

ORIGINAL ARTICLE

The German Health Care System in International Comparison

The Primary Care Physicians' Perspective

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SUMMARY

Background: In 2009, the U.S. Commonwealth Fund conducted a survey of primary care physicians in a number of different countries to determine their views on aspects of their daily work and their perceptions of their countries' health care systems as a whole. A similar survey had been carried out in 2006.

Methods: From February to July 2009, the survey was carried out by interview in representative samples of primary care physicians, general practitioners, internists providing primary care, and pediatricians in 11 countries: Australia, Canada, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, the UK, and the USA.

Results: A total of 10 320 interviews were conducted. Only in the Netherlands and Norway did most respondents (60% and 56%, respectively) consider their health care system to be functioning well. Everywhere else, many of the respondents—in particular, 82% of the respondents in Germany—saw a fundamental need for change. 73% of the German physicians stated that recent changes in the health care system had brought about a decline in the quality of care. In all countries but Germany, the percentage of respondents sharing this opinion was 41% at the highest. Nevertheless, most of the German physicians had a positive opinion of the patient care that they themselves delivered.

Conclusion: The 2009 survey, like its predecessor in 2006, revealed major differences in physicians' perceptions of their health care systems from one country to another. The German respondents' dissatisfaction with, and negative evaluation of, their health care system as a whole contrast with their positive views of their own patient care.

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The importance of primary health care has been and continues to be debated because of the recent reforms to the German health care system. Although national and international policies aim to strengthen primary care, it is feared, particularly in Germany, that the tasks of the primary care physician are increasingly considered unattractive and consequently fewer physicians are focusing on primary care. It therefore stands to reason to ask primary care physicians and other physicians providing primary health care directly about their perceptions of the health care system.

In 1999 the Commonwealth Fund (CF) initiated a project to determine the quality of health care from various perspectives, including from the point of view of primary care physicians (1–9). By 2004, surveys had been conducted in Australia (AUS), Canada (CDN), New Zealand (NZ), the United States (USA), and the United Kingdom (UK). Germany (D) participated in the study for the first time in 2005, and primary care physicians were surveyed in 2006 (10, 11). These surveys revealed that German primary care physicians reported by far the greatest number of patient contacts paired with the shortest period of contact. At the same time, German primary care physicians expressed the highest level of dissatisfaction with their health care system.

In 2009, primary care physicians were again asked to assess their work and the health care system in an international comparison. Schoen et al. summarized the international data (12). In the present article we describe selected results for Germany in specific areas and, where possible, compare them with the results from 2006 (10).

The participants in the 2009 survey were asked about the following aspects:

- general satisfaction with the health care system
- perceived quality of the care provided
- opportunities for patients to access primary health care
- scheduling appointments and treatment outside consulting hours
- support for chronic diseases, encouraging self-management, coordination of treatment
- use of computer technologies for administration and documentation

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TABLE 1

Demographic data and practice structure

	D	AUS	CDN	F	I	NL	NZ	N	S	UK	USA
Number surveyed n ^{*1}	715	1016	1401	502	844	614	500	774	1450	1062	1442
– of whom female	38%	38%	37%	32%	25%	37%	39%	33%	48%	38%	31%
– of whom aged over 50	41%	50%	74%	51%	86%	45%	44%	51%	62%	30%	43%
Location of practice ^{*2}											
– city	24%	22%	51%	43%	41%	17%	40%	27%	32%	27%	37%
– suburb	10%	58%	16%	12%	11%	26%	36%	10%	13%	22%	32%
– small town	37%	12%	20%	24%	39%	41%	11%	31%	34%	33%	19%
– rural	27%	9%	12%	22%	9%	15%	13%	31%	20%	17%	8%
Number of physicians in the practice (full-time equivalents)	1.7	4.6	5.9	1.5	2.7	2	3.5	3.6	5.8	3.9	12.5
Number of other non-medical specialist personnel working in the practice (full-time equivalents)	3.4	3.1	5	0.3	1.3	2.8	2.5	3.5	19.3	3.6	7.9
Practices with non-medical staff who provide some patient care	73%	88%	52%	11%	54%	91%	88%	73%	98%	98%	59%
Affiliated with a network of medical practices	24%	16%	37%	21%	67%	48%	56%	25%	61%	38%	33%

^{*1} weighted, except Sweden; ^{*2} missing data up to 100%: unsure or no response, AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States

- opportunities to improve quality and to upgrade specific competencies
- use of clinical information systems
- experience with financial incentive systems to improve quality, performance, and coordination of care
- factors that prevent or encourage high-quality care.

Methods

Australia (AUS), Canada (CDN), Germany (D), France (F), Italy (I), the Netherlands (NL), New Zealand (NZ), Norway (N), Sweden (S), the United Kingdom (UK), and the United States (USA) took part in the study. In these countries the surveys were conducted either by structured telephone interviews or questionnaires sent by mail, or an opportunity was provided to answer questions online. The surveys were conducted in the language of the particular country. The participants came from a sample of primary care physicians and pediatricians, provided the primary care of the children was also administered by pediatricians, who had been identified by medical and other data registries. The survey was conducted between February and July 2009 and was coordinated by Harris Interactive Inc. on behalf of the CWF.

The German surveys were financed by the Institute for Quality and Efficiency in Health Care (Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen, IQWiG) and designed and implemented by IQWiG and the Department of General Medicine and Health Services Research of Heidelberg University Hospital. In

Germany, a representative sample of 1500 primary care physicians, internists providing primary care, and pediatricians from all federal states was formed on the basis of 2008 base data from the National Association of Statutory Health Insurance Physicians (Kassenärztliche Bundesvereinigung, KBV) (effective 31.12.2007). The physicians in the sample were first contacted in March 2009 and requested to answer a four-paged questionnaire in writing (time required was about 20 minutes). Each participant received 20 euros as an incentive, which could optionally be donated to Médecins Sans Frontières. Two reminder notices were sent in the following 6 weeks to increase the response rate. In the last postal notice any non-participants were asked to provide sociodemographic data and their general assessment of the health care system using the provided postcard.

For the evaluation, the answers were weighted by age and sex, and in many countries also by region. In Germany there was also additional weighting by federal state and by medical specialty (primary care physician/internist providing primary care/pediatrician). Only those results that were weighted in this manner are discussed below.

The results are presented descriptively by indicating the relative frequencies with which the particular response categories were selected (also in tabulated form). All evaluations were exploratory in nature.

Unlike in 2006, the average time for each patient contact was calculated not as a mean but rather as a median because it is a more robust statistic capable of coping with outliers and missing values. The values

TABLE 2

Aspects of satisfaction

	D	AUS	CDN	F	I	NL	NZ	N	S	UK	USA
Satisfaction with the health care system* ¹											
Percentage agreeing with ...											
– Our health care system functions quite well on the whole, and there are only a few changes necessary to make it function even better.	18%	23%	33%	41%	38%	60%	42%	56%	37%	47%	17%
– Our health care system has some good features but there are fundamental changes necessary so that it functions better.	51%	71%	62%	53%	58%	37%	57%	40%	54%	50%	67%
– Our health care system has so many faults that it must be completely reformed.	31%	6%	4%	6%	4%	1%	1%	2%	7%	3%	15%
Conditions have deteriorated over the last 3 years	73%	22%	31%	41%	27%	19%	12%	9%	28%	12%	26%
Satisfaction with your personal professional situation* ¹											
of whom											
– very satisfied	5%	12%	21%	8%	18%	22%	35%	35%	30%	27%	15%
– satisfied	34%	36%	54%	68%	59%	66%	54%	54%	49%	54%	49%
– somewhat unsatisfied	37%	45%	22%	16%	19%	10%	10%	9%	17%	16%	30%
– very unsatisfied	23%	6%	2%	7%	4%	1%	1%	1%	3%	1%	6%

*¹ missing data up to 100%: unsure or no response;

AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States

from 2006 were also recalculated as medians to enable comparison. These changes did not affect the conclusions drawn from the article published in 2007 (10).

Results

Response

A total of 10 320 interviews or questionnaires from all the countries were evaluated. The response rates for the postal survey varied between 35% (Canada) and 52% (Australia). The response rate in Germany was 49%, an above average value compared to the other countries.

In Germany 49 of 1500 mailings were returned due to invalid addresses. The remaining were answered by 715 physicians (49.3%) within the stipulated period. 123 physicians (8.5%) who did not fill out the questionnaire (= non-participants) returned a postcard with basic sociodemographic details and their overall assessment of the health care system.

Composition of the sample

The original German sample deviated only slightly (maximally 3% in each category) from the corresponding divisions of the base data from the National Association of Statutory Health Insurance Physicians (KBV) in terms of sex, state and medical specialty. Only the age-related composition did not correspond to the overall population. The four parameters age, sex, specialty, and state were weighted.

To obtain information about the differences between participants and non-participants, the sociodemographic data from the postcard responses were

compared with those from the complete surveys. No significant difference was determined for any of the parameters age, sex, location of practice, professional experience as a physician, or affiliation with a physicians’ network/medical care center (MCC). There was also no difference found in general satisfaction with the health care system.

Demographic data and practice profile

Table 1 contains demographic details for the physicians surveyed and their practices. The table indicates that the median number of practicing physicians per practice is 1.7 in Germany and is thus relatively low in international comparison. The median number of non-medical personnel is 3.4 and is thus in the middle compared with the other participating countries.

General evaluation of the health care system and satisfaction with professional situation

There was wide variation in primary care physicians’ assessments of their national health care systems (Table 2). Only in the Netherlands and Norway did the majority assess the system as functioning well (60% or 56% agreement respectively). In all other countries a need for change was felt. Only a very small fraction (maximally 7%) of the physicians in most of the participating countries considered that their system required a complete reform. The exceptions to this, however, were the US with 15% and particularly Germany with 31% of physicians. A very large fraction (82%) of German primary care physicians considered “fundamental

TABLE 3

Work load and number of patient contacts, 2009

	D	AUS	CDN	F	I	NL	NZ	N	S	UK	USA
Average working week (hours)	50.8	40.5	42.5	48.6	37.5	44.4	41	40.5	37.8	42.2	47.6
– of which personal contact	70%	87%	75%	82%	75%	69%	83%	67%	66%	68%	76%
Average number of patients treated per week	242	128	124	110	171	123	116	81	53	130	96
Working week in hours (median [lower quartile, upper quartile])	50 [45, 60]	40 [38, 50]	40 [32, 50]	50 [40, 60]	40 [30, 45]	45 [34, 50]	40 [38, 48]	40 [33, 48]	40 [32, 43]	40 [35, 50]	46 [40, 60]
– of which personal contact	70%	87%	75%	82%	75%	69%	83%	67%	66%	68%	76%
Number of patients treated per week (median [lower quartile, upper quartile])	250 (150, 300)	125 (110, 150)	110 (70, 150)	101 (81, 136)	150 (120, 200)	120 (90, 150)	120 (100, 130)	80 (60, 100)	50 (40, 64)	120 (90, 150)	100 (65, 120)
Mean patient contact time in minutes (median [lower quartile, upper quartile])	9.1 (6.4, 13.4)	17.0 (14.9, 19.2)	16.8 (12.1, 23.3)	22.2 (16.9, 29.5)	10.3 (7.2, 15.0)	15.0 (12.2, 18.0)	17.4 (15.4, 19.8)	20.6 (16.0, 26.0)	28.8 (24.0, 36.0)	13.3 (10.8, 16.8)	22.5 (17.0, 29.7)

AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States

TABLE 4

Other problems in daily practice*1

	D	AUS	CDN	F	I	NL	NZ	N	S	UK	USA
Lack of nearby primary care physicians considered a "big problem"	12%	30%	69%	20%	14%	5%	25%	9%	51%	9%	26%
Time required for administrative tasks (accounts/reimbursement)	54%	24%	27%	49%	85%	56%	29%	13%	37%	19%	57%
Time required for documentation of clinical information or legal requirements	67%	26%	15%	38%	50%	19%	29%	20%	49%	32%	27%
Time required for care in cases of limited insurance cover	34%	13%	19%	16%	42%	10%	16%	17%	10%	6%	48%
Time required for coordination of patient care	29%	17%	33%	30%	22%	20%	18%	12%	18%	20%	30%

*1 missing data up to 100%: not a problem or a lesser problem;

AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States

changes” or even “complete” reform to be necessary. In 2006, the proportion of dissatisfied respondents was even higher with a total of 96%. At that time 54% of physicians considered “fundamental changes to be necessary” and 42% saw a need for complete reform.

It was also noteworthy that in Germany 73% of those surveyed complained of a deterioration in medical care caused by changed conditions in the last three years. In the remaining countries only 9% to 41% noted declines.

This negative evaluation is accompanied in Germany by a high level of dissatisfaction with the personal professional situation: In no other country are there (relatively speaking) more primary care physicians that are very unsatisfied.

Work load and patient contacts

Physicians' self-assessed work load was the highest in Germany with a median of 50 hours per week (Table 3).

In 2006, their working week had been identical. The number of patient contacts was 250 per week and broadly corresponds with the data from 2006. With the exception of Italy, this is at least as twice as high as the other countries (Table 3). Physicians in Norway and Sweden have the smallest numbers of patient contacts (80 and 50 per week, respectively).

Nevertheless, the proportion of physicians' working week spent in contact with patients is fairly similar: The values range between 66% (S) and 87% (AUS). The median time per patient contact calculated on the basis of these data is lowest in Germany with a median of 9.1 minutes, followed by Italy with 10.3 minutes. In the remaining countries this time has a median ranging from 13.3 (UK) to 28.8 (S) minutes. The median was selected because the mean in some countries would have been distorted by extreme values. The results from 2006 were also recalculated as medians to allow better comparisons to be made.

TABLE 5

Perception of care and quality problems*¹

	D	AUS	CDN	F	I	NL	NZ	N	S	UK	USA
Following specialist treatment, all relevant health-related information is communicated (always or often)	78%	95%	85%	95%	66%	93%	93%	90%	70%	83%	75%
The information is communicated in good time (always or often)	72%	77%	67%	88%	50%	66%	72%	69%	56%	54%	65%
Information about further treatment arrives 4 days later at most after hospital release (always or often)	69%	68%	22%	18%	90%	58%	84%	23%	22%	32%	56%
Patients rarely or never have ...											
– difficulties paying for medications or making co-payments	23%	14%	16%	33%	14%	18%	13%	45%	46%	38%	4%
– difficulties accessing certain diagnostic procedures	38%	22%	15%	25%	14%	34%	8%	55%	40%	38%	24%
– long waiting times for a specialist appointment	9%	10%	2%	15%	5%	9%	6%	7%	5%	21%	24%
– long waiting times for treatment appointments after diagnosis is made	36%	20%	22%	43%	17%	12%	10%	21%	22%	32%	58%
More than half the patients were able to make an appointment on request on the same or subsequent day (sum of individual items) ^{*2}	78%	79%	39%	87%	92%	87%	91%	69%	60%	87%	70%
Opportunity to visit a doctor outside normal consulting hours (apart from emergency admission) ^{*2}	54%	50%	43%	78%	77%	97%	89%	38%	54%	89%	29%
My practice has ...											
experience in the recognition and handling of adverse events ^{*2}	48%	85%	41%	41%	50%	30%	84%	59%	85%	94%	65%
There are areas of quality of care that should be reconciled with targets at least once a year ^{*2}	55%	52%	32%	30%	29%	41%	81%	18%	46%	82%	61%
There is information available for comparing the care provided by my own practice with others (routinely or occasionally) ^{*3}	48%	43%	32%	74%	0%	73%	55%	23%	79%	88%	61%

*¹ missing response/unsure max. 2%; *² missing response/unsure max. 4%; *³ missing response/unsure up to 17%; AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States

The time per contact was similar in 2009 and in 2006 (eTable).

Problems in everyday practice and time stresses

Despite the many hours worked and the high level of patient contact, only few German physicians complained of not having colleagues nearby. In Germany only 14% consider this to be a “big” problem, whereas in Canada and Sweden the proportion is over 50% (Table 4).

However, the time required for administrative and other tasks is seen as a major drawback. The majority (54%) of German primary care physicians indicate that the time required for activities such as accounting is “very” problematic. There is an enormous span here from 13% in Norway to 85% in Italy.

Coordination and quality of care

Assessment of the access patients have to medical care varies internationally. For example, only 29% of US primary care physicians consider that patients are also able to call on a regular physician outside normal consulting hours, while in the Netherlands (NL) it is 90% (Table 5).

In Germany, 48% (compared to 30% [NL] to 90% [UK]) use a system for the detection and handling of adverse events. A comparison of their own quality of care with target criteria is the norm only in a few countries. In Norway, 18% of physicians report using such a system, while 82% of physicians in the UK do (Germany: 55%). Benchmarking comparisons between practices are not the rule: In Italy there are essentially no such comparisons but in the UK 82% of physicians receive such data (Germany: 48%).

Discussion

As was already apparent in 2006 (10), in 2009 there were again dramatic differences between countries in physicians’ general assessment of their own country’s health care system and specific assessment of each physician’s own professional activities and interaction with patients. It is noticeable that in Germany the overall opinion of the health care system is again very negative in international comparison.

Strengths of this study

The strength of this study lies in surveying a random sample of primary care physicians in several countries

at the same time using a uniform questionnaire. The results thus provide a reliable picture of the experiences of physicians in their national context, and international comparison can reveal potential areas for improvement for individual countries. Repeating the survey in a three-year cycle also enables the consequences of any reforms to be assessed by physicians.

Limitations of this study

The survey was conducted by telephone in some countries and in writing or online in others. It is uncertain how this difference may affect the results. No fundamental deviations in the demographic characteristics were identified in a comparison of the sample with the overall population. Any deviations present were adjusted using subsequent weighting. In the German part of the survey non-participants were also asked to send a postcard back with basic information. The data did not indicate any difference in essential characteristics between participants and non-participants. In light of these issues and the distribution of responses about satisfaction, it seems unlikely with a response rate of almost 50% that the observed international differences in satisfaction would not persist if participation were complete. Differences in other aspects that are less noticeable must be cautiously interpreted, however.

Possible reasons for the high level of dissatisfaction among German physicians

A reason for the relatively high subjective dissatisfaction of German physicians may be due to the extensive reforms that the German health care system has undergone over many years; a satisfactory solution for dealing with limited resources, however, has obviously not been found as far as physicians are concerned. It may be that primary care physicians feel that they have too few opportunities to affect developments in the health care system. They may also feel that the system possibly offers the wrong incentives in some situations.

It must also be taken into consideration that the present survey of German primary care physicians was conducted in spring 2009 at a time when a large proportion of the German medical profession was vehemently protesting against reforms in reimbursement and feared loss of income. It cannot be ruled out that this protest and the ongoing discussions about the reimbursement of medical services may have deepened dissatisfaction.

The degree of professional satisfaction of physicians affects several areas including the quality of care given to their patients, workload, income/social standing, personal satisfaction, and professional standing amongst colleagues (13). Not all aspects were surveyed as part of this study, leaving open the question of the extent to which dissatisfaction is based on other aspects.

German physicians have the greatest number of patient contacts

As found previously, German physicians are notable in international comparison because of the very high number of patient contacts per week and the short time

for each patient contact. It is uncertain which share of the contacts is initiated by the physicians themselves and which share is requested by patients. Studies have shown that for referrals a share of barely 20% is due to patient initiative (14). In epidemiological studies it was shown for the US that of 1000 people over a period of one month about 750 complain about symptoms, 250 patients visit a physician, 9 are admitted to hospital, and only one receives care in a university hospital (15, 16). These numbers are not solid but rather are subject to a wide range of factors such as free access to medical facilities and insurance status but also sex/gender, ethnicity, and social influences (17).

There have been no investigations of this in Germany. Because the proportion of primary care providers in private practice is less than 50%, it must be expected that a not inconsiderable share of primary care is provided by specialists in Germany. If German patients actually do seek out a physician or a higher level of care 'earlier', this would be inefficient from a system perspective on one hand and could result in an excessive level of care on the other, because procedures are adjusted at the various levels of care to patients with different risks (18). It would be helpful for Germany to initiate studies investigating the reasons for frequent contact so that measures could be developed to counteract any undesirable developments.

It is feared that the current dissatisfaction amongst primary care physicians and general practitioners will have an effect on upcoming junior physicians. The German Advisory Council on the Assessment of Developments in the Health Care System considers it essential to specifically encourage education and professional development in general medicine and to involve primary care physicians in the development and implementation of new care concepts (19). This cannot be achieved simply by making demands: At the same time (primary care) physicians ought to adjust to changed conditions in care needs resulting from foreseeable demographic changes and a shift in the morbidity spectrum towards chronic diseases. The aim must be to ensure that objectively good medical care and high satisfaction (of physicians and patients) go hand in hand.

Conflict of interest statement

The authors declare that no conflict of interest exists.

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REFERENCES

1. Blendon RJ, Schoen C, DesRoches C, Osborn R, Zapert K: Common concerns amid diverse systems: health care experiences in five countries. *Health Aff (Millwood)* 2003; 22: 106–21.
2. Blendon RJ, Schoen C, DesRoches CM, Osborn R, Scoles KL, Zapert K: Inequities in health care: a five-country survey. *Health Aff (Millwood)* 2002; 21: 182–91.
3. Blendon RJ, Schoen C, Donelan K, et al.: Physicians' views on quality of care: a five-country comparison. *Health Aff (Millwood)* 2001; 20: 233–43.

KEY MESSAGES

- The majority of primary care physicians in almost all countries surveyed see a fundamental need for change in their health care systems.
- German primary care physicians are more dissatisfied in their assessment of both the German health care system in general and their own professional activities compared to physicians from other countries.
- German primary care physicians have a median 250 patient contacts per week, which is at least twice as high as in almost all other countries.
- Nevertheless, the majority of the German physicians surveyed had a positive opinion of the patient care provided.
- Despite a relatively high workload and frequent patient contact, only few German physicians complained of not having colleagues nearby.

4. Schoen C, Davis K, Collins SR: Building blocks for reform: achieving universal coverage with private and public group health insurance. *Health Aff (Millwood)* 2008; 27: 646–57.
5. Schoen C, Osborn R, Doty MM, Bishop M, Peugh J, Murukutla N: Toward higher-performance health systems: adults' health care experiences in seven countries, 2007. *Health Aff (Millwood)* 2007; 26: w717–34.
6. Schoen C, Osborn R, How SK, Doty MM, Peugh J: In chronic condition: experiences of patients with complex health care needs, in eight countries, 2008. *Health Aff (Millwood)* 2009; 28: w1–16.
7. Schoen C, Osborn R, Huynh PT, Doty M, Davis K, Zapert K, et al.: Primary care and health system performance: adults' experiences in five countries. *Health Aff (Millwood)* 2004; Suppl Web Exclusives: W4–487–503.
8. Schoen C, Osborn R, Huynh PT, Doty M, Peugh J, Zapert K: On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Aff (Millwood)* 2006; 25: w555–71.
9. Schoen C, Osborn R, Huynh PT, et al.: Taking the pulse of health care systems: experiences of patients with health problems in six countries. *Health Aff (Millwood)* 2005; Suppl Web Exclusives: W5–509–25.
10. Koch K, Gehrman U, Sawicki PT: Primärärztliche Versorgung in Deutschland im internationalen Vergleich: Ergebnisse einer strukturvalidierten Ärztebefragung. *Dtsch Arztebl* 2007; 104(38): A 2584–91.
11. Sawicki PT: Quality of health care in Germany. A six-country comparison. *Med Klin (Munich)* 2005; 100: 755–68.
12. Schoen C, Osborn R, Doty MM, Squires D, Peugh J, Applebaum S: A survey of primary care physicians in eleven countries, 2009: perspectives on care, costs, and experiences. *Health Aff (Millwood)* 2009; 28: w1171–83.
13. Bovier PA, Perneger TV: Predictors of work satisfaction among physicians. *Eur J Public Health* 2003; 13: 299–305.
14. Rosemann T, Rüter G, Wensing M, Szecsenyi J: Überweisungen vom Hausarzt zum Facharzt: Naht- oder Bruchstelle? *Dtsch Arztebl* 2006; 103(37): A 2387–92.
15. White KL, Williams TF, Greenberg BG: The ecology of medical care. *N Engl J Med* 1961; 265: 885–92.
16. Green LA, Fryer GE Jr, Yawn BP, Lanier D, Dovey SM: The ecology of medical care revisited. *N Engl J Med* 2001; 344: 2021–5.
17. Fryer GE, Jr., Green LA, Dovey SM, Yawn BP, Phillips RL, Lanier D: Variation in the ecology of medical care. *Ann Fam Med* 2003; 1: 81–9.
18. O'Connor GT, Sox HC Jr: Bayesian reasoning in medicine: the contributions of Lee B. Lusted, MD. *Med Decis Making* 1991; 11: 107–11.
19. Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen. Sondergutachten 2009: Koordination und Integration – Gesundheitsversorgung in einer Gesellschaft des längeren Lebens. Baden-Baden: Nomos-Verlag 2010.

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eTABLE

Work load and number of patient contacts, 2006

	D	AUS	CDN	F* ¹	I* ¹	NL	NZ	N* ¹	S* ¹	UK	USA
Average working week (hours)	50.6	39.9	44.9			48.1	41.5			45.1	45.9
– of which personal contact	63%	78%	72%			65%	71%			63%	71%
Average number of patients treated per week	243	128	122			141	112			154	102
Working week in hours (median [lower quartile, upper quartile])	50 (45, 60)	40 (30, 50)	45 [36, 55]			50 (42, 58)	40 (32, 50)			45 (40, 50)	45 (40, 60)
– of which personal contact	63%	78%	72%			65%	71%			63%	71%
Number of patients treated per week (median [lower quartile, upper quartile])	200 (180, 300)	120 (80, 164)	120 (70, 150)			150 (120, 170)	100 (75, 150)			150 (110, 180)	100 (70, 125)
Mean patient contact time in minutes (median [lower quartile, upper quartile])	9.0 (6.3, 10.8)	15.1 (12.1, 19.2)	16.0 (12.2, 23.0)			13.4 (11.2, 15.8)	16.2 (12.8, 19.8)			11.8 (9.0, 14.6)	20.3 (14.7, 27.3)

*¹ did not participate in 2006; AUS, Australia; CDN, Canada; D, Germany; F, France; I, Italy; NL, Netherlands; NZ, New Zealand; N, Norway; S, Sweden; UK, United Kingdom; USA, United States