ROBERT KOCH INSTITUT

FEDERAL HEALTH REPORTING
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Health in Germany

Summary

What are the **most important results?**

WHAT ARE THE MOST IMPORTANT RESULTS?

Spanning ten chapters, the report "Health in Germany" provides an in-depth overview of the state of health of the people in our country and related developments. A widespread data base has been included and current figures and trend analyses have been compiled in the report.In the synopsis overarching developments emerge, which are of significance for all observed areas. These range from the spectrum of disease via the prevalence of risk factors right through to prevention and care. Overall it can be seen that two major trendsare currently significantly influencing health and healthcare matters in Germany, namely demographic changes and the strong impact of social inequalities on health.

Demographic development is closely interwoven with the health status and disease spectrum within the population, as well as with the design of future health care provision. On the one hand, we have the positive effects of longer life expectancy and the fact that an ever greater proportion of people can grow old today in good health despite chronic diseases. Mortality as a result of diseases, which previously often led to death, is declining. On the other hand, we are faced with major challenges for the continued development of health care: the actual number of (chronically) ill persons and hence the burden of disease within the population is growing, resulting in an increasing need for care. In contrast, the number of people of working age is decreasing. In the face of a changing population structure, reliable data is required as part of this process as a decision-making basis for policy makers, stakeholder associations and healthcare professions alike. A regular monitoring of the health status and health behaviour in the light of demographic developments is therefore imperative.

In the light of demographic change, one of the most important goals is to facilitate "Healthy Ageing". At the national level an important contribution is being made in particular by the national health target "Healthy Ageing" published in 2012. As part of the German health targets co-operation network gesundheitsziele.de, stakeholders from many areas agreed 13 specific sub-targets that help facilitate active and healthy ageing. These sub-targets include for example, "maintaining or improving physical activity and mobility levels of elderly people" and "preventing care-dependence and ensuring quality long-term care for those in need ". These goals were then backed up with concrete measures. The German national health target "Healthy Ageing" has been very well received at both national and regional level. With the Preventive Health Care Act, this and other targets were adopted into Volume V of the Social Insurance Code (Fünftes Buch Sozialgesetzbuch - SGB V) in July 2015. The National Association of Statutory Health Insurance Funds is therefore obligated to take this target into account in activities within the areas of prevention and health promotion. The overarching term "Active Ageing" is used by the World Health Organization (WHO). Active ageing is defined by the WHO as a process of optimising opportunities for health, participation and safety. This is about the need to improve quality of life with advancing age. Active ageing enables older people to participate in society and receive care and help when they need them. This is made possible, inter alia through the strengthening of intergenerational solidarity, adjustments in family policy and innovative solutions for the labour market. The European Commission declared 2012 the European Year for Active Ageing and Solidarity between Generations.

The state of health of the population is influenced by many factors. It is based on social differences; but gender-based, regional and other health differences such as migrant status are also to be seen. Realising health equity is an important task. However, many determinants of health lie outside the health sector, for example in the area of educational and labour market policy or urban planning. Consequently, the creation of health promoting framework conditions has to be taken into account in all policy areas and is a social cross-cutting issue. Assuming the above, the strategy of the World Health Organization "Health in All Policies" is aimed at an overall policy of promoting health in which health aspects are taken into account at all levels and in all areas of politics and society. The strategy thus expands the view beyond the individual and focusses on the societal and social determinants of health. The implementation of the "Health in All Policies" approach also helps to improve the framework of prevention and health promotion: social contexts in which people engage in daily activities (settings) can be made conducive to health. This therefore will contribute toward improving health equity.

The overarching themes and developments that emerge in the present report represent challenges for the further development of health reporting and health monitoring at the Robert Koch Institute. Data regarding prevalence, risk factors and consequences of diseases, as well as indicators of the quality of care are all necessary for assessing the state of health and care of the population. This also applies with regard to data on the social and economic situation, which must be linkable with information on health. The health monitoring performed by the Robert Koch Institute, makes an important contribution in this regard through its continuous observation of the burden of disease, as well as of health and risk behaviour in Germany. Their health reporting merges findings from the population-based surveys and numerous other data sources in the form of so called GBE (health reporting) publications. It identifies trends and changes in the state of health and analyses these in relation to prevention measures. The health reporting also reveals any gaps there may be in data.

In the field of cancer, reliable data is now available at the federal level. After establishing the epidemiological cancer registry at the level of the Laender this data was then consolidated and analysed at the German Centre for Cancer Registry Data (ZfKD) at the Robert Koch Institute. In other areas, such as for diabetes mellitus, the data requirement has so far not been comprehensively met by the current data collection routes. The development of monitoring and surveillance capacities is required in this area in Germany. Important steps for planning and implementation have already been made with the support of the Federal Ministry of Health. It is intended to establish a national diabetes surveillance system with regular indicator-based reporting at the Robert Koch Institute, which already collects data within the framework of existing health monitoring for diabetes. In addition to monitoring individual widespread chronic diseases it is also necessary to continuously monitor the state of health of elderly people as a population group. Temporal trends regarding burden of disease and care needs for older people can only be traced using regularly recurring primary data collection in representative surveys based on random sampling. Data requirements exist particularly concerning the state of health of the very elderly who are already severely restricted with regard to health or in need of care. To be able to make representative statements for these target groups and adequately record the relevant health problems (such as the relief of pain and sleep disorders, fall prevention and prevention of inappropriate medication), special field work approaches are needed for example via nursing homes. A collection of data

of this kind carried out on a continual basis, could contribute substantially to accompanying research and the evaluation of objectives and measures detailed in the national health target "Healthy Ageing".

Monitoring the health of children and adolescents however is a task that the Robert Koch Institute has been intensively dedicated to for many years. The German Health Interview and Examination Survey for Children and Adolescents (KiGGS) is currently being conducted for the third time (2014-2016). In each of the waves of the survey, data was collected on health variables as well as on the framework conditions for "growing up healthy". Through the repeated invitation of children and young people who took part in the KiGGS baseline survey (cohort approach) it is possible to show individual developmental trajectories. Numerous analyses regarding child and adolescent health have been incorporated in the present report on the basis of the KiGGS studies.

The following is a brief summary of the contents of the report. Analogous to the report the most important diseases and risk factors/determinants regarding the state of health are first defined. The following section is dedicated to prevention and health promotion, then information regarding health care delivery structures and utilisation of the same are summarised along with details of healthcare costs. In addition to these five comprehensive chapters, in which important issues from the previous report "Health in Germany 2006" have been revisited and updated, the present report also contains four more focus chapters. These deal with the latest topics currently under discussion: health targets for Germany and their significance regarding health policy, the health of older people, the effects of demographic change on health and an international comparison: where does Germany rank in Europe?

SO WHAT IS THE STATE OF OUR HEALTH?

Over the last one hundred and fifty years in Germany, as in many other developed countries, the disease spectrum has undergone manifold changes. Infectious diseases have become less significant as causes of death. Nowadays, mortality is predominantly determined by chronic diseases and their consequences such as heart attack and stroke. The life expectancy of people in Germany has risen steadily in recent decades. Advances in medicine have contributed decisively to this fact. In our (ageing) population, chronic diseases such as cardiovascular complaints, cancer, musculoskeletal disorders and diabetes increasingly determine the occurrence of illness. Mental disorders are also becoming increasingly significant. Many diseases are closely related to life-style habits.

In the past two decades there have been some positive developments in cardiovascular diseases. Both for heart attack and stroke the incidence rates are decreasing. As is the case with incidence rates, mortality has also declined considerably for coronary heart disease, heart attack and stroke. This can be explained by the combined effects of successes in primary and secondary prevention, advances in therapy and improved care following current clinical guidelines more closely. Successes have also been recorded with regard to many types of cancer. Admittedly between 2001 and 2011 incidence increased by about 16%, but demographic change is decisively responsible for this. While the age-standardised death rate from lung cancer in women has increased, the mortality rates for most cancers have declined in recent years. This is primarily attributed to advances in the treatment for some types of cancer but also to earlier detection of diseases.

The high incidence of diabetes mellitus gives reason for concern. In recent years, an increase has been observed, which can only be explained in part by the demographic ageing of the population. Since at the same time, the prevalence of undetected diabetes has declined, the prevalence increase in diabetes mellitus could be partly due to improved early detection. Another cause under discussion is the increase in lifestyle-related risk factors, in particular in obesity. With regard to complications of diabetes, such as blindness and amputations, a decline is apparent. It is likely that the introduction of the disease management programmes for diabetes mellitus type 1 and type 2 and the implementation of the national clinical care guideline for type 2 diabetes have contributed to this.

Musculoskeletal diseases are still among the most common and most costly diseases in Germany. While osteoarthritis, osteoporosis and rheumatoid arthritis more commonly occur at an older age, back pain often affects younger people and can lead to long-term sick-leave and early retirement. Musculoskeletal diseases cause the highest number of sick days and after mental disorders are the second most common reason for health-related early retirements.

Chronic diseases and their complications can restrict mobility and participation in everyday life through pain and limitations of physical function thus reducing quality of life. Diseases acquired in the course of life are the cause of most officially recognised disabilities. These occur correspondingly more frequently in older people. In Germany today, every eighth person lives with an officially recognised disability.

Allergic illnesses are still widespread and are of major significance in terms of physical impairments and reduced quality of life. The prevalences for hay fever and neurodermatitis / eczema have stabilised in recent years at a high level. The lifetime prevalence of bronchial asthma has in contrast continued to increase.

Even today infections continue to cause a high burden of disease, even though in 2013, only a single infectious disease - pneumonia - ranked among the ten most frequent causes of death in Germany. One positive note is that the incidence of tuberculosis in Germany is falling continuously, even though in recent years this has only been slight. In 2013, the number of first-time diagnoses of hepatitis C increased slightly compared to the previous year. The number of the new cases of HIV infection has been rising again since the turn of the Millennium. Increasing resistance to antibiotics for tuberculosis, as well as other infectious diseases is to be critically highlighted. Also problematic are insufficient vaccination rates, which, as has been seen in the case of measles in some regions of Germany, fail to provide adequate protection even for the minority of unvaccinated individuals (herd immunity). In addition, another important topic are infections that patients acquire in connection with medical treatment, so-called nosocomial infections. An estimated 400,000 to 600,000 patients become infected with a pathogen in hospital each year, other estimates are even higher. Particularly dangerous are infections with so-called multidrug-resistant germs against which commonly used antibiotics have become ineffective. These include methicillin-resistant Staphylococcus aureus - MRSA.

Despite great progress in preventing accidents in recent decades, particularly in the areas of road traffic and the workplace, accidents are still of great significance in Germany. Especially among teenagers and young adults they play a major role as a cause of death: in the 15 to 24-year-old age group almost every third death is caused by an accident. Fatal and non-fatal accidental injuries occur most often at home or during leisure

time. A majority of these accidents is deemed to be avoidable and prevention measures specific to this target-group promise significant successes.

One development requiring special attention is the increasing relevance of mental disorders. Society as a whole attaches great importance to good mental health and there is increased awareness of mental disorders within the general public. No increase in the prevalence of common diagnoses such as anxiety and depression can be observed at population level. However, there has been a considerable increase in the number of days of absence and early retirements due to mental disorders in the last 20 years. Reasons being discussed for this shift in diagnoses giving reason for incapacity to work are changes in the world of work and in particular the removal of taboos surrounding mental syndromes and associated improved diagnostics.

In the 2013, 682,069 children were born in Germany. 61.9% of births were by "normal" means (spontaneous, vaginal), 6.3% using forceps or a vacuum extractor (operative, vaginal) and nearly one-third of births were Caesarean sections. This percentage has almost doubled since 1994, but is stagnating now. The health of children and adolescents in Germany is rated by their parents as being very positive overall: 93.7% assess the health of their children as good or very good. Allergies are among the most common illnesses in childhood and adolescence. A quarter of children and young people in Germany have already had an allergic disorder diagnosed by a doctor at some point in their life. Each year, 15.5% of children and adolescents in Germany are affected by accidents that require treatment by a doctor. About 0.2% of children and adolescents (7 to 17-years) suffer from diabetes mellitus, mostly type 1. There is particular cause for concern in terms of mental health that epidemiological studies indicate a high level of mental disorders: one fifth of children and adolescents have been allocated to the group suffering from mental abnormalities.

In many diseases a clear impact is to be observed from social inequalities, this being particularly pronounced in diseases of the cardiovascular system and diabetes. Significant associations between health and social status can already be noticed in childhood and adolescence. These are to be seen especially with regard to health behaviour and health risk factors such as obesity, passive smoke exposure and mental abnormalities. Accordingly, for example, the proportion of children and adolescents presenting mental abnormalities among families of low socio-economic status compared to families with high social status is significantly increased (33.5% vs. 9.8 %). A medium or high social status is rarely associated with a higher prevalence of a disease. This is the case only with regard to allergy prevalence in adulthood, in the case of neurodermatitis in childhood and with regard to burn-out syndrome.

The data compiled in Chapter 2 of the report and the facts on health and diseases regarding the population in Germany indicate positive health trends in many areas during the last decade. Depending on the illness, successes in the prevention and early detection of diseases, advances in therapy, medical innovations and improved care structures - for example in the context of disease management programmes - have all contributed to a varying degree to this development. At the same time, it is clear that the chronic diseases, which dominate the burden of disease in Germany today, pose major challenges for our society. Alongside the stresses for those affected and their families, there are considerable effects impacting on the healthcare and social systems.

WHICH FACTORS INFLUENCE HEALTH?

The state of health of the population is affected considerably by living conditions and health behaviour. The WHO distinguishes between different types of factors as causes of chronic diseases that dominate the burden of disease in Germany: intermediate risk factors such as obesity, high blood pressure or lipid metabolic disorders, are illnesses in their own right. Their occurrence is encouraged through health risks, which are closely related to lifestyle such as unhealthy diet, lack of physical activity or alcohol and tobacco consumption. Social determinants of health are generally effective and influence the occurrence of these risk factors.

Firstly with regard to the social determinants of health: there is a close relationship between social status and the state of health of the population. Many studies confirm, that also with regard to Germany, people with low socio-economic status are more often affected by diseases, disorders, disabilities and some types of accident. They view their own health and health-related quality of life as being worse and a greater percentage die prematurely (i.e. before the age of 65). The relationship can often be seen in women and men as a social gradient, in this case as a gradual decrease in disease risks and health problems with increasing social status. Socio-economic differences in the average life expectancy at birth of 8.4 years for women and 10.8 years for men are reported in Germany, also with regard to life expectancy upon commencing retirement (65 years) there are significant social differences.

The state of health of children and adolescents is already influenced by the socio-economic status of their family of origin. In children and young people from families of low socio-economic status however social differences in health can be determined to a lesser extent via the prevalence of acute or chronic diseases than by risk factors such as problematic exercise and nutritional habits or overweightness and obesity.

The working environment is the context where social differences manifest themselves particularly strongly - in the form of better or worse working conditions, employment opportunities and earnings. Work is also the setting in which the largest part of the population can be accessed with regard to prevention measures. Viewed in the long-term there is an overall improvement in the state of health of those in gainful employment. Consequently, in recent decades not only has there been a reduction in absences caused by sickness and accidents, but the number of fatal accidents has also fallen. This is among other things a success due to well-established occupational health and safety in Germany. In recent years, however, there has also been an opposing trend: the significant increase in absenteeism due to mental illnesses. In addition, data shows there are still large social differences in the health of employees, for example in terms of the number of sick days per year. These are significantly elevated in workers with low professional status. This is attributed to differences in physical and psychosocial workloads. The unemployed and people with precarious connections to the labour market such part-time employees, are particularly frequently affected by illnesses and health problems. According to a health report by the company health insurance funds, the unemployed register sick almost twice as often as those who are gainfully employed. Here, the data indicates an accumulation of problems, because men and women with unemployment experiences less frequently state that they have taken part in prevention measures and they more frequently have behaviour-related health risks.

The many and varied forms of cohabitation or living alone present a varied picture with regard to health opportunities

and risks. The differences seem relatively minor here and are dependent on the life phase. Often they are determined by additional factors - for example socio-economic status. Children and adolescents who grow up in one-parent families or step-families, tend to have a higher risk of mental impairments compared with peers living with both biological parents. In studies single parents are shown to have an increased risk of physical and mental complaints. In advanced age a partnership often offers support and the ability to remain at home when care needs arise. The pluralisation of living arrangements is an ongoing process. The research into this topic is developing parallel to this, which means that in the future improvements are to be expected in terms of available studies and data bases.

People with migrant background are a heterogeneous group, both with regard to their living conditions, attitudes and behavioural habits and to their state of health. The health of people with migrant background is primarily affected by the same (social) determinants as that of the majority population. Migrant-specific factors such as the country of origin, reason for migration, residence status, degree of integration and the cultural background also come into play. Persons with migrant background suffer more frequently from diabetes but less frequently from cancer and cardiovascular diseases. Immigrants drink less alcohol on average, exercise less and eat less healthily than people without migrant background. In addition to the above, specific risks occur with regard to infectious diseases such as tuberculosis, HIV and hepatitis B which are associated with the infection status in their countries of origin. In old-age a need for care occurs earlier among migrants on average than in people without migrant background. People with migrant background call upon health care services less often than those without. With regard to the state of health of asylum-seekers there is currently very little information. Due to the increasing number of people seeking asylum in Germany, it is a high priority to better include this population group in future health monitoring.The housing situation in Germany is very good with regard to the spaciousness and amenities of apartments in comparison to the rest of Europe. Measurement values of the German Federal Environment Agency (UBA) clearly show that air quality in Germany has improved over the last 20 years. The same applies with regard to the perception of environmental noise, which has fallen significantly. The high proportion of homes with mould or mildew infestation and passive exposure to tobacco smoke (ETS), which is however declining, remain problematic. Moreover, women and men of low social status in Germany frequently live in poorer living and environmental conditions in comparison with people of higher social status.

Now to the health behaviour and the associated risk factors: a balanced diet and sufficient physical exercise are important aspects of a health-promoting lifestyle. They can help to prevent the occurrence of obesity, lipid metabolic disorder and hypertension. Thus, the risk of diabetes, cardiovascular disease and other chronic diseases can also be reduced. The results of the nutrition monitoring show that adults in Germany do not eat enough vegetables, fruit and fish. In addition, men continue to eat too much meat. The supply of most vitamins and minerals is sufficient for children, adolescents and adults on average.

Two-thirds of adults and three quarters of children are physically active. However, only one in five adults achieves the recommended activity level of 2.5 hours per week. Only a quarter of children reach the recommended level of one hour of daily physical activity. The sporting activity of the population - especially in older adults - has increased significantly compared to the end of the 1990s. However, adults with low socio-economic status continue to do less sport than adults from the high status group. This could, however be related to the fact that people of low social status are more likely to be physically active in the context of their work. In the long term, an unfavourable ratio between energy intake and energy consumption can lead to obesity. Being seriously overweight (obese) is especially associated with an increased risk of a multitude of chronic diseases. Among adults, the proportion of overweight persons has stabilised in recent years at a high level however in contrast and particularly among young men, the percentage of obese persons has risen significantly. Even among children and adolescents, the percentage of overweight individuals has increased since the 1990s by about 50%. The prevalence of obesity has even doubled. There are, however, indications that this increase has come to a standstill in recent years. In both sexes, in nearly all phases of life, the prevalence of overweight and obesity follows a social gradient: the lower the social status, the more overweight and obesity occur.

Increased blood pressure is one of the main risk factors for cardiovascular disease in Germany, in particular in when it occurs in conjunction with other risk factors such as lipid metabolic disorder, diabetes mellitus, obesity, smoking and lack of exercise. Using study data it can be estimated that about a third of all adults in Germany, about 20 million people, are affected by high blood pressure (women: 29.9%, men: 33.2%). Most of those affected are aware of high blood pressure. 4.0% of women between the ages of 18 and 79 years and 7.3% of men have hypertonic blood pressure values without having been diagnosed with hypertension. This could be an indication of undetected high blood pressure. With increasing age the risk of high blood pressure in both women and men increases significantly. Most people with hypertension are receiving medical treatment and blood pressure can be lowered to a normal level with adequate medication.

Smoking is the most important single health risk and the leading cause of premature death in industrialised nations. In Germany in 2013, approximately 29.0% of 15-year-olds and older men and 20.3% of women of the same age were smokers. Since the beginning of the millennium, the smoking rates for women and men have been falling in Germany. However the decline in women has stagnated since the year 2009, while it still continues in men. Smoking rates among adolescents have been falling continuously since 2004. Frequent and excessive alcohol consumption is also one of the avoidable health risks. In the rankings of the most significant risk factors for disease and death, alcohol - according to the WHO - is in third place in Europe after tobacco and high blood pressure. In 2013, as part of a worldwide comparison, Germany was among those countries with above average alcohol consumption having a per capita consumption in relation to total population of 9.7 litres of pure alcohol. In the last 20 years there has been a positive overall trend: based on the drinking behaviour in the last 30 days the percentage of people with hazardous alcohol consumption and those who indulge in binge drinking has decreased. Also among adolescents, alcohol consumption has been falling in recent years. Nevertheless, between 2000 and 2013 the number of cases of children and adolescents requiring inpatient treatment due to acute alcohol poisoning nearly tripled, falling for the first time in 2013.

The present findings regarding factors that have a bearing on health show once again the important impact socio-economic status has on the health of the population. Risk factors that are diseases in their own right such as obesity or behavioural risks such as lack of exercise and tobacco consumption/

smoking are essentially patterned by social status differences in the population. Sustainable measures must start early in life: epidemiological life course research has provided plenty of evidence that the course for health is set early on in childhood and adolescence and that health inequalities in later life are determined during this early stage of life.

WHAT ABOUT PREVENTION AND HEALTH PROMOTION?

Health promotion and prevention are important topics of this report. With the German Act to Strengthen Health Promotion and Preventive Health Care (Preventive Health Care Act), which entered into force in July 2015, these important aspects have moved more into the spotlight. The law provides new impetus to the further development of the structures and contents of health promotion and prevention in Germany. Health promotion comprises all those measures which strengthen the personal, social and material resources and protective factors for sustaining health. Prevention is specifically aimed at reducing risk factors and burdens. This should ensure that diseases are avoided, delayed or made less likely. Health promotion and prevention measures are targeted at individuals and the living conditions of the people, which is why many policy areas and sectors of society have to be included (mainstreaming/cross-sectional task). Among other reasons, challenges for health promotion and prevention come about due to the high prevalence of chronic diseases, the wide distribution of behaviour-associated risk factors, the changing age spectrum of the population, changes in working conditions and requirements, as well as health inequalities.

Health promotion and prevention are organised and financed by a variety of stakeholders at federal, regional and municipal level. According to health expenditure accounts at the Federal Statistical Office, about 4% of all spending in the health system currently flows into health promotion and prevention measures, with statutory health insurance currently being the most important source of health sector funding. Annual expenditure by health insurance funds for primary prevention is due to increase from currently around 289 million Euros to 500 million Euros according to the Preventive Health Care Act. The expenditure detailed by the Federal Statistical Office only relates to spending in the health system and therefore only reflects a part of the financial expenses for prevention and health promotion. There is no comprehensive reporting tool with regard to expenditure outside the health system.

As yet there is no comprehensive coordination between the various stakeholders in the field of health promotion and prevention. The newly adopted Prevention Act will also support development here by seeking - among other things - that stakeholders such as health insurance funds, pension insurance funds, the Laender and municipalities in future find a consensus on common objectives and procedures. In the light of limited financial resources, it is important to carry out prevention and health promotion measures, which can actually improve the health of the population. Therefore, increased reliance on evidence basing is an important requirement for the further development of health promotion and prevention. There are already approaches to this end both in evaluation and in practice. In order to achieve a population-wide effect, the various preventive and health-promoting measures should be coordinated to the greatest possible extent. Multi-level interventions that combine politico-structural measures with counselling and information services, public relations and the coordination of action at the local level, are considered particularly promising to meet the complex requirements of prevention and health promotion.

For adults, there are numerous offers of health promotion and prevention measures in Germany, which are funded by the statutory health insurance. Some of these are very well received, such as check-ups during pregnancy: 89.5% of pregnant women make use of a monthly check-up in line with the recommendations. About three-quarters of adults in Germany go regularly for dental check-ups. The vaccination coverage rates for influenza, tetanus and measles show a clear upward trend over time. 71.4% of adults are adequately vaccinated against tetanus. Annual vaccination rates for influenza in Germany among those aged 65 years and above are at around 60%. This means, however, that they fail to reach the WHO recommended level of 75% vaccination for persons aged 65 and above. Almost half of those entitled to a health check-up make use of this offer. Now that the Prevention Act is in place, the check-up will be more focussed on the detection and assessment of health risks, a prevention-oriented consultation and medical recommendation of appropriate primary preventive measures. The cancer screening services offered by the statutory health insurance funds are aimed at specific target groups. Uptake rates vary depending on the type of examination, gender and age groups. With the introduction of the Cancer Screening and Registry Act (KFRG) the development of cancer screening became regulated. The aim is that more people are reached by the services offered and that the informed utilisation increases. The participation rates for behaviour-related prevention have increased significantly in the last ten years and today are almost twice as high. 20.1% of women and 10.9% of men per year participate in the schemes on offer, mostly in the field of "physical activity".

Screening in childhood, as is the case with examinations during pregnancy, is very well received: over 90% of children attend the screening (U3 - U9). Preventive measures in adolescence (J1) are only utilised by a minority. In Germany, there is no mandatory vaccination. However, only a high vaccination rate in the population will provide protection for those who cannot be vaccinated for health reasons. In 2013, 92.6% of those starting school were sufficiently vaccinated against measles. Small children are frequently less well protected: among children in their second year of life, almost 40% are not sufficiently vaccinated against measles. With the event of the Prevention Act, screening programmes for children and adolescents should in the future be on offer up to the age of 18. Furthermore, a stronger focus is to be placed on the recording and assessing individual stressors and health risk factors. Prevention-oriented counselling tailored to suit the above should, in addition to vaccination, also include medical recommendations for appropriate primary preventive measures if required. According to the Prevention Act, proof of a medical vaccination counselling must be provided when a child is admitted into a day-care facility. In the area of oral health a positive trend is emerging in children: dental caries (tooth decay) in children (and even in adults) is on the decline. Related to this is the fact that three quarters of children and adolescents in Germany have good oral hygiene habits and regularly attend dental check-ups. In contrast to this is the fact that dental caries in pre-school children is still a permanent challenge for dental prophylaxis.

For almost all of the aforementioned areas of prevention and health promotion differences in the utilisation of these services are reported depending on gender, age, socio-economic status and region of residence. In the field of oral health, people of low socio-economic status but also those dependent on long-term care and people with disabilities have an increased risk of deficits in their oral health and dental care. Participation

in screening varies considerably depending on gender, age, socio-economic status and region. In the case of most vaccinations, the coverage rates in the new Laender - federal states that joined the Federation of the German Laender after the German unification - are higher than in the old federal states. Women and men of low socio-economic status participate less often in behaviour-based preventive measures.

If the health-promoting measures are offered in settings such as school or the workplace, a broad majority of people can be reached in this manner. Access to these measures is largely independent of education or income. Almost half of all businesses have carried out at least one health promotion measure in the workplace in recent years, the spectrum ranging from behavioural measures through to employee participation in the planning of health options in the workplace. Whether companies provide workplace health promotion, currently still strongly depends on the economic sector and the size of the business: industry, the public-social sector and companies with many employees are more engaged than other companies. There is still development potential here both from a quantitative and qualitative point of view. This need for action is addressed in the Prevention Act. In the future greater support is to be given to health-promoting structures within companies. It should even be made easier for small and medium-sized enterprises to establish company health promotion measures. The expertise of competence of company doctors should be extended to include prevention in the workplace. Children and young people can be reached particularly well by prevention and health promotion if the measures are offered in child day care facilities and schools. Here there are currently options on offer in particular with regard to diet, exercise, stress reduction, dental health and addiction prevention. Important impulses for the dissemination of health promotion in child day-care facilities and schools are emanating from the national health target "Growing up Healthy".

Neighbourhoods with a high percentage of socially disadvantaged persons are often characterised by poor living conditions and lesser health prospects. Promotion of health in the community can be effective here. It requires continuous and sustainable measures and the integration of health as a cross-cutting issue. Co-operation between different areas such as health, education, sport, transport and urban development is especially important. Strengthening collaboration between stakeholders involved in prevention is also a central concern of the Prevention Act. It is provided for in the act that the social insurance institutions with the participation of stakeholders from federal, regional and local governments, the federal employment agency and the social partners determine common objectives and agree on a common implementation approach as part of a national conference on prevention. In addition, it is intended that to implement this national prevention strategy at Laender level, all relevant stakeholders conclude joint framework agreements.

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

Germany has an efficient health system, which has been going through major structural changes since the 1990s. Since the last "Health in Germany" report was published in 2006 the supply and use of health care provision has increased in many areas. In any one year, nine out of ten adults use the services of practising doctors. In particular, the occurrence of chronic diseases and end of life or palliative care are associated with high levels of usage. In the area of inpatient care, the number of cases treated has increased further. This is due in part to the increase in chronic diseases and demographic trends but also to medical advances and new treatment options. In outpatient care, the shift from the GP to specialist provision continues further and a lower care density is emerging in rural areas. In inpatient care the number of hospitals and hospital beds continue to fall with average stay becoming shorter. In international comparison however hospital capacity in Germany remains very high with around 2,000 hospitals and approximately 500,000 beds. The number of employees in the outpatient care is currently about 2.2 million with an upward trend. More than one million employees work in our hospitals. The level of utilisation of medical rehabilitation services has changed very little over the past 10 years and the percentage increase in expenditure in this area has been less than in health care expenditure overall. Rehabilitation is currently undergoing a process of change: future tasks will include the expansion of outpatient and geriatric services, as well as the linking of medical and vocational rehabilitation.

The number of people in need of long-term care has continued to increase due to demographic development - of these about two-thirds are cared for at home. With the trend rising, around 3% of the population today - about 2.6 million people- are in receipt of benefits from long-term care insurance. Since women in old age more often live alone, they depend to a greater degree on benefits from long term care and nursing insurance than men.

Around 15% of the total health expenditure each year in Germany is spent on medicines.

Admittedly in recent years turnover has increased, the number of prescriptions has however declined. The majority of the population takes medicines: about three quarters of adults, women more frequently than men, take medicines in any one week. These are mainly prescribed by a doctor, however, self-medication has for years accounted for a considerable proportion of medicine use within the population

New forms of care such as the GP centred care, Medizinische Versorgungszentren (medical care centres) and disease management programmes should improve the coordination and quality of health care in Germany. Supply and use of some new forms of health care have grown significantly in recent years. Around three million insured persons currently participate in GP centred care, around 18,000 Medizinische Versorgungszentren are available. Disease management programmes are currently being offered for six chronic diseases. More than 6.5 million patients and patients are enrolled.

An increase is also to be observed in services on offer in the area of palliative care - the treatment, care and support for the most seriously ill and dying people. In Germany there are currently more than 200 inpatient hospices, more than 250 palliative wards and around 1,500 outpatient hospice services; increasingly, care is also being provided by multi-professional teams in specialised outpatient palliative care. However, despite the increase in services on offer there is still a shortage especially in rural areas.

Quality assurance in health care has gained in importance in recent years and has been strengthened via legislation. The main legal basis here is Volume V of the Social Insurance Code (SGB V) with the Federal Joint Committee (G-BA) as central player. The guidelines of the Federal Joint Committee and the German Medical Association as well as the guidelines of the medical associations form important foundations for quality assurance. Quality measurement with quality indicators, error

reporting systems, collegial advice and supervision, as well as the publication of quality reports all represent important instruments of quality assurance. Future challenges exist in the continued development of the methodology, the cross-sectoral quality assurance and the inclusion of patients.

Patient orientation - the focussing of care on the interests, needs and wishes of patients - has been seen as increasingly important since the beginning of the 1990s. Patient activation and patient involvement have a positive impact on health behaviour and treatment outcomes and thus contribute to the preservation and recovery of health. In addition, the inclusion of patients makes a significant contribution to the development of the care system. The patient rights act has legally enshrined the doctor-patient relationship in the German Civil Code and thus established the fundamental rights of patients. Since the year 2000, Independent Patient Counselling Germany (UPD) has also been enshrined in law. The organisation provides advice to some 80,000 people a year. Self-help also makes an important contribution to patient-centred care. In Germany, there are up to 100,000 self-help groups for over 1,100 health-related, psychosocial and social topics. Their method of operation is characterised by self-responsibility, equality, participation and solidarity. The statutory health insurance companies promote self-help to the tune of more than 40 million Euros per year.

In the Volume V of the Social Insurance Code (SGB V) it states healthcare services have to be adequate, appropriate and cost-effective. They may not exceed the necessary and must be provided at a professionally appropriate level of quality. Meeting these requirements given the present framework of demographic change, medical-technical advances and the increase in chronic diseases whilst at the same time ensuring funding of the system, is among the main challenges facing the provision of health care in Germany.

HOW MUCH DO WE SPEND ON OUR HEALTH?

The health care system and associated industries and service sectors are a major economic and employment factor in Germany. With health spending at 11.2% of GDP health care was one of the strongest performing sectors in the German economy in 2013. In 2012, 14.5% of all employees in Germany worked in the health care system and associated economic sectors. Significant levels of growth are also forecast in the future.

On the other hand, health expenditures is an important cost factor and burden upon social systems and not least the people in Germany. In 2013, the total financial volume related to the system of health care was 422.5 billion Euros. This amount includes among other things income benefits such as wage replacement benefits or early retirement benefits. Health spending in the narrower sense, which include only current health expenditure, amounted to 314.9 billion Euros in the 2013. The biggest item of health expenditure is for physician services followed by long-term care. Hospitals represent the greatest financial requirement among all institutions. With regard to individual groups of diseases, illnesses of the cardiovascular system represent the most significant cost factor. Other high-cost disease groups are illnesses related to the digestive system, the muscular skeletal system, mental and behavioural disorders and cancers.

Health spending shows an increasing dynamic: in relation to economic performance, health expenditure between 1992 and 2013 has increased by approximately 1.8 percentage points and in 2013 represented 11.2% of gross domestic product. In relation the disposable household income the percentage spent on health care increased from 14.8% to 19.1%. In international comparison, German per capita expenditure on health is in the upper mid-range among Western industrialised nations. The legislator is attempting to dampen this spending dynamic through various measures. Laws such as the Act on the Reform of the Market for Medicinal Products noticeably slow down spending dynamics in the short term and limit the growth rates in the long term. Due to demographic development alone, the healthcare system is also to be regarded as an economic and employment factor of growing importance. At the same time it is necessary to ensure that increased spending at the expense of social security systems are limited to imperative medical services and innovations with proven benefits for patients. The interests and needs of patients should therefore be central to any regulations or measures implemented.

THE IMPORTANCE OF HEALTH TARGETS IN HEALTH CARE

The World Health Organization (WHO) strategy "Health for All" of 1977 and the 1986 Ottawa Charter saw the introduction of the health targets process in many European countries as well as in Germany. Currently there are eight national health targets in Germany along with numerous regional and local targets that have been formulated and implemented. In Germany, health targets are finding increasing acceptance and use as an instrument of control in health policy. One reason for their spread is the interest on the part of the various stakeholders in the health sector to agree on common objectives regarding important themes, pool resources in this regard and include other players from outside the health care system.

After choosing a health target, the stakeholders involved formulate targets and sub-targets for defined fields of action and draft recommendations and measures for the implementation thereof. The health targets are realised within a framework of self-commitment on the part of the stakeholders in the co-operation network gesundheitsziele.de, in their respective areas of responsibility. The acceptance of health targets is promoted via the integration by experts in the development of the targets, evidence-basing and consensus in decision-making. More than 120 health sector stakeholders from national, regional and local government, self-governing organisations, professional associations, patient and self-help organisations and science are represented in the German health target co-operation network gesundheitsziele.de. Since the year 2000 the following national health targets have been developed, some of which have already been updated and evaluated:

- Type 2 diabetes mellitus: reduction of disease risk, early recognition and treatment of patients (2003
- Breast cancer: reduction of mortality, increase in quality of life (2003, updated in 2011 and 2014)
- Reduction of tobacco consumption (2003, updated in 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)

Commitment to health targets and their implementation is a major challenge for the national health targets process. To date no legislative basis has been provided and there has been a lack of obligation – beyond the self-commitment of the stake-

holders – to implement health targets. National health targets compete with the interests of all involved as well as their need to set their own priorities. They encounter boundaries set by federalism and self-administration. But increasingly there are interconnections between health targets at national, regional and local level, that help to orientate the target processes on all levels toward common issues and harmonise them. Nevertheless, achieving the health targets across the country is still a major task for the coming years. Important impulses in this regard are to be expected through the naming of the national health targets in the German Act to Strengthen Health Promotion and Prevention (Prevention Act). In the said act, the health targets are one of the reference values that the National Association of Statutory Health Insurance Funds has to take into account when determining fields of action and criteria for the services in primary prevention and health promotion. In the future the task will be to adapt the process at all levels to the changing framework conditions of health policy. Content-related support for implementing the health targets will continue to be an essential task. In addition, it is necessary to promote co-operation between all social stakeholders that may affect the health of the population.

HOW HEALTHY ARE THE ELDERLY?

The increase in life expectancy now offers many people the chance to actively participate in social life many years after completing the working and family phase of life. However, these opportunities have risks attached. With age the probability of illness, weight loss and diminished cognitive performance also increases. This often leads to limitations in the ability to cope with everyday life. Dependence on assistance and care may also come about with advancing age. This in turn places a tremendous burden on the individuals concerned, their families and society.

In 2013, 20.8% of the population were aged 65 or above, 2.6% were 85 years of age or older. Due to demographic changes the percentage of senior citizens within the population will increase further in years to come. When older people are asked to evaluate their own state of health, the result in general is positive: more than half of people in the second half of their life assess their health as being good or very good. Despite this positive overall assessment, chronic diseases are widespread in this population group, especially diseases of the cardiovascular system, cancers, chronic lung diseases, musculoskeletal disorders and diabetes mellitus. Leading causes of death in the population aged 65 and above are cardiovascular disease, cancer and chronic lung disease. Suicide rates rise sharply in older people, especially in men. Presumably, symptoms of depressive disorders are often overlooked in older people. The age-related increase in chronic illnesses, physical and cognitive limitations, falls and multi-morbidity determines the specific care needs of elderly. In the area of drug therapy, the simultaneous use of five or more medicines (polypharmacy) in the elderly is common, about one-third of those aged 65 and above being affected. Polypharmacy is associated with an increased risk of undesired adverse drug reactions and interactions.

It is still debatable whether prolonged life expectancy shortens or extends the phase of life with severe health-related limitations (compression or extension). Most recent findings suggest that functional abilities, especially cognitive capacities are increasing in elderly people. Because of higher education, improvements in health behaviour (e.g. nutrition) and due to the decline in cardiovascular disease, the prevalence of dementia currently being observed remains lower than estimates suggested based on the ageing of the population. Overall it is emerging that serious limitations affecting everyday activities are in decline. Lesser restrictions to everyday life however are on the increase. Disease prevalence rates are also increasing not least because of improved diagnostics and treatment. Targeted health promotion measures, prevention and health care as well as encouragement of social participation represent important resources in old age. In its health target "Healthy Ageing", the co-operation network gesundheitsziele.de has formulated essential individual objectives and possible measures for the population aged 65 and above. These relate to the reinforcement of physical, mental and social resources of older people, the management of age-related health problems such as multimorbidity and dementia, as well as to the quality of medical and long-term care.

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

Demographic ageing is a complex social development that presents many challenges for the further development of healthcare. One of the most important aspects is the changing relationship between the declining proportion of people of working age and the increasing number of elderly people who are increasingly dependent on help and support with age. Demographic ageing is caused by a continuing low birth rate and increasingly longer life expectancy. Immigration from abroad can have relieving effects. Immigration to Germany has increased significantly since 2011 partly due to a growing number of asylum-seekers and refugees. Even though the exact effects of these developments on demographic ageing in Germany are not yet clear, it is expected that positive trends may result.

A shift in the spectrum of the diseases is associated with demographic ageing: age-related, non-communicable diseases, which frequently take a chronic course, are becoming increasingly significant. Cardiovascular diseases in particular but also some cancers nowadays respond better to medical treatment resulting in lower mortality rates. The rising number of dementia cases poses new challenges for society. As long as no breakthrough is achieved in the prevention and treatment of dementia, the care of dementia patients in particular has to be developed further and improved.

Because of the growing number of elderly people increase use is being made not only of long-term care services but also of outpatient and inpatient treatment. This has consequences for social security systems and healthcare structures. In the field of outpatient and inpatient healthcare this can lead to a lack of supply, for example with regard to the density of practice-based doctors in structurally weak regions. The shortage of doctors in these regions particularly affects many older and elderly people, for whom the long distances to remaining medical practices and hospitals represent a particular burden. Regarding long-term care, demographic ageing on the one hand, brings with it an ever-smaller proportion of possible family caregivers and on the other a decline in skilled professionals. The influx of nursing staff through immigration may provide certain relief. However, the task of arousing the interest of young people in nursing professions therefore becomes crucially important. New incentive structures, which further increase the attractiveness of the caring professions, are of great importance here. The long-term care sector will however be competing with other sectors of the economy which are also developing strategies to cope with the shortage of

qualified personnel.

The generally positive trend that more and more people are living to a great age and are also growing old healthily, has many implications for society and therefore also for the healthcare system. This aspect and further developments that can be summarised with the term "demographic change", play an important role in many chapters of this report. The topic therefore represents an overarching link and a core theme.

HOW DOES GERMANY FARE IN EUROPEAN COMPARISONS?

In addition to the national health reporting, international comparisons based on selected indicators are valuable. Numbers and trends in Germany can be discussed and evaluated against the background of developments in other countries. The ECHI indicators (European Core Health indicators) provide a good basis for these comparisons within the European Union and other European countries. However, due to different survey methods for collecting national and international data, minor differences for example in prevalences, may arise. These are reported in Chapter 10 in comparison with other chapters of the report. Furthermore, different care structures and the cultural diversity of the European population affect international comparability of data, for example with regard to a different evaluation of the individual state of health but also when comparing statistics on diseases and causes of death.

Over two-thirds of adults in the European Union (EU) assess their health as being good or very good. The values for Germany are only slightly under this figure at 65%. The increase in average statistical life expectancy at birth has continued in the EU over the last ten years. In Germany, in 2012 this was 83.3 years for women and 78.6 years for men, close to the European average (EU: 83.2 and 77.4 years).

Cardiovascular disease is the leading cause of death in the EU as well as in Germany. Ischemic heart disease (disease of the coronary arteries) and cerebrovascular diseases such as stroke play the main role here. The mortality rates in Germany for ischemic heart disease, are slightly above the European average and slightly below for cerebrovascular diseases. Since the mid-1990s, mortality rates for these diseases in Germany and in almost all EU member states have fallen. Cancers are the second most common cause of death in the EU. The cancer mortality rates in Germany of 206 per 100,000 women and 330 per 100,000 men are in the lower third compared to the rest of Europe and confirm the higher rates in men compared to women observed internationally. The number of new cases of cancer in the EU for 2012 was estimated to be about 2.6 million cases. Nationally and internationally, the most common types of cancer are colorectal cancer and lung cancer, as well as gender-specific prostate cancer in men and breast cancer in women.

Diabetes is one of the most common metabolic diseases both in Germany and in Europe. Data from the European Health Interview Survey (EHIS) show a diabetes prevalence of 3% for adults up to the age of 64 years. For those aged 65 and above a prevalence of 14.3% was reported. For both age groups, Germany recorded a higher 1-year prevalence (4.1% and 17.4%) according to the GEDA study conducted by the Robert Koch Institute (GEDA 2010). Clear differences between education groups emerged both in Europe and in Germany.

Percentages of regular smokers in the EU vary considerably among the adults. The percentages in Germany of 17.6% in women and 26.4% in men are close to the EU average (women: 17.7%, men: 28.5%). Only in nine of the 28 EU States is the smoking rate below 20%. Generally however a decline in tobacco use can be observed in most countries. According to the study Health Behaviour in School-aged Children (HBSC), the proportion of young people in Germany who smoke at least once a week (15%) is below the European average of 17%. Average adult per capita alcohol consumption in the EU is 10.1 litres per year according to internationally comparable data. Germany ranks above this average at 11.0 litres. With regard to adolescents, Germany is within the European average both in terms of regular alcohol consumption and binge drinking. In both age groups falling trends emerged in a national and international context. More than half of the adult population in the EU are overweight. Approximately 23% of adults in the EU and in Germany are deemed to be obese. Germany is within the European average range with a figure of 14% overweight or obese adolescents.

Across the EU, Germany is among those countries with the highest GDP percentage spend on health at a figure of 11% of gross domestic product (EU: approx. 9 %). With regard to physician density and the number of physician contacts, Germany is in the upper third. Germany also occupies a leading position with regard to available resources for inpatient care (number of hospital beds per 1,000 population).

It has not been possible to attain all of the improvements achieved in the last ten years in Europe for all health indicators, all countries and for all population groups. National and international data continue to indicate social inequalities in state of health, health behaviour and healthcare. Increased efficiency of health systems and social inequality therefore are the focus of the health strategies among international organisations. ■

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