

1010

# KOMPAKT

# Facts and Trends from Federal Health Reporting



#### Key messages

- ► Since 1990, life expectancy and mortality in East Germany have reached the level of that in West Germany in women, and have continued to approach this level in men.
- ▶ In particular, there has been a significant reduction in the mortality of cardiovascular diseases, and this reduction has been greater in East Germany than in West Germany.
- ► The East/West differences in terms of smoking rates and in the prevalence of obesity have also decreased.
- ▶ Regional differences are found in East and West Germany in terms of the ratio of physicians to population in the field of SHIaccredited healthcare.
- ► For the evaluation of health-related development in East and West Germany, it is necessary to make comparative observations between the different federal states and different regions within the federal states.

# 25 Years after the Fall of the Berlin Wall: Regional Differences in Health

After the fall of the Berlin Wall in November 1989, major social efforts were made to reach or at least approach the living conditions of the former western federal states in the former eastern federal states. This was possible in many areas and could be evidenced, for example, in the standard of living, i.e. the availability of consumer goods considered important, and also in subjective satisfaction with living conditions (Federal Statistical Office of Germany et al. 2011, Federal Statistical Office of Germany et al. 2013).

"20 Years after the Fall of the Berlin Wall: How has Health in Germany Developed?" (Robert Koch Institute 2009), a report published in 2009 as part of the Federal Health Reporting (GBE), impressively illustrated how these developments were reflected in health. The report, which was commissioned by the Federal Ministry of Health and drawn up by the Robert Koch Institute, shows the health-related developments in East and West Germany, making use of a comprehensive database. The range of topics extended from morbidity and mortality to health-related behaviour and the health care system. The report clearly showed that many health-related east/west differences that were evident shortly after the fall of the Berlin Wall were less pronounced or even no longer existed 20 years later. This applies to average life expectancy, subjective health, and many chronic illnesses and underlying risk factors, for instance. In addition, it became clear that the east/west comparison fell short when regarding only the remaining differences. Instead, a smaller-scale observation with consideration of different regional living conditions, e.g. regarding economic power or employment and earning opportunities, is required (Robert Koch Institute 2009, Lampert et al. 2010, Lampert 2010a).

On the occasion of the 25th anniversary of the fall of the Berlin Wall, this issue of GBE kompakt deals with the question of how and to what extent the developments described have continued. To this end, it firstly considers data on mortality and the average life expectancy. Then, it addresses the issues of cardiovascular diseases, cancer and mental health problems. Obesity, tobacco and alcohol consumption, and physical activity are dealt with as significant health determinants. In addition, the topic of health care, particularly the range of outpatient services, is covered. Like the comprehensive report from 2009, this issue of GBE kompakt makes use of a wide variety of data, which include official statistics as well as data from the health surveys of the Robert Koch Institute, the Federal Centre for Health Education (BZgA), the National Association of Statutory Health Insurance Physicians (KBV) and the German Centre for Cancer Registry Data (ZfKD).

# Life expectancy and mortality

In the years following reunification, general mortality in all eastern federal states was higher in both women and men than in all of the western states. Calculated per 100,000 residents, the comparison of mortality between East and West in 1990 showed 815 vs. 638 deaths in women and 1356 vs. 1070 deaths in men. Since that time, the difference in mortality between East and West Germany has levelled off in women and has at least narrowed in men. For women in both parts of Germany, approximately 440 deaths per 100,000 residents were recorded in 2012, whereas 743 deaths (east) vs. 651 deaths (west) per 100,000 residents were recorded for men.

A similar pattern can be seen with regard to average life expectancy. At the beginning of the 1990s, the average life expectancy at birth in East Germany was 2.3 years higher in women and 3.2 years higher in men than in west Germany. By 2009/2011, this difference had reduced to 0.2 years in women, which means a high degree of convergence. In contrast, the average life expectancy of men in East Germany was still 1.4 years lower than in west Germany in 2009/11 (Table 1).

A corresponding trend was evident in further life expectancy at the age of 60, that is, the average number of remaining years that can be expected at this age. Further life expectancy also increased more sharply in East Germany than in west Germany, and the east/west differences narrowed. In 2009/11, the difference between East and West Germany was still 0.2 years for women and 0.6 years for men (Table 1). A different picture emerges when we look at further life expectancy at 60 years of age at the level of the 96 planning regions (Raumordnungsregionen, RORs) defined for Germany. Figure 1 shows that a north/south gradient exists in addition to the east/west differences. A comparatively low life expectancy can be recorded in parts of Mecklenburg-Western Pomerania and Saxony-Anhalt, whereas the life expectancy in Baden-Wuerttemberg and Bavaria is relatively high. The differences between the other federal states are less pronounced. For example, further life expectancy in the regions

Table 1
Development of average life expectancy at birth and further life expectancy at 60 years of age in women and men in East and West Germany, 1991/1993, 2002/2004 and 2009/2011

Data source: Statistics on natural movement of the population (Federal Statistical Office of Germany 2012)

	Women										
	1991/	2002/	2009/	1991/	2002/	2009/					
	1993	2004	2011	1993	2004	2011					
Average life expectancy at birth											
Germany	79,0	81,6	82,7	72,5	75,9	77,7					
East Germany	77,2	81,3	82,6	69,9	74,7	76,6					
West Germany	79,5	81,6	82,8	73,1	76,2	78,0					
Further life expectancy at 60 years of age											
Germany	22,1	24,1	25,0	17,8	20,1	21,3					
East Germany	20,7	23,7	24,8	16,5	19,5	20,8					
West Germany	22,5	24,2	25,0	18,1	20,2	21,4					

of Saxony barely differs from the rates in Lower Saxony or North Rhine-Westphalia.

# **Explanation**

East Germany: Former eastern federal states up to 1997 incl.

Berlin East, from 1998 without Berlin

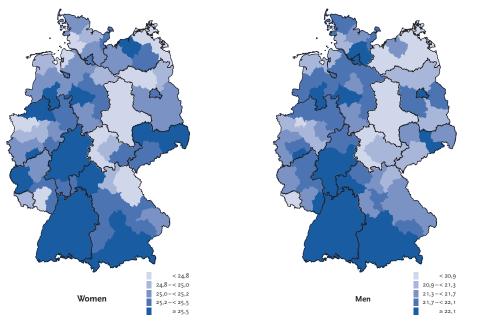
West Germany: Former western federal states up to 1997 with Berlin West, from 1998 with Berlin

### Cardiovascular diseases

The frequency of inpatient treatments can be used to estimate the prevalence of cardiovascular diseases in the population. In 2012, there were 2,860,496 inpatient treatment cases in Germany due to cardiovascular diseases (1,339,368 women and 1,521,109 men). Using age-standardised case figures, it is possible to make a comparison between different regions. It is evident that the age-standardised case numbers with primary diagnosis of a cardiovascular disease have reduced considerably overall since 2000, but continue to be higher in East Germany than in west Germany (2000: 3,280 vs. 3,053 per 100,000 residents; 2012: 2,841 vs. 2,637 per 100,000 residents).

346,217 people (199,068 women and 150,149 men) died from a disease of the cardiovascular system in 2012; this equates to approximately 40% of all deaths (Federal Statistical Office of Germany 2013a). Looking at the trend over time, we can observe a significant decrease in cardiovascular mortality, along with a narrowing of differences between East and West Germany: At the beginning of the 1990s, cardiovascular mortality in women and men from the former eastern federal states was about 1.5 times higher than that of women and men from the former western federal states. In contrast, only comparatively minor east/west differences can be detected for the year 2012 (Figure 2). To a large extent, the reduction of differences in life expectancy and mortality between East and West Germany can be attributed to this lowered death rate from cardiovascular diseases. However, since the start of the new millennium, the converging of the differences between east and west has been very slow. Particularly in men, the differences between East and West Germany seem to be settling at the level already achieved. A comparison of the individual federal states shows that both the frequency of illness and the mortality of cardiovascular diseases in Germany tend to decrease from the northeast to the south-west (Figure 3). For the year 2012, the highest age-standardised death rates are in Saxony-Anhalt, Mecklenburg-Western Pomerania and Saxony, while the lowest values are recorded, after Hamburg and Berlin, in the states of Baden-Wuerttemberg and Hesse. Exceptions from the north-east/south-west trend can be seen primarily in the city states (i.e. Hamburg, Berlin and Bremen)

Figure 1
Further life expectancy at 60 years of age in women and men according to planning regions (RORs), 2009/2011
Data source: INKAR 2013 (Federal Institute for Research on Building, Urban Affairs and Spatial Development 2013)



and in Saarland. The regional differences have remained largely unchanged over a substantial period of time, and essentially correspond to the spatial distribution of known risk factors for cardiovascular diseases (Robert Koch Institute 2009).

#### Cancer

According to estimates of the German Centre for Cancer Registry Data, approximately 224,900 women and 252,400 men were diagnosed with cancer in 2010. The most common malignant tumours in women were breast cancer (31%), colorectal cancer (13%) and lung cancer (8%). In men, the most common malignant tumours were prostate cancer (26%), lung cancer (14%) and colorectal cancer (13%)

(Robert Koch Institute, Gesellschaft der epidemiologischen Krebsregister in Deutschland e.V. 2013). The demographic ageing of the population, along with a greatly increased risk of illness in older people, has the result that the number of new diagnoses with malignant tumours is increasing overall. However, the development of age-standardised morbidity rates shows that, without the demographic change, there would have been only a minor increase in disease numbers in women and even a slight decrease in these numbers in men (Robert Koch Institute, Gesellschaft der epidemiologischen Krebsregister in Deutschland e.V. 2013).

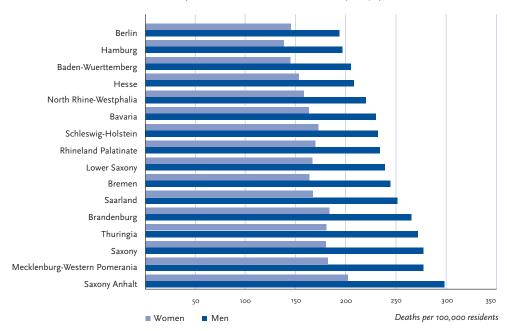
In 2012, approximately a quarter of all deaths were caused by malignant neoplasms. According to the cause-of-death statistics, 101,531 women and 120,080 men died from cancer in Germany in 2012 (Federal Statistical Office

Figure 2
Development of the mortality of cardiovascular diseases (ICD-10: Ioo-I99) in women and men in East and West Germany, 1990-2012 (age standardisation: old European standard population)
Data source: Cause-of-death statistics (Federal Statistical Office of Germany 2013b)



Figure 3
Mortality of cardiovascular diseases (ICD-10: Ioo—I99) in women and men by federal state, 2012 (age standardisation: old European standard population)

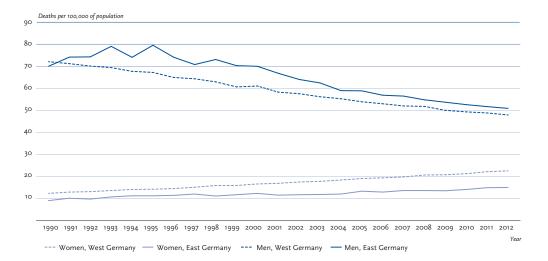
Data source: Cause-of-death statistics (Federal Statistical Office of Germany 2013b)



of Germany 2013a); most of these deaths could be attributed to breast cancer, prostate cancer, lung cancer or colorectal cancer. Shortly after reunification, only slight differences could be observed between East and West Germany in terms of total mortality rates from malignant neoplasms. Differentiated according to cancer sites, larger differences were evident for example in lung and breast cancer.

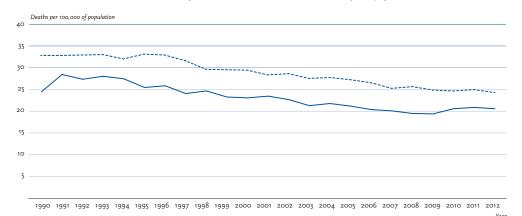
The death rate from lung cancer is lower in women from the former eastern federal states than in women from the former western federal states; the trend over time shows a rise in mortality and a slight increase in the east/west difference. In contrast, the data for men show a higher death rate in East Germany, a decrease in the mortality of lung cancer over time, and a reduction in the east/west difference since the end of the 1990s (Figure 4). In contrast, higher morbidity and mortality rates of breast cancer can be seen in women in west Germany (Robert Koch Institute, Gesellschaft der epidemiologischen Krebsregister in Deutschland e.V. 2013). The trend over time shows that rates of new diagnoses have risen since 2005, which is associated with the introduction of mammography screening. Since 2009, breast cancer rates have shown a slight downward trend. Despite the higher numbers of new diagnoses, the mortality of breast cancer is decreasing. The east/west difference remains (Figure 5). This may be related in part to differences in reproductive behaviour (younger age of first-

Figure 4
Development of the mortality of lung cancer (ICD-10: C33–C34) in women and men in the West and East Germany, 1990–2012 (age standardisation: old European standard population)
Data source: Cause-of-death statistics (Federal Statistical Office of Germany 2013b)



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Figure 5
Development of the mortality of breast cancer (ICD-10: C50) in women in East and West Germany, 1990–2012 (age standardisation: old European standard population)
Data source: Cause-of-death statistics (Federal Statistical Office of Germany 2013b)



time mothers and higher birth rate in the GDR) (Sundmacher et al. 2011, Robert Koch Institute 2009).

--- Women, West Germany --- Women, East Germany

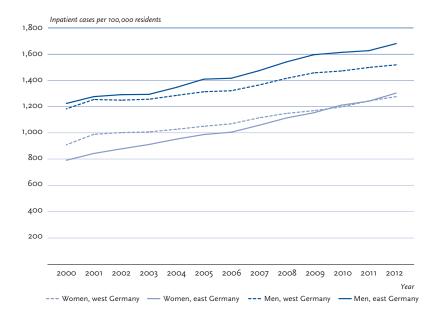
#### Mental health issues

Hospital statistics can provide indications of the current prevalence of mental health issues. According to these statistics, the inpatient case numbers per 100,000 residents with the primary diagnosis of a mental health issue or behavioural disorder rose continuously throughout all of Germany between 2000 and 2012. It is notable that the age-standardised case numbers in men are considerably higher than in women. Only slight differences exist

between the West and East Germany (Figure 6). The fact that these differences vary in the individual important disease groups can be shown using the example of mood disorders (ICD-10: F30–F39), which include depression, and neurotic, stress-related and somatoform disorders (ICD-10: F40–F48). In the first diagnosis group, the age-standardised case numbers in East Germany are higher; in the latter diagnosis group, those in west Germany are higher. For both diagnosis groups, a trend of diverging development of age-standardised case numbers in east and west is apparent, which has been increasing further since 2009 (cf. also Robert Koch Institute 2009).

Although the developments in inpatient case numbers

Figure 6
Development of inpatient case numbers for mental and behavioural disorders
(ICD-10: Foo-F99) in women and men in East and West Germany, 2000–2012
(age standardisation: old European standard population)
Data source: Hospital diagnosis statistics (Federal Statistical Office of Germany, 2013a)



show the increasing significance of mental health issues for the health system, data on prevalence and incidences cannot be derived from them. Estimates of the prevalence of mental health issues can be made based on survey data. The "German Health Interview and Examination Survey for Adults" (DEGS1, 2006–2011) and its supplementary module Mental Health (DEGS1-MH) collected data on a relatively broad spectrum of mental health issues, which included relatively minor, temporary issues in addition to manifest mental illnesses. First analyses show that the 12-month prevalence of mental health issues in the general German population aged between 18 and 79 is 27.7%. Major differences exist between different groups of the population, for example according to age, sex and social status. The differences between East and West Germany are fairly small (women: 36.6% vs. 33.7%, men: 20.4% vs. 23.0%). The most common mental health issues overall are anxiety disorders (15.3%) and unipolar depression (7.7%) (Jacobi et al. 2014). Mental health issues may also be connected to suicidal tendencies or to acting on suicidal thoughts. The cause-of-death statistics recorded almost 10,000 suicides in Germany in 2012. Nearly three quarters (7,287) of the persons who committed suicide were men (Federal Statistical Office of Germany 2013a). The rate of suicide is considerably higher in older people, particularly men aged over 75, than in younger people. A comparison between the East and West Germany shows that no significant changes have taken place since 2009: The differences in age-standardised case numbers in men that were very significant in the 1990s are decreasing continually; in women, the differences have almost disappeared (Figure 7).

# Obesity

Obesity is a term referring to serious overweight. It is a risk factor for illnesses such as type 2 diabetes, cardiovascular diseases and joint or back problems (Mensink et al. 2013). Statements on the prevalence of obesity in the population are generally based on the body mass index (BMI), which is calculated using measured values or self-reported information on height and weight. The prevalence calculated using self-reports is generally lower than that calculated using measured values (Mensink et al. 2005). For the years following reunification, a considerably higher prevalence of obesity in East Germany than in west Germany was recorded in both sexes on the basis of measured values. Since then, the prevalence in Germany has continued to rise (Mensink et al. 2013). The differences between East and West Germany have gradually decreased during this time (Lampert 2010b). According to current measured data from the "German Health Interview and Examination Survey for Adults" (DEGS1, 2008-2011), significant differences no longer exist in the prevalence of obesity in women and men aged between 25 and 69 (Table 2).

Additional analyses based on the "German Health Update 2012" (GEDA 2012) suggest that considerably higher obesity in East Germany can now only be observed in older people. This corresponds with the findings of the "German Health Interview and Examination Survey for Children and Adolescents" (KiGGS), which, even ten years ago, found no differences between East and West Germany in terms of the prevalence of obesity in children and adolescents (Lampert et al. 2010a). The data of the microcensus can be used to analyse regional distribution patterns. However, these data are based on self-reports and not on measured values. Figure 8 illustrates the increasing



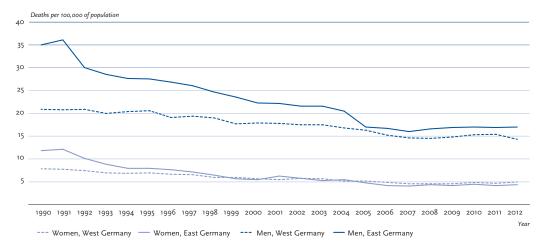


Table 2
Proportion of women and men in East and West Germany with obesity (BMI≥30) according to age group, 1990–1992, 1997–1998, 2008–2011)

Data source: Health surveys of the RKI 1990-1992, 1997-1999, 2008-2011, based on measured values of height and weight

		1990–1992	0–1992 1997–1999			2008–2011		
	West Germany	East Germany	Old states	West Germany	East Germany	Old states		
Women								
18–24 years old	-	-	0.4	1.1	0.7	0.6		
25–39 years old	3.4	5.0	4.6	3.0	3.6	3.9		
40–54 years old	6.4	9.7	5.7	6.0	6.6	7.1		
55–69 years old	9.7	12.1	7.6	10.8	6.9	8.3		
Overall (25–69 years old)	19.5	26.8	22.6	25.2	22.5	25.8		
Men								
18–24 years old	-	_	0.8	0.5	0.6	0.9		
25–39 years old	4.5	6.8	4.6	4.0	4.5	3.5		
40–54 years old	6.7	8.6	5.9	8.1	7.9	7.8		
55–69 years old	6.1	6.2	5.9	7.1	6.6	7.3		
Overall (25–69 years old)	17.3	21.7	19.7	23.3	24.6	23.9		

prevalence of obesity in all federal states. Because of the inclusion of higher age groups in the microcensus, this data source also shows an increased prevalence in East Germany for the year 2009. In addition, higher levels are found in the western federal states of west Germany. Overall, the increase should also be viewed in relation to the ageing of the population.

# Tobacco and alcohol consumption

According to data from the health surveys of the Robert Koch Institute, at the beginning of the 1990s, women in the former eastern federal states were considerably less likely to smoke than women in the former western federal states (Robert Koch Institute 2009, Lampert 2010b). In men, who smoke more often than women overall, the proportion of smokers in East Germany at this time was somewhat higher than in west Germany. Current data from the German Health Update 2012 no longer show any significant differences between East and West Germany in terms of the prevalence of smoking in men and women.

Figure 8

Proportion of people with obesity (BMI≥30) according to federal state, 1999, 2005 and 2009

Data source: Microcensus 1999, 2005, 2009 (Federal Statistical Office of Germany 2010)

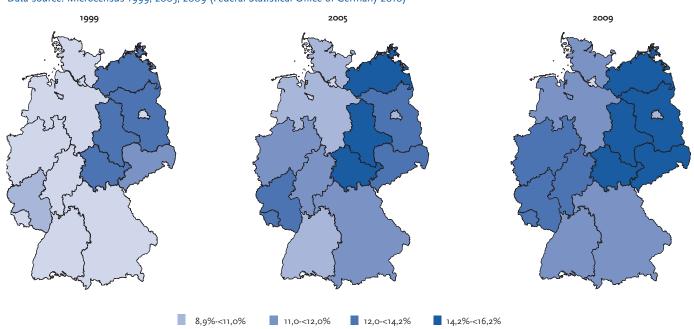
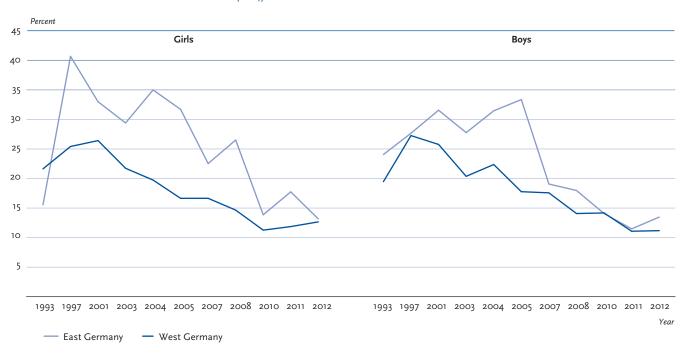


Figure 9
Smoking rates in 12- to 17-year-old girls and boys in East and West Germany, 1993–2012
Data source: Federal Centre for Health Education (2014)



The development of regional differences in the smoking behaviour of young people aged between 12 and 17 can be illustrated based on the data from the Drug Affinity Study of the Federal Centre for Health Education (BZgA). In the 1990s, the rate of smoking among young people increased sharply in East Germany. This trend began to reverse after 2005 in the context of more stringent regulations for protecting non-smokers in Germany (Figure 9). Current data for the year 2012 now no longer show higher smoking rates in boys and girls in East Germany as compared to west Germany.

Before the fall of the Berlin Wall, the consumption of alcohol in the German Democratic Republic was relatively high by international standards. Risky alcohol consumption continued to be more widespread in the former eastern federal states than in the former western federal states in the years following reunification (Robert Koch Institute 2009). In the period thereafter, the consumption patterns became more similar. According to the results of the "German Health Update 2012" (GEDA 2012), differences in consumption behaviour continue to exist in men, in particular. In East Germany, with 37.1% and 38.9% respectively, the age groups from 40 to 49 and from 50 to 59 in men include higher proportions of persons with risky alcohol consumption. In west Germany, the comparable proportions are approximately 10% lower, at 28.5% in 40 to 49 year olds and 27.8% in 50 to 59 year olds.

The Drug Affinity Studies of the BZgA provide information on alcohol consumption in children, adolescents and young adults. Based on this information, the proportion of 12 to 17 year olds who had ever tried alcohol (lifetime prevalence) was well over 80% in all groups in 2001 and has decreased since then. There are hardly any significant

differences between East and West Germany: In 2011, the lifetime prevalence of alcohol consumption among boys was 73.3% in west Germany and 66.7% in East Germany. In girls of the same age group, the differences between East and West Germany were also minor (72.1% in East Germany, 77.1% in West Germany). In recent years, the public awareness of the issue of so-called binge drinking has increased greatly.

In scientific studies, this is often defined as the consumption of five or more alcoholic drinks on one occasion. In addition to differences between the sexes, a gradual decrease in prevalence since 2007 is evident in all groups (Figure 10). In 2011, approximately one in ten girls aged between 12 and 17 and one in five boys of the same age reported experiences with binge drinking in the preceding 30 days.

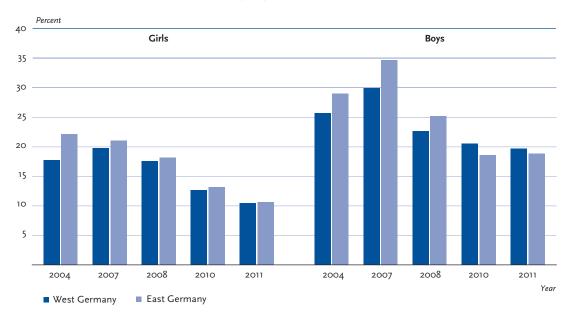
#### **Physical activity**

Data from the health surveys of the RKI for the period from 1990 to 2011 show that participation in sport was lower in East Germany than in West Germany shortly after reunification (Lampert 2010b, Krug et al. 2013). Since then, overall participation in sport has increased considerably in Germany, while differences between east and west have decreased (Figure 11). When the different age structure of the population in East and West Germany is taken into consideration, the DEGS1 study (2008–2011) no longer shows any significant differences in women or men in terms of participation in sports activities within the preceding four weeks.

In contrast, differences between East and West Germany are evident among children and adolescents. According to the results of the KiGGS study (2003–2006), the proportion of children and adolescents who are not participating in

Figure 10
Binge drinking in the last 30 days (5 drinks or more on one occasion) in 12- to 17-year-old girls and boys in East and West Germany, 2004–2011

Data source: Federal Centre for Health Education (2014)



sports activities is higher in East Germany. A differentiated view according to organisational forms makes it clear that the east/west differences in sports activity can be attributed primarily to the varying levels of involvement in sports clubs. Differences are much less pronounced in sports activity that is not connected to sports clubs (Lampert et al. 2007). Analyses of data from the first follow-up survey of the "German Health Interview and Examination Survey for Children and Adolescents" (KiGGS Wave 1, 2009–2012) suggest that there has been no considerable reduction in these differences.

# **Outpatient healthcare**

For the former eastern federal states, reunification involved adopting the health system of the former western federal states. In the process of bringing inpatient care up to the west German level, hospitals were modernised, the quality of healthcare was improved, and the structures were adapted to the legal requirements of the Federal Republic. The changes to outpatient medical care were considerably more drastic. The primarily community-based or company-based outpatient health care system, which provided care mainly in polyclinics and ambulatories (primary care centres), was

Figure 11
Proportion of men and women in East and West Germany who had participated in sports activity in the preceding four weeks, 1990–1992, 1997–1999, 2008–2011

Data source: Health surveys of the RKI 1990–1992, 1997–1999, 2008–2011

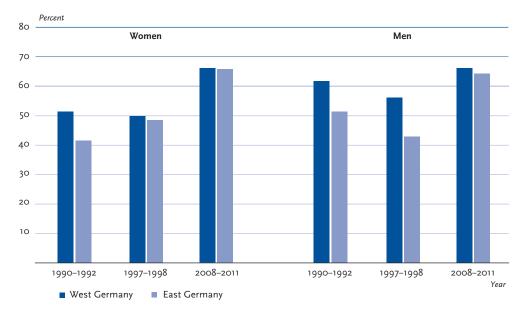
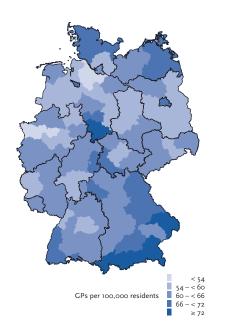
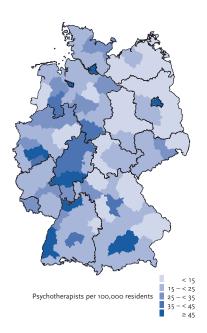


Figure 12

GPs and psychotherapists per 100,000 residents according to planning region (ROR), 2011

Data source: INKAR 2013 (Federal Institute for Research on Building, Urban Affairs and Spatial Development 2013)





replaced by private service providers, particularly resident doctors (Federal Ministry of the Interior 2010).

Between 1993 and 2013, the number of statutory health insurance (SHI-) accredited physicians in Germany rose by 24% to 142,660. With 25% to 121,513, the relative increase in west Germany was considerably higher than in East Germany, in which the figure increased by just under 14% to 21,147 SHI-accredited physicians (National Association of Statutory Health Insurance Physicians 2014).

Notable regional differences exist in terms of the ratio of physicians to population. In 2011, the highest number of GPs per 100,000 residents could be found in Bavaria, Hamburg and Berlin, while the numbers in Brandenburg and North Rhine-Westphalia were below the national average. Larger differences exist in the numbers of psychotherapists (Figure 12) (BBSR 2013). A smaller-scale observation based on planning regions shows that differences in healthcare services also exist within the individual federal states. Unequal distribution between cities and rural areas to the disadvantage of rural areas can be assumed here (Advisory Council on the Assessment of Developments in the Health System 2014).

According to the Advisory Council on the Assessment of Developments in the Health System, ensuring the provision of sustainable, efficient and effective outpatient healthcare in sparsely populated, structurally disadvantaged regions is a particular challenge (Advisory Council on the Assessment of Developments in the Health System 2014, Advisory Council on the Assessment of Developments in the Health System 2009). Various measures can be considered to meet this challenge. One measure that is already practised is the delegation of some medical tasks to qualified professionals who are not doctors, as in "AGnES", "VerAH" and other

model projects (Kalitzkus et al. 2009), which have become part of standard care in some regions. Access to medical care for patients with limited mobility can be improved through measures such as patient buses or mobile medical practices. Other possibilities for reducing shortages in medical care include setting up branch offices, outpatient/inpatient cooperation and providing incentives for young doctors to practise in under-served regions (Richter-Kuhlmann 2014, Association of Statutory Health Insurance Physicians Brandenburg 2014).

#### **Conclusion and outlook**

After 25 years of co-development, we can observe a narrowing, in some cases even disappearance, of east/west differences in terms of health. This convergence frequently took place in the course of general improvements in health, such as an increase in average life expectancy and decrease in cardiovascular mortality. However, negative developments - advancing faster in East Germany – can also contribute to a converging of these differences, as evidenced by the increase in tobacco consumption among women, particularly in the 1990s. This illustrates that the developments described in the report from the Robert Koch Institute on the 20th anniversary of the fall of the Berlin Wall (Robert Koch Institute 2009) have continued. However, it is also evident once again that the evaluation of health-related development in East and West Germany must go hand-in-hand with comparative observations of the individual federal states and of individual regions within the federal states. This is the only way to obtain a view of regional distribution patterns beyond the east/west perspective and to look at these patterns in connection with the regional distribution of health-related opportunities (Robert Koch Institute 2009, Lampert et al. 2010a, Rommel et al. 2014).

The focus of this issue of GBE kompakt is to describe east/ west differences and other regional differences in terms of health. Providing reasons for all these differences would go beyond the scope of this publication, particularly as there is no single explanation for the different health indicators. A possible starting point could be to describe the relationship between the social and health situation, which is similarly strong at the individual level in East and West Germany (Lampert et al. 2010a). The health-related differences between East and West Germany that still exist today could thus be at least partially attributed to the socio-economic differences that remain between east and west, despite the standard of living becoming more equal.

In addition to the health situation and the risk and protection factors, the healthcare services must also be taken into consideration. The low population density and increasing age of the population in many regions of East Germany, which are also associated with changes in the infrastructure, place new challenges on ensuring the provision of health services. This affects not only outpatient and inpatient services, but also other areas of healthcare such as rehabilitation and nursing care. The development of (cross-sectoral) models of care, in order to guarantee local provision of health services adapted to the regional conditions, particularly for older people with chronic illnesses, is a task that affects the whole of Germany, but initially mainly the former eastern federal states. Some promising approaches exist in this area and are already being implemented to some extent. In this respect too, regional observations that do not focus purely on the federal states, but also on smaller geographical units, will remain of interest in the future.

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