

FEDERAL HEALTH REPORTING
JOINT SERVICE BY RKI AND DESTATIS

Health in Germany

The report “Health in Germany” provides a profound overview of the status and development of human health in our country in 2015 in 11 chapters. It is the third comprehensive report of this kind in the Federal Health Reporting. A broad database was included in order to represent the disease spectrum, the distribution of risk factors, the use of prevention and health care. Overall, it can be observed that there are two major developments which are essentially determining the health and care developments in Germany: the demographic changes and the strong influence of the social situation on health. The impact of the demographic development on health and health care is analysed in detail in a separate chapter. The report provides an important information base and orientation for different players, who shape the processes and measures to improve health. It hence supports evidence-based decisions for more health in Germany.

Summary of the Report “Health in Germany” Annex to the Press Release of 3 December 2015

CHAPTER 1: INTRODUCTION

The report “Health in Germany” published by the Robert Koch Institute (RKI) on 3 December 2015 provides a profound overview of the state and development of human health. The report is part of the Federal Health Reporting which comes within the remit of RKI. A broad database was included; up-to-date data and trend analyses were compiled. In the synopsis overarching developments can be identified which are relevant for all areas considered: from the disease spectrum via the distribution of risk factors to prevention and health care.

CHAPTER 2: SO WHAT IS THE STATE OF OUR HEALTH?

Health and health care in Germany are currently determined by two major developments: the **demographic change** and the strong impact of the **social situation** on health.

Around three-quarters of the women and men in Germany assess their health condition as good or very good. This is particularly positive with a view to life expectancy which has continuously increased over the past decades: Girls born today can on average expect 82.7 and boys 77.7 years of age. In our (ageing) population, chronic diseases such as cardiovascular diseases, cancer, musculo-skeletal diseases and diabetes are increasingly determining the incidence and prevalence of disease. Mental disorders are given more attention today. During the past decades there have been many health improvements which are attributable – to a different extent depending on the disease – to prevention and early detection, progress in treatment and better health care. Chronic diseases, however, represent major challenges not only for the patients concerned and their families but also for the health system and the social systems.

The most important diseases

Cardiovascular diseases such as myocardial infarction and stroke continue to be amongst the most frequent causes of death: 39.7% of all deaths are attributable to them. During the past decades there have, however, been first indications of a positive development: both for myocardial infarction and for stroke there have been less new cases. Mortality caused by coronary heart disease, myocardial infarction and stroke has likewise significantly declined. This is attributed to successful prevention, progress in treatment and improved health care.

For many **types of cancer** successes have been recorded, too. Although there had been an increase in new cases by about 16% from 2001 to 2011 (which was, however, above all due to the demographic change), the mortality rates decreased for most types of cancer during the past years. This is explained by referring to progress in treatment, for some types of cancer also due to an earlier detection of the diseases. However, today more women die of lung cancer. Cancer is the second most frequent death cause in Germany (25.0%).

The prevalence of **diabetes mellitus** is a matter of concern. For 7.2% of all adults aged between 18 and 79 years a diabetes mellitus is known; these are approximately 4.6 million people. 2.0% of all adults (approximately 1.3 million people) have an undetected diabetes mellitus. Growing case numbers during the past years can only be partly explained by demographic ageing. They are at least partly attributable to an improved early detection, possibly also to the increase in lifestyle-related risk factors, in particular obesity. Sequelae of diabetes such as blindness and amputations are, however, declining.

Diseases of the muscular and skeletal system continue to be amongst the most frequent and cost-intensive diseases in Germany. Whereas arthrosis, osteoporosis and rheumatoid arthritis occur more frequently with growing age, back pain often affects younger people. Musculoskeletal diseases cause the highest number of days of incapacity to work and are, after mental disorders, the second most frequent reason for early retirement for health reasons.

Infections continue to cause a high disease burden, even if in 2013 only one infectious disease has been amongst the ten most frequent death causes in Germany: pneumonia. It is positive to note that tuberculosis has been continuously declining in Germany for years – although only to a minor extent during the past years. The number of first diagnoses of hepatitis C has been slightly up in 2013 versus the previous years and amounts to 5,200. The number of new HIV infections has already increased since the turn of the millennium: in 2013, there were around 3,300 HIV infections in Germany. A critical development is an increasing antibiotic resistance of tuberculosis and other infectious diseases. Insufficient vaccination rates, as seen in the recent measles outbreak in Germany, are also problematic: Only a high vaccination rate in the population will provide protection (herd immunity) for those who cannot be vaccinated for health reasons. Moreover, infections contracted by patients in connection with medical measures (nosocomial infections) are important. Every year an estimated 400,000 to 600,000 patients infect themselves at the hospital. Infections with so-called multi-resistant germs against which many standard antibiotics have become ineffective are particularly dangerous (including methicillin-resistant *Staphylococcus aureus*, MRSA).

Mental disorders require special attention. On a population level no rise can be observed in frequent diagnoses such as anxiety disorders and depressions. However, the rate of absenteeism and early retirement due to mental disorders has significantly increased during the past 20 years. The reasons discussed in this connection are changes in the working environment; in particular, however, also the removal of taboos concerning mental disorders and the associated improved diagnostics.

In 2013, 682,069 children were born in Germany. 93.7% of the parents estimate that the **health of children and adolescents** is good or very good. The most frequent diseases in childhood and adolescence include allergies, which have already been diagnosed in one-fourth of the children and adolescents in Germany. Accidents requiring medical attendance affect 15.5% of the children and adoles-

cents every year. Around 0.2% of the 7 to 17-year-olds are suffering from diabetes mellitus (primarily type 1). It is alarming that one-fifth of the children and adolescents show mental health problems. Already in childhood and adolescence there are significant differences in connection with the social situation, in particular as far as health behaviour, health risk factors such as overweight and mental health problems are concerned. The share of children and adolescents with mental health problems is, for instance, significantly higher in families with a low socioeconomic status compared to families with a high social status (33.5% vs. 9.8%).

CHAPTER 3: WHICH FACTORS INFLUENCE HEALTH?

The health status of the population is essentially determined by the living conditions (social determinants) and the health behaviour as well as related risk factors.

Social determinants of health

There is a close relationship between the health and the social situation of the population. Studies prove that people with a low socioeconomic status are more frequently affected by diseases, ailments and disabilities, assess their own health more poorly and die earlier. Study results show that for women with a very low income, life expectancy is eight years lower than for women with a high income; for men the difference is 11 years. Already during childhood and adolescence, health is marked by the socioeconomic status of the family.

In the **workplace**, the health situation has altogether improved during the past decades: absenteeism due to illness and lethal accidents decreased for persons gainfully employed. Absenteeism caused by mental disorders, however, has considerably increased during the last years. There are still major social differences concerning the health of employees. The number of sick days is, for instance, significantly higher for employees with a low professional status; this is attributed to differences in physical and psychosocial workload. The unemployed are almost twice as often reported as ill compared to those gainfully employed. Studies also suggest that people with an unemployment experience show more often behavioural health risks and participate less often in preventive measures: in the working environment, the largest part of the population can be reached by such measures.

The health of people with a **migration background** is primarily determined by the same (social) determinants as for the majority of the population. There are, however, migration specific particularities such as the country of origin, the reason for migration, the resident status, the degree of integration and the cultural background. As far as physical health is concerned, there are altogether hardly any differences between people with and without a migration background. Depending on the infection status of the countries of origin, specific risks occur for infectious diseases such as tuberculosis, HIV and hepatitis B. Migrants use health care services and benefits altogether less often than people without a migration background. As far as the health situation of asylum seekers is concerned, there is currently hardly any information available. Due to their growing number, a high priority is to include this population group into a health monitoring.

Health behaviour and associated risk factors

A balanced **diet** and sufficient **physical activity** can contribute towards preventing overweight, lipid metabolic disorder and hypertension and hence help reduce the risk for cardiovascular and other chronic diseases. The results of nutrition monitoring show that adults in Germany do not consume enough vegetables, fruit and fish. However, adults, children and adolescents have on average enough of most vitamins and minerals. Two-thirds of the adults and three-quarters of the children are practising sports but only every fifth adult and every fourth child reaches the level of exercise recommended by WHO (2.5 hours per week for adults and one hour per day for children). Since the end of the 1990s sports activities have significantly increased in particular amongst older adults. Adults with a low socioeconomic status continue to practise comparatively less sports.

An unfavourable ratio of energy absorption to energy consumption can lead to **overweight** in the long-term. Heavy overweight (obesity) increases the risk for many chronic diseases. Amongst adults the share of overweight persons stabilised on a high level during the past years; the share of obese persons has however significantly increased especially amongst young men. For children and adolescents the number of overweight persons has likewise increased since the 1990s; the number of obese persons has even doubled. Nearly 25% of all adults and approximately 6% of the children and adolescents in Germany are obese. The distribution of overweight and obesity follows a social gradient: the lower the social status, the more frequent the occurrence of overweight and obesity.

Hypertension is amongst the main risk factors for cardiovascular diseases, mainly in combination with other risk factors such as lipid metabolic disorder, diabetes mellitus, obesity, smoking and lack of exercise. With growing age, the risk of hypertension is strongly increasing. According to estimates approximately one-third of all men and women in Germany, around 20 million people, are affected by hypertension. Most of them are medically treated; thanks to medicines, hypertension can be lowered to a normal level.

Smoking is the leading cause of premature mortality in industrial nations. In Germany, approximately 29.0% of men and 20.3% of women from the age of 15 onwards were smoking in 2013. Since the beginning of the year 2000 the quotas have been declining. For women the decrease has, however, stagnated since 2009. Amongst adolescents the smoking quotas have continuously decreased since 2004.

Apart from hypertension and tobacco, **alcohol consumption** is amongst the most important risk factors for health and death in Europe. On a worldwide level, Germany is among those countries with above average alcohol consumption (9.7 litre pure alcohol per capita referred to the overall population in 2013). It is positive to note that during the past 20 years the share of persons with risky alcohol consumption and episodic heavy drinking has decreased. Alcohol consumption at an adolescent age has likewise been declining. The number of children and adolescents who had to undergo hospital treatment due to acute alcohol intoxication has, however, almost tripled between 2000 and 2012. In 2013, it was declining again for the first time.

CHAPTER 4: WHAT ABOUT PREVENTION AND HEALTH PROMOTION?

By health promotion, you understand measures which strengthen the personal, social and material resources for health preservation. Prevention is to reduce concrete risk factors in order to avoid or delay diseases. The German Act to Strengthen Health Promotion and Preventive Health Care (Preventive Health Care Act) which became effective in July 2015 places a stronger focus on these aspects. According to the Prevention Health Care Act, the annual expenses of the sickness funds for primary prevention will rise from currently EUR 289 million to EUR 500 million. Moreover, the act stipulates that the different players such as sickness funds, pension insurance as well as the federal states (Laender) and municipalities will reach an understanding in respect of common goals and approaches.

For **adults** there are many offerings available for health promotion and prevention in Germany. They are financed by the statutory health insurance and are partly very well accepted. For instance, 89.5% of the pregnant participate, according to the recommendations, in a preventive check-up every month. Three-quarters of the adults go to a regular dentist control examination. The vaccination rates for influenza, tetanus and measles show a significantly increasing tendency. A health check-up is currently carried out by half of the beneficiaries. The cancer screening services offered by the statutory health insurance address specific target groups; the use of these offers depends on the type of examination, gender and age groups. As far as behaviour-based prevention measures are concerned, the number of participants has almost doubled over the past 10 years: every fifth woman and every tenth man participate every year, most frequently in offers from the field of physical exercise.

More than 90% of the **children** participate in health screenings in childhood (U3 – U9); prevention is, however, only utilised by a minority in adolescence (J1). In 2013, 92.6% of the children starting school were sufficiently vaccinated against measles. Infants are less well protected: nearly 40% of the two-year-olds have no sufficient protection against measles. Thanks to increasingly good mouth hygiene and regular dentist control examinations, dental decay amongst children is declining. As far as dental prophylaxis is concerned, dental decay in the pre-school age remains, however, a challenge. With the Prevention Health Care Act the health examinations for children and adolescents are to be extended, individual stresses and strains as well as risk factors are to be considered to a stronger extent. Moreover, proof of medical vaccination consulting must be submitted for the admission to a day-care centre.

The use of offers for health promotion and prevention varies depending on gender, age, socioeconomic status and residential region. Women and men with a lower socioeconomic status participate, for instance, more rarely in behaviour preventive measures. With health-promoting measures in **settings such as school or workplace** a broad majority can be reached. Access to these measures is largely independent of education or income. According to the Prevention Health Care Act, health-promoting structures in companies are to be increasingly supported in future.

CHAPTER 5: HOW HAVE THE SUPPLY AND USE OF HEALTH CARE SERVICES CHANGED?

Since the last report “Health in Germany”, which was published in 2006, the offers and uses of health care have increased in many areas. This is attributable to the rise in chronic diseases and the demographic development but also to medical-technical progress and new treatment possibilities. One of the main challenges will be to organise the services and benefits of health care under these conditions – as laid down in the fifth Social Security Code (SGB V) – sufficiently, conveniently and economically in future.

In **outpatient care** the shift from a general practitioner to a medical specialist care offer continues. Nine out of ten adults use the services of physicians in private practice within a year. At present around 2.2 million people are employed in outpatient care. In rural areas there is a lower care density than in urban regions. In **inpatient care** the number of treatments is increasing. The number of hospitals and beds continues to decline whereby the average inpatient duration becomes increasingly shorter. With around 2,000 hospitals and 500,000 beds, capacities continue to remain on a very high level in an international comparison. More than 1 million employees are working in hospitals.

The number of people in need of **long-term care** has continued to increase; around two-thirds are nursed at home. Around 3% of the population or 2.6 million people receive benefits from the long-term care insurance. Since women of a higher age are frequently living alone, they are more dependent on the benefits than men.

Approximately 15% of the health spending is used in Germany for **medicines** every year. Around three-quarters of the adults – women more often than men – use medicines within a week. These are primarily prescribed by doctors but a considerable share is also accounted for by self-medication.

Offers and uses of **new forms of care** such as primary care physician services, medical care centres and disease management programmes have significantly increased. Around 3 million insured are currently participating in the primary care physician services; around 18,000 medical care centres are available. More than 6.5 million patients participate in disease management programmes which are currently offered for six chronic diseases.

Offerings in the field of **palliative care** are likewise on the rise. In Germany, there are currently more than 200 inpatient hospices, more than 250 palliative units in hospitals and around 1,500 outpatient hospice services. Nonetheless there is still undersupply in particular in rural areas.

Quality assurance in health care has been enhanced by law. Important tools of quality assurance are, amongst others, error reporting systems, peer counselling and the publication of quality reports.

Future challenges will be the upgrading of the methodology, cross-sectoral quality assurance and the inclusion of patients.

Patient orientation – the orientation of care towards the interests, needs and wishes of patients – makes a decisive contribution to the upgrading of the care system. Essential rights of patients are defined in the Patients' Rights Act in the German Civil Code. Independent Patient Counselling Germany (UPD), established by law in 2000, advises around 80,000 people per year. Moreover, there are up to 100,000 patient support groups. The statutory health insurances support self-help with an annual amount of more than EUR 40 million.

CHAPTER 6: HOW MUCH DO WE SPEND ON OUR HEALTH?

In 2013 health expenses amounted to EUR 314.9 billion. The largest item is made up of medical followed by care services. As far as diseases are concerned, cardiovascular diseases represent the most important cost factor, followed by diseases of the digestive system, the musculoskeletal system, mental disorders and cancer. Compared to the economic output, health expenses increased between 1992 and 2013 by around 1.8 percentage points. In an international comparison Germany ranges with per capita expenses of around EUR 3,800 per year for health in the upper midfield of western industrial nations.

Health care is one of the industries with the highest sales revenues in Germany. 6.1 million employees worked in the health economy (including wellness, fitness etc.) in 2012. As a result of the demographic development, it will continue to have an increasing importance. At the same time it must be ensured that the growing expenses are restricted to medically necessary benefits and innovations with a proven benefit.

CHAPTER 7: THE IMPORTANCE OF HEALTH TARGETS IN HEALTH CARE

Around 120 leading players in health care participate in the consensus platform *gesundheitsziele.de*, including sickness funds, health politicians, patient representatives, doctors and scientists. Several working groups of *gesundheitsziele.de* have elaborated eight health targets for Germany since 2000. Some targets have already been updated and evaluated. Their binding implementation is a major challenge. Important impulsions are expected from the new Prevention Health Care Act: the health targets are one of the references with which fields of action and benefits in the field of prevention and health promotion are to be defined. The national health targets are:

- Type 2 diabetes mellitus: reduction of disease risk, early recognition and treatment of patients (2003)
- Breast cancer: reduction of mortality, increase the quality of life (2003; updated 2011 and 2014)
- Reduction of tobacco consumption (2003; updated 2015)
- Growing up healthy: life skills, exercise, nutrition (2003; updated 2010)
- Enhancing health competence, strengthening patient sovereignty (2003; updated 2011)
- Depressive disorders: prevention, early detection, provision of long-term treatment (2006)
- Healthy ageing (2012)
- Reduction of alcohol consumption (2015).

CHAPTER 8: HOW HEALTHY ARE THE ELDERLY?

In surveys it is estimated that more than half of those aged 65 plus consider their health to be good or very good. Chronic diseases are, however, widely spread in this segment of the population, led by cardiovascular diseases, cancer diseases, and chronic lung diseases – all three of them counting amongst the leading causes of death – as well as musculoskeletal diseases and diabetes. Suicide rates

increase particularly strongly for men at a higher age; depressive symptoms are probably frequently overlooked in elderly people. Around one-third of those aged 65 plus takes at least five medicines; this increases the risk of undesirable side effects and interactions.

In the long-term it has been shown that severe restrictions in everyday life are altogether decreasing. Lighter restrictions are, however, increasing. International studies suggest that higher education, better health behaviour and the decline in cardiovascular diseases mean that probably less people develop dementia than estimated. Important resources at a higher age are targeted group adjusted health and prevention offers and the promotion of social participation. "Healthy ageing" is one of the national health targets for which essential individual goals and possible measures have already been formulated. The adaptation of health care to the needs of the elderly represents an important challenge today and in future.

CHAPTER 9: WHAT ARE THE IMPLICATIONS OF DEMOGRAPHIC CHANGE ON HEALTH AND HEALTH CARE?

The demographic change harbours many challenges for society and health care. It is caused by the low birth rate and an increase in life expectancy: a dwindling share of gainfully employed contrasts with a growing number of elderly people who are increasingly dependent on support.

Consequently, the **disease spectrum** is shifting. Age-related, non-transferable diseases, which frequently have a chronic course, are gaining in importance. In particular, cardiovascular diseases but also some cancers can be treated today in a better way and less often lead to death. The growing number of dementia confronts society with new tasks: as long as no breakthrough is achieved in prevention and treatment, the care of dementia patients must be improved in particular.

As a result of the growing number of elderly people, **health services and benefits** in long-term care, in outpatient and inpatient care are used more frequently. The care for elderly people can be particularly difficult in structurally weak regions, for instance if longer access routes are necessary for a doctor's visit. In health care, demographic ageing leads to a reduction of the caring relatives and specialists. The immigration of nursing staff can create a certain relief. It is, however, also important to increase the attractiveness of care professions for young people.

CHAPTER 10: HOW DOES GERMANY FARE IN EUROPEAN COMPARISONS?

The comparison of German and European health data provides important insights into differences and commonalities in prevention and care and their impact on health. More than two-thirds of adults within the European Union (EU) estimate that their health is good or very good. The average **life expectancy** at birth continues to increase within the EU. In Germany it is close to the European average (EU: women 83.2, men 77.4 years). In the EU as well as in Germany, cardiovascular diseases are the most frequent death cause, led by diseases of the coronary vessels and cerebrovascular diseases such as strokes. Since the mid-1990s, the mortality rates for these diseases have decreased in Germany and in almost all EU Member States.

Cancer is the second most frequent death cause within the EU. With 206 cancer deaths per 100,000 women and 330 cancer deaths per 100,000 men, the cancer mortality rates in Germany are in the lower third of the European comparison. They confirm the internationally observed higher rates for men. The number of new cancer cases within the EU was estimated at around 2.6 million cases for 2012. The most frequent types of cancer are both nationally and internationally intestinal cancer and lung cancer as well as, gender-specifically, prostate cancer in men and breast cancer in women.

Diabetes is one of the most frequent metabolic diseases in Germany and in Europe. According to European data 3% of all adults up to the age of 64 are concerned; for those aged 65 plus the percentage is 14.3%. For Germany higher prevalence rates were determined.

The share of regular **smokers** varies considerably in the EU Member States; in Germany it is close to the EU average. In general, a decrease in tobacco consumption has been observed in most countries.

The share of adolescents in Germany who smoke at least once a week is below the European average of 17%.

The per capita adult **alcohol consumption** within the EU is strongly varying; Germany ranges in the upper segment. During the past three decades the average per capita consumption in Germany has, however, decreased, as in most other EU Member States. Amongst the adolescents, Germany is on the European average level concerning regular alcohol consumption and heavy drinking episodes. In the two age groups declining tendencies can be observed both internationally and nationally.

More than half of the adult population within the EU is **overweight**. Around a quarter of the adults are considered as heavily overweight (obese) in the EU average and in Germany.

With approximately 11% of the gross domestic product (GDP), Germany is among those countries with the highest GDP share for **health care expenses** (EU: approximately 9%). Concerning the density of doctors and the number of doctor contacts, Germany is in the upper third. Germany is likewise in the upper segment for the number of hospital beds per 1,000 inhabitants.

European health surveys provide answers to many international public health questions. Within the framework of the health monitoring of RKI the data surveys of the European Health Interview Survey (EHIS) are conducted for Germany.