

## CHAPTER 2

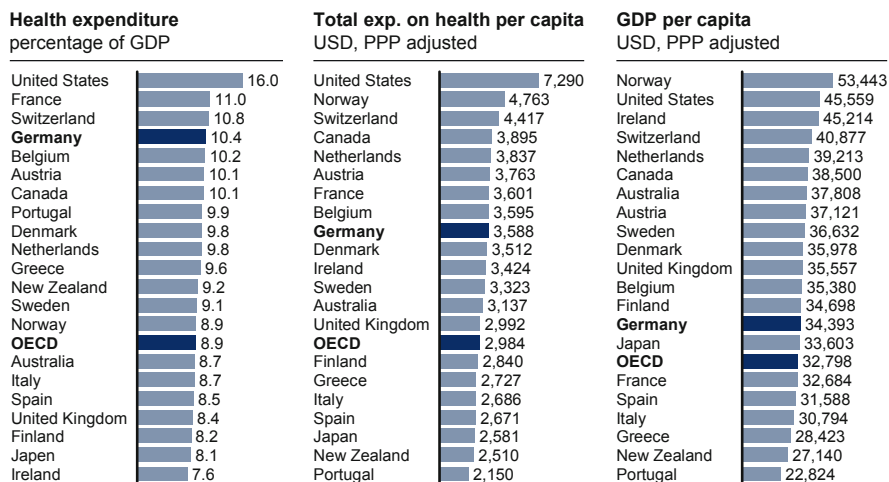
# Defining the Problem

Health care is a daunting field to understand, with rapidly advancing medical sciences, a complex array of institutions, heavy government regulation, and numerous highly engaged stakeholders. The sheer complexity of the field has led to widely different opinions about the problems in health care and the many ill-advised “solutions” to these issues. Despite the many voices speaking about the German health care system, the challenge is clear: the system is in need of reform. While Germany has achieved much over the course of the last 65 years in providing health care to citizens, the nation is on an unsustainable path. There is a toxic combination of rising costs, unsustainable financing, divergent quality of care, shortages of skilled personnel, and a confrontational atmosphere among entrenched stakeholders.

This chapter provides an overview of the problems facing the German system. While any individual performance measure may be questioned, the overall evidence is overwhelming. The current system in Germany is not maximizing value to its citizens.

### High and Rising Costs

When asked about the most pressing problem for the German health care system, the public overwhelmingly cites high costs. The most often quoted numbers are that Germany spent 10.4% of its GDP on health care or 253 billion euros in 2007.<sup>4</sup> Only the US at 16.0%, France at 11.0% and Switzerland at 10.8% spent more as a percentage of GDP (see Figure 1).<sup>5</sup> In 2007, Germany spent 3,588 USD (PPP-adjusted) per year per capita on health care.

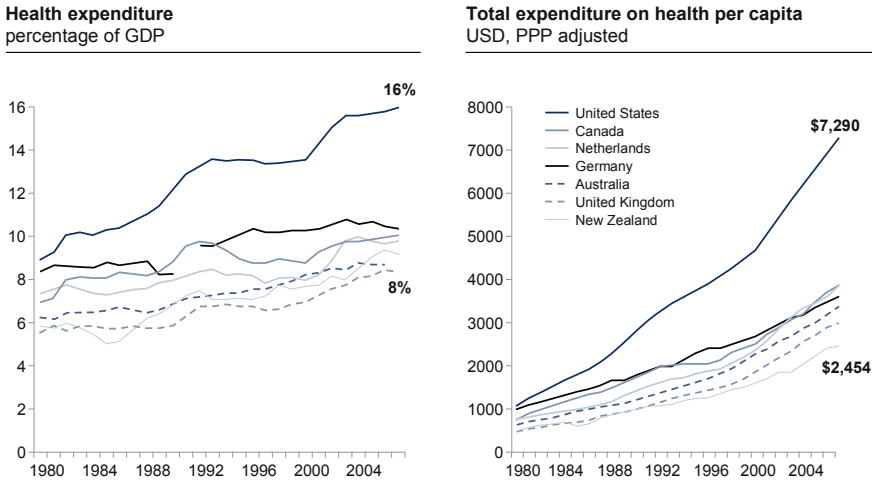


**Fig. 1.** Health care spending as a percentage of GDP, absolute health care spending per capita, and GDP per capita by country, 2007

*Source: Health at a Glance 2009, OECD Indicators; data from 2007 except for Portugal (2006), Japan (2006), and Australia (2006/07)*

As in nearly all developed countries, German health care expenditures have grown faster than GDP (see Figure 2), and cost increases are likely to persist.<sup>6</sup> The reasons are similar across the globe: an aging population, increased demand and sense of entitlement from consumers, supply-induced demand from providers, and a trend towards defensive medicine.<sup>7,8</sup> A negative structural price effect, i.e., wages of health care workers increasing faster than productivity, also causes further cost increases.<sup>9</sup> The effect of technology on long-term health care costs is unclear: while some innovations will reduce costs, others will increase them.

Faced with rising costs, Germany passed a series of major health reforms between 1977 and 2010, with the central goal being cost containment. As detailed in Chapter 4, reforms introduced budgets, mandatory rebates, and price caps, while excluding certain services from coverage. These intensive efforts at cost containment led to cost increases in Germany that were lower than those in other countries.<sup>10</sup> From 1997 to 2007, health care spending increased



**Fig. 2.** Health care cost by country, 1980–2007

Source: OECD Health Data 2009

only 1.7% per annum, compared to an average increase in OECD countries of 4.1% per annum.<sup>11</sup>

While slowing down the overall rate of cost increase, however, costs were increasingly shifted from the statutory health plans to consumers, private health insurance, and other social insurance programs (see Chapter 4 for details). The share of private expenditures – encompassing out-of-pocket payments, private insurance, and charities – of the total health care expenditures has risen 20% in the last 15 years.<sup>12</sup> The share of out-of-pocket payments alone has risen 25% in the same period.<sup>13</sup> These increases in Germany significantly exceed its European peers.<sup>14</sup>

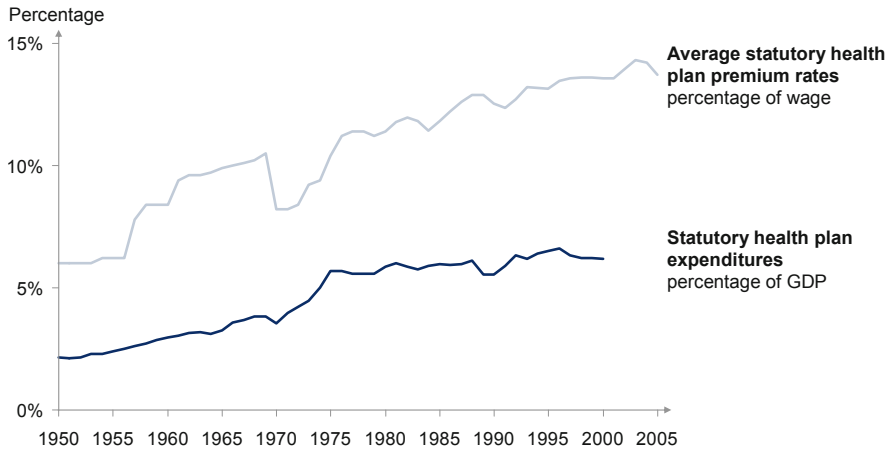
While the focus on costs is understandable, the more basic question is what value Germans are getting for their health care expenditures of over 250 billion euros a year. As we will discuss in following chapters, there are substantial deficits in the outcomes achieved. High costs do not mean high quality, nor do broad access to care or large quantities of care imply better outcomes.

## **Declining Sustainability of the Statutory Health Plan System**

While once the pride of the German system, the statutory health plan system has become unsustainable in its current form. The statutory system covers 90% of all Germans, with 10% covered by the private system. As detailed in Chapter 5, the statutory system is based on wage-dependent premiums, free insurance for dependents, and a pay-as-you-go financing system with no capital reserves. The structure of the statutory health plan system once exemplified the strong social security system in Germany: the young finance the old, the better off finance the worse off, the single earners support the families, and the healthy finance the sick.

Today, the statutory system faces serious challenges. As costs rise, wage-based premiums are not keeping up. All non-self-employed employees earning less than 3,460 euros per month are required to enroll in the statutory system. Health contributions are a percentage of wages (currently 15.5%), resulting in a maximum monthly insurance premium of 536 euros per employee, which is split between employer and employee. While initially covered for free, pensioners have contributed the same percentage share of their retirement benefits as regular employees since 1983. The employer's share for pensioners is covered by the pension funds. The financial viability of the statutory system depends on the total number of employees and the average wage levels across Germany. More people working and higher wages means more revenue flows into the system.

However, demographic trends including an aging population, mean fewer working adults, more pensioners, and a growing number of self-employed citizens who do not contribute to the statutory system. Consequently, health plans are confronted with rising costs while collecting lower overall revenues from their subscribers. This discrepancy explains why health plan premium rates have increased faster than total health plan expenditure expressed as a percentage of GDP (see Figure 3).



**Fig. 3.** Statutory health plan expenditures and average statutory health plan premiums, 1950–2005

*Source: Federal Statistical Office; Berie H, Fink U, Grundlohnentwicklung und Ausgaben der GKV, Wiso – Institut für Wirtschaft und Soziales, 2002/3; GKV Statistics KM1; OECD Health Data 2008; own calculations*

Many Germans believe that health plan premium rates, expressed as a percentage of wage, reflect health care costs. Thus, health plan premium rates have become the central benchmark for the performance and efficiency of the German health care system, and no number is more in the political limelight than health plan premium rates. The success or failure of reforms is measured by their effects on these rates.

To lower the increases in premium rates, the government has made significant tax contributions to the statutory health plan system since 2004. While the latest reform was hailed as a step towards sustainable and equitable financing, in 2009 the highest contribution ever was made to health plans despite the newly introduced common funding pool. Estimates of the future deficit vary, but most suggest numbers in the range of 63 to 127 billion euros by 2030.

Understandably, many Germans worry about the financial viability of the system. A survey by the Bertelsmann Foundation revealed that 89% of Germans expected increases in their health insurance

premium, 62% expected rationing of care, and 60% worried about a lack of care during retirement.<sup>15</sup> Especially younger generations are concerned that they will have to pay twice in the future, once for their parents' generation and once for themselves. In addition to subscribers, German employers are also concerned. While citizens and the government pick up part of the health care bill, employers cover almost half of health care premiums, accounting for significant indirect labor costs. Rising health care costs could threaten the competitive position of German companies.

New reform discussions are ongoing. Various models of income-related and non-income-related premiums, as well as tax-based financing systems, are being suggested depending on the political party. Some approaches involve the redistribution of wealth through taxes, rather than through income-related insurance premiums. Some proposals maintain the current health plan system with its competition between 160 health plans. Few advocate the introduction of a single payer system, but many call for a significant reduction in the number of health plans. The added value of health plans is being implicitly and explicitly called into question, and health plans are on the defensive given their substantial administrative costs.

The place of Germany's private insurance system is also a contentious issue. Access is restricted to high-earning employees, the self-employed, and government workers. Despite often paying lower premiums than those in the statutory system, private patients receive preferential treatment because they are more lucrative for providers due to higher reimbursement for identical services. Providers also face no budget restrictions on the number of private patients served, further raising concerns about a two-class medical system in Germany. As we will discuss in Chapter 5, some politicians want to abolish the private system altogether, seeing it as a withdrawal of the higher income individuals from the social welfare system. For others, the private insurance system, with its risk-adjusted premiums and capital reserve, is a model for reform.

While financing the system is clearly crucial, the more basic question is the value delivered by the German system. Changing the tax

structure, integrating the private health plan system, or making other changes to financing might secure the solidarity principle. However, none of these address the value delivered. As we will discuss in Chapters 6–9, the German health care delivery system needs substantial changes to achieve a high-value system in the long run. Without such value improvement, the financing challenges will never be solved.

## **Overcapacity and Low Reimbursement Levels**

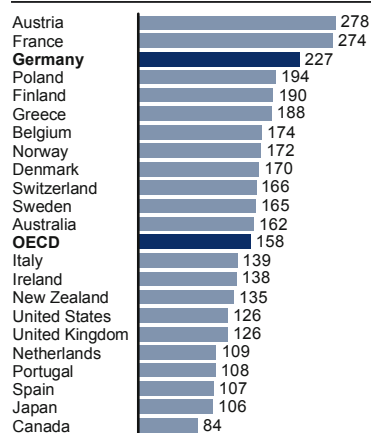
Despite the fact that Germany already spends more than 10% of its GDP on health care, the money does not seem to be enough. Providers complain about low reimbursement levels despite recent increases, especially in the outpatient sector. Depending on the medical specialty and services, outpatient physicians are paid as little as 34 euros per patient per quarter.<sup>16</sup> Inpatient rehabilitation facility reimbursements have reached similarly low levels. For example, an orthopedic inpatient rehabilitation center receives 106 euros per day, which covers food and board, medical services, physical therapy, and medication.<sup>17</sup> Centers focusing on cardiac rehabilitation often get less than 100 euros per day. Providers argue that these price levels allow only limited therapy, and patients complain of poor services.

Hospitals are also faced with low reimbursement levels. Germany has one of the lowest reimbursement rates by international standards, with an average of roughly 3,000 euros per patient per stay.<sup>18</sup> 21% of hospitals are losing money, which they attribute to inadequate price levels.<sup>19</sup> This has been compounded by the drying up of the dual financing system, whereby hospital infrastructure investments were paid for by the regional governments while health plans funded ongoing operations. Due to budget challenges in regional governments, infrastructure funding has been consistently declining. The backlog of capital improvement in the hospital sector is estimated at as high as 30 billion euros.<sup>20</sup>

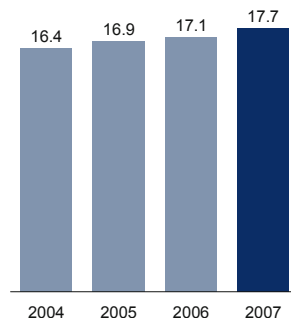
The causes of inadequate price levels are a matter of debate. Managers of provider organizations argue that low reimbursement rates

force them to boost volume to attempt to cover costs. Health plans, however, maintain too much volume, and overcapacity leads to the need to hold down reimbursement levels in a system with too many providers and too many patient visits. Germany – with 2,000 hospitals, 1,200 inpatient rehabilitation units, 120,000 outpatient physicians, and 20,000 pharmacies – has one of the highest provider densities in the world. At no point in time has Germany ever employed more physicians than today,<sup>21</sup> and at no point have Germans consumed more health care as measured by provider visits than today.

**Hospital discharges per 1,000 population**  
2007



**Outpatient physician contacts per capita/year**  
2004–2007



**Fig. 4.** Hospital discharges by country, outpatient visits per year, 2004–2007

Source: OECD Health Data 2009; Barmer GEK Arztreport, Schriftenreihe zur Gesundheitsanalyse, vol 1, January 2010

Today, Germany has 227 hospital discharges per 1,000 citizens, significantly exceeding the number for almost any other country (see Figure 4). Inpatient care is increasing, despite the technological improvements leading to more and more opportunities for outpatient care. While other countries like the UK, Italy, Japan, the US, and Canada are reducing the number of hospital cases, or at least maintaining them, the number of hospital cases continues to increase in Germany. The increase in hospital patient volume has coincided



with a significant drop in length of stay. While historically the average length of stay was 14 days, the introduction of DRGs in 2004 drove it down to eight days. Yet few hospitals have shut down or reduced their case volumes. Instead, in a quest for volume and revenue, hospitals have broadened their services and increased the number of patients.

The outpatient sector reflects similar trends. Today, the average German has 17.7 outpatient contacts a year, and the trend is rising (see Figure 4).<sup>a,22</sup> Again, this significantly exceeds the figure for other countries. High patient volumes in the physicians' offices leads to short consultations. On average, each consultation lasts only 8 minutes.<sup>23</sup> Like the inpatient sector, outpatient physicians argue that low reimbursement levels per case lead them to expand services and volume, causing them to see up to 60 patients in their clinic per day.

Despite constant increases in revenues, physicians are dissatisfied. A recent survey revealed that 54% of all surveyed physicians see a substantial need to restructure the health care system.<sup>24</sup> These pressures have led to a decline in the number of new physicians, posing a real challenge as a growing number (almost 20%) of all outpatient physicians are over 60 years old.<sup>25</sup> The problem, however, goes beyond physicians and includes nursing and other skilled medical staff. Many positions cannot be filled and many providers are looking to hire from outside Germany. Recent reform efforts have yet to change the status quo. So while Germany consumes more health care than ever, it is questionable if in the future the current system can be staffed.

In summary, the German provider sector is marked by a high case volume and low reimbursement levels. As a result, Germany has one of the most expensive provider sectors in the world. Providers,

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<sup>a</sup> Other sources report 7.7 physician contacts per year. These are the number of billed cases, not the actual physician contacts. Outpatient reimbursement rules stipulate that follow-on contacts within the same quarter are not billed. On average each patient visits 2.3 times per quarter and physician, resulting in 17.7 outpatient contacts per year.

health plans, and governments are all pointing fingers at each other, with each stakeholder fighting for its own interests. Unfortunately, in the current system the interests of stakeholders are often not aligned with those of patients. Care continues to be fragmented and there are too many providers that offer a wide range of service lines with limited experience (see Chapters 6 and 7). With no universal outcome measurement, licensing restrictions protecting monopolies, strong lobbying groups, and a lack of political determination, poorly performing providers have managed to stay afloat at the expense of excellent providers and ultimately of patients. As we will discuss, rather than trying to fill the gap, Germany needs to restructure the delivery system into integrated providers, which will promote better patient outcomes with fewer provider visits and ultimately fewer providers. This will be the only sustainable way to contain costs.

### **Increasingly Concerned Patients**

While many patients have enjoyed dedicated care by their doctors at the personal level, satisfaction is waning. As outlined above, Germans are concerned about the financial viability of their system as well as its drop in quality. Data suggests that over the course of the last few years, confidence in the German system has suffered.<sup>26</sup> However, Germany shares this fate with many others.

While historically, the ease of access to care was primarily regarded as a reflection of quality, this view is no longer universal. While the high number of provider visits is still taken by some as a sign of easily accessible health care, it is taken as evidence of a broken system by others. In today's highly fragmented provider system, patients often have to access a multitude of providers for the same problem. And patients are beginning to recognize these limitations: in a 2010 Commonwealth study comparing seven developed countries, Germany ranked last in the efficiency of coordinating care.<sup>27</sup>

Patients are also beginning to become more aware of quality differences among providers. For example, a recent survey asked citizens whether they believed that there were quality differences among outpatient physicians. Over 80% responded "yes," with 40% citing

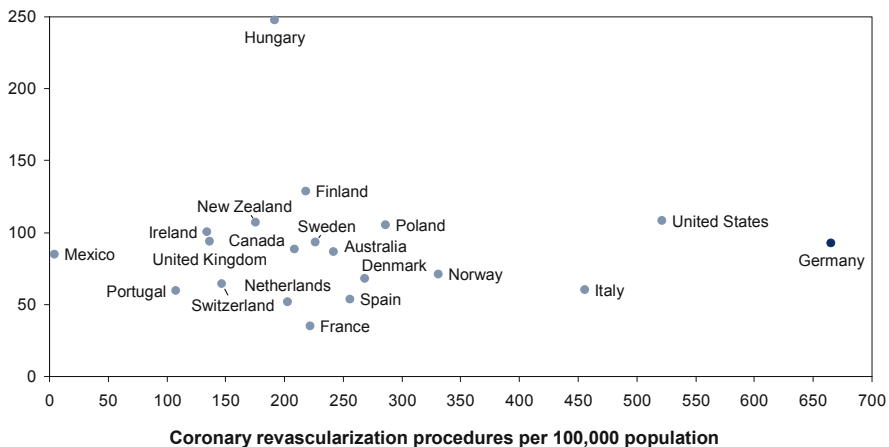
some differences and 42% citing major quality differences among physicians. Patients reported differences in empathy, time spent, and clarity of explanations. However, when asked what they would most like to know when selecting their outpatient physician, patients ranked “if treatment errors are known (with that provider)” first.<sup>28</sup>

While there is a clear interest in publications on the quality of providers, this is not yet always followed by action. The great majority of consumers are still guided in their health care choices by past, unrelated experiences and convenience. To truly transform the health care system, patients will also have to become more involved and take more responsibility for their own health.

### **Inconsistent Quality**

In spite of cost increases in the German health care system, the quality of care leaves much to be desired. While the evidence is still limited, the picture is becoming clearer. Many patients receive good care in Germany, but there are many missed diagnoses, unsuccessful treatments, and avoidable errors. In the past, abundant choice of providers and high spending were equated with high quality. Measurement of results in terms of patient outcomes was largely non-existent. As we will detail in Chapter 9, however, advances in outcome measurement are making it increasingly evident that more medicine is not necessarily better medicine and that newer medicine is not necessarily better medicine. This is the case in Germany and in many other countries.

While national quality comparisons are still severely limited, they can nonetheless offer some insights. Germany ranks 10<sup>th</sup> in the OECD Health Data comparison in terms of purchasing-power adjusted spending, but it ranks 14<sup>th</sup> in terms of life expectancy at birth. Germany ranks 12<sup>th</sup> out of 19 in mortality of patients under 75 years of age across nineteen countries for medical conditions where timely and effective care can make a difference (namely diabetes, asthma, ischemic heart disease, stroke, infections, and screenable cancers).<sup>29</sup>

**Ischemic heart disease, age-standardized death rates per 100,000 population**

**Fig. 5.** Correlation of age-standardized death rates from ischemic heart disease and number of coronary heart revascularization procedures (coronary angioplasty and coronary bypass surgery)<sup>30</sup>

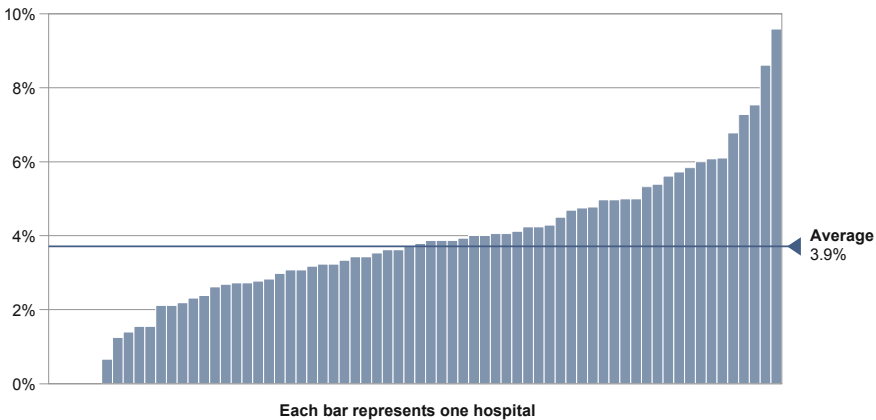
Source: OECD Health Data 2009

Looking at outcomes for specific medical conditions, Germany's results are similarly uninspiring. For ischemic heart disease, the age-standardized mortality ratio is only at the OECD average. In Germany, 127 per 100,000 citizens die of ischemic heart disease every year versus the OECD average of 126, despite a much higher density of cardiac catheterization units. Clearly treatment capacity and a high volume of procedures are no guarantee of better outcomes (see Figure 5).

In a 2009 OECD study providing evidence on cancer survival, Germany ranked number 12 out of 28 countries across all cancers in spite of its high spending. While prostate cancer outcomes measured by mortality rates were better in Germany than the OECD average and those for lung cancer were at about the OECD average, breast cancer survival was worse than the OECD average.

Mediocre average scores in international comparisons are accompanied by significant heterogeneity in outcomes across German

**7-day in-hospital mortality rate**  
Percentage of stroke patients\*



**Fig. 6.** Stroke mortality across Bavarian hospitals

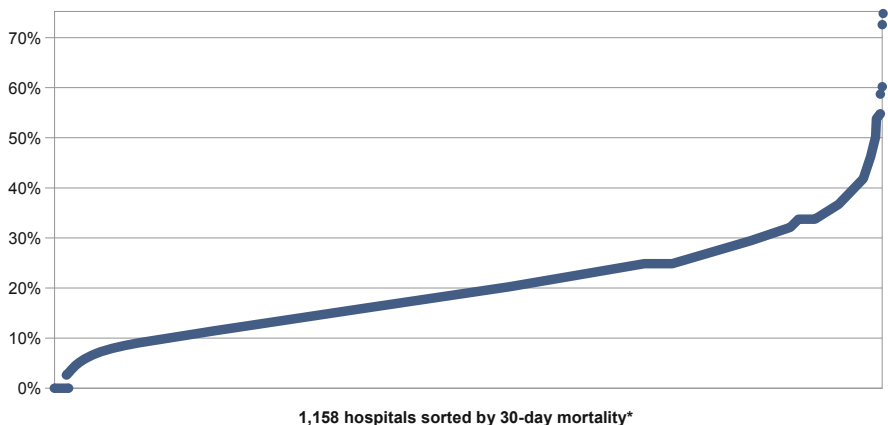
\* Excluding patients transferred to other departments, rehabilitation centers, or nursing houses

Source: Bavarian Working Group for Inpatient Quality Assurance (Bayerische Arbeitsgemeinschaft für Qualitätssicherung in der stationären Versorgung – BAQ), *Stroke Modul 85/1, Annual Report 2008*, p 24

providers. While there are many excellent providers, the data suggests significant room for improvement by others. For example, the Bavarian registry for stroke patients reports an average seven-day inpatient mortality of 3.9%, though the mortality varies from 0.8% to 9.6% across Bavarian hospitals (see Figure 6).<sup>31</sup> Even taking into account the different risk profiles of patients across centers, these differences remain significant. While stroke mortality is just one outcome measure, this finding is representative of the broader system.

A study by Helios, a private hospital operator, and the AOK, Germany's largest health plan, found similar heterogeneity of care for myocardial infarction, cardiac failure, stroke, hip replacement, and colorectal cancer across all German hospitals.<sup>32</sup> We will examine the study and methodology in detail in Chapter 9 (on results measurement and outcomes of care, two conditions serve as examples here).

**30-day mortality for patients with myocardial infarction**  
Percentage



**Fig. 7.** 30-day mortality from acute myocardial infarction across German hospitals (crude mortality)

\* Sample only includes hospitals with more than ten cases per year.

Source: AOK Research Center/Helios, *Inpatient Quality Assurance with Administrative Data (Qualitätssicherung der stationären Versorgung mit Routinedaten – QSR)*, Final Report, 2007

For myocardial infarction, Figure 7 shows the unadjusted 30-day mortality rates across 1,158 hospitals treating a minimum of ten myocardial infarctions a year. While the average mortality rate across all German hospitals was 20%, the 25<sup>th</sup> percentile was 13% and the 75<sup>th</sup> percentile was 25%.<sup>33</sup> In other words, the mortality from myocardial infarction in the worst-performing percentile of hospitals was twice that of the best 25%. These immense quality differences among hospitals persist even with extensive risk adjustment.

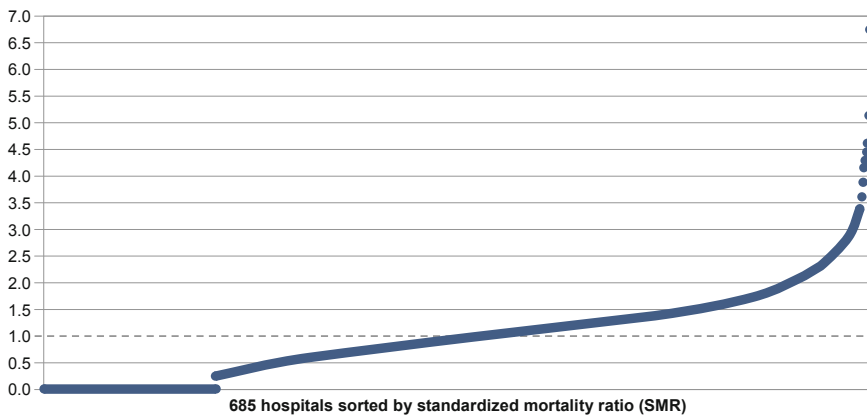
Similar problems can be observed for the mortality from colon cancer. A third of all German hospitals performed colorectal surgeries on 15,875 AOK patients in 2003, representing a quarter of all such surgeries in Germany. The average unadjusted 90-day mortality for these patients was 9.4%, with a median of 8.3%, a 25<sup>th</sup> percentile of 3.8%, and a 75<sup>th</sup> percentile of 13.3%.<sup>34</sup> The extensive variations of results could not be explained due to different patient populations.

Risk-adjusted rates are shown in Figure 8,<sup>b</sup> with a standardized risk-adjusted mortality (SMR) for colorectal cancer of less than 1 indicating a result better than expected and a SMR of greater than 1 indicating a higher mortality than expected for the hospital's patient population. Variation remained considerable.

The authors of the study highlighted the fact that the outcomes were due not only to the surgery itself and could be significantly reduced by improving perioperative processes through improved coordi-

**90-day risk-adjusted mortality ratio for patients with colon operations for the treatment of colorectal cancer**

Standardized mortality ratio (SMR)



**Fig. 8.** 90-day mortality from colon cancer across German hospitals (risk-adjusted)

Source: AOK Research Center/Helios, *Inpatient Quality Assurance with Administrative Data (Qualitätssicherung der stationären Versorgung mit Routinedaten – QSR)*, Final Report, 2007

<sup>b</sup> For risk adjustment the following variables were used: age, sex, cardiogenic shock, second-degree AV block, ventricular tachycardia, atrial fibrillation, old myocardial infarct, stroke, intercerebral hemorrhage, atherosclerosis, heart failure, asthma, COPD, major renal insufficiency, diabetes, atherosclerosis of the extremities, chronic ischemic heart disease, valve disease, metastases, arrhythmias, partial colonic resection, total colectomy, and rectum resection and ileus. The details of the methodology are explained in Chapter 9.

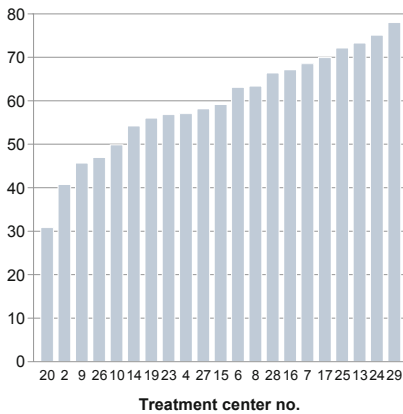
nation between surgeons, anesthesiologists, intensive care physicians, and general medical physicians.<sup>35</sup> Besides demonstrating the power of measuring outcomes, this example emphasizes the need to reorganize and measure care delivery around medical conditions instead of discrete departments. We will expand on this issue in a later section.

Adjuvant chemotherapy is another significant determinant of outcomes in patients with stage III colon cancer. With few contraindications, clinical guidelines agree that 80% of all patients with colon cancer should receive adjuvant chemotherapy in addition to surgery.<sup>36</sup> Germany is far from reaching this goal. The most significant disease registries in this area, the "Korporationsverbund Qualitätssicherung durch klinische Krebsregister (KoQK)" and "Arbeitsgemeinschaft Deutscher Tumorzentren (ADT)," which include 196,000 patients, show that the average rate of adjuvant chemotherapy across their 21 centers varies from 31% to 78%, implying that in some centers less than half of the patients receive the recommended standard of care (Figure 9). The Kaplan-Meier survival curves laid out in Figure 9 show the resulting differences in the cumulative survival of these patients. The data highlights two points: first, patients with chemotherapy have a higher chance of survival than patients with no chemotherapy; and second, the survival of patients with no chemotherapy is significantly different among different centers. In this case, thanks to continuous measurement, the rate of adjuvant chemotherapy is beginning to increase across centers.<sup>37</sup>

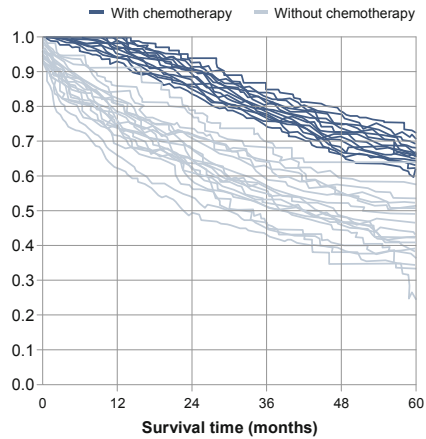
The observed heterogeneity of hospital care in the AOK study is echoed by the findings from the recently introduced mandatory quality benchmarking (BQS/AQUA) covering all German hospitals. While we describe the methods and results in detail in Chapter 9, the new initiative further reveals the extent of quality concerns across Germany's acute care hospitals. In the BQS Report 2008, 15 out of 204 quality indicators covering a range of diseases and procedures showed significant deficits across all hospitals, while almost all other indicators showed an acceptable overall level, albeit with significant variation among hospitals.<sup>38</sup>



**Adjuvant chemotherapy rate by treatment center**  
Percentage of patients receiving chemotherapy



**Cumulative survival times by treatment center**  
for patients *with* and *without* chemotherapy



**Fig. 9.** Rate of adjuvant chemotherapy across treatment centers and patient survival rate with stage III, operated colon carcinoma

Source: Quality Assurance Cooperation of Cancer Registers (Kooperationsverbund Qualitätssicherung durch klinische Krebsregister – KoQK) and Working Group German Tumour Centers (Arbeitsgemeinschaft Deutscher Tumorzentren – ADT), July 2010

These quality weaknesses are neither restricted to rare diseases nor limited to small, rural hospitals. They are often associated with common conditions with clearly defined guidelines for which providers fail to deliver appropriate care. In total, it is estimated that over 40,000 more lives could be saved every year in German hospitals.<sup>39</sup> Another study makes a conservative estimate of 17,000 deaths due to avoidable errors alone, let alone raising all providers to the level of the best performers.<sup>40</sup> By comparison, there were 4,050 German traffic deaths in 2009.<sup>41</sup> Despite these problems, German hospitals are only now starting to introduce safety programs. In a recent survey, 21% responded that they have not looked into them at all, while 40% are planning something.<sup>42</sup>

For many hospitals, quality management has not been a top priority, and it has sometimes carried a negative connotation. It is required, but the effect has not translated into a change in day-to-day management. In a recent hospital survey, over 900 hospital managers

were asked about their goals for their hospital. Management ranked high patient satisfaction as the number one goal and quality of medical care as the second most important company goal. However, when asked what determines the success of a hospital, these factors ranked low, while economic factors like increased revenues ranked at the top. Only for some privately owned hospitals did “high quality of medical care” rank in the top self-identified success factors.<sup>43</sup> Most hospitals, then, talk about quality, but few seem to believe in it as a fundamental driver of success.

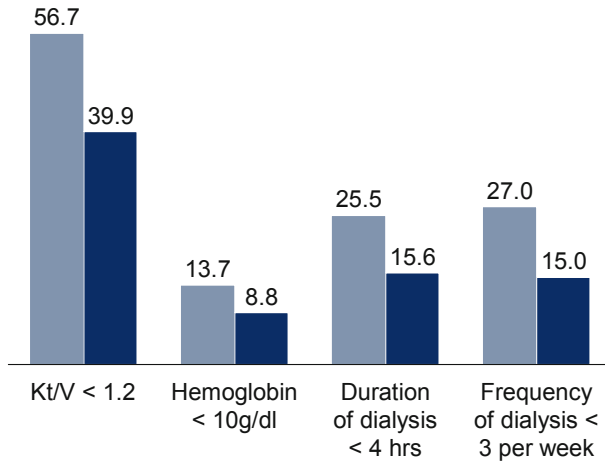
While data on the outpatient sector is even scarcer than for the inpatient sector, the evidence also points to significant heterogeneity in the quality of care and substantial room for improvement. A 2005 Commonwealth Fund study found that 13% of all German patients surveyed experienced a medical mistake in their treatment, and 10% reported a medication error. Among those reporting a mistake or medication error, 41% reported that it caused serious health problems. In 63% of the cases, the error occurred outside the hospital, in the outpatient sector or at a rehabilitation clinic. In 83% of cases, doctors did not inform the patient about the error.<sup>44</sup>

The Commonwealth Fund survey also investigated the care of the chronically ill, highlighting several more quality deficits. For over half of the patients, drugs were not reviewed annually, and an equal number of patients had only sometimes, rarely, or never been informed about drug side effects. Only 37% of patients were given a plan to manage their care at home despite the proven benefits, and only 47% had nurses involved in their care.<sup>45</sup> Another study echoed these results for diabetes care in Germany. The research showed that only 40% of diabetics received HbA1c screening, annual foot and eye examinations, and cholesterol tests – the gold standard in screening tests for diabetic care.<sup>46</sup> An extensive study in 2001 by the scientific advisory committee to the German Federal Ministry of Health also highlighted significant quality deficits in the management of chronically ill patients.<sup>47</sup> These problems eventually led to the introduction of disease management programs for some chronic conditions, as described in Chapter 6.

## Percentage of deficient centers

Deficiency is defined as 15% of total patient population in that center falling below defined threshold

2007  
2008



**Fig. 10.** Process quality measures in dialysis centers

Source: *National Association of Statutory Health Insurance Physicians, Quality Report 2009, p 24*

Based on mandatory reporting by dialysis centers introduced in 2007, another study investigated 727 German centers with respect to four key process quality parameters that correlate strongly with quality-of-life and survival rate outcomes: hemoglobin levels, length of dialysis, dialysis frequency, and Kt/V, a measure of the efficiency of dialysis.<sup>48</sup> As shown in Figure 10, there are significant deficits across all centers. On the positive side, thanks to continuous measurement, the results improved significantly from 2007 to 2008.

Germany can save many lives by consistently delivering proven care. To date these quality differences remain largely unknown to patients, health plans, and often providers themselves. If Germany improved its worst providers and expanded and strengthened its best, it could achieve significant value improvement and serve as a role model for health care systems in other nations. Improving quality will be the only sustainable way to control costs, as better health is inherently cheaper than poor health.

## Summary

Following the massive destruction of World War II, Germany created an extensive network of health care providers characterized by universal access, free choice of providers, and free care at the point of service. The solidarity principle of the German statutory fund system has enabled many patients to access care well beyond their ability to pay. Many patients have received excellent and compassionate care. Fewer than 0.2% of Germans are not covered by a health plan, and Germans can choose freely from over 160 health plans. These are all substantial achievements by international standards.

However, the current system is not designed to achieve its most important purpose: to deliver excellent value to patients and improve value over time. Germans receive more care than citizens in many other parts of the world, but not necessarily better care or the highest value care. The evidence points to significant room for improvement. In subsequent chapters, we will discuss how the German system could be redesigned to change this state of affairs.



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