Arzneimittelhersteller
VUD  Verband der Universitätsklinika Deutschlands
WHO  World Health Organization
ZVEI  Zentralverband Elektrotechnik- und Elektronikindustrie
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8.4 About the Editors and Contributors
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