Health in Europe - Data from the EU Health Monitoring Programme

At first glance, the health situation of the population of the countries of the European Union (EU) has improved significantly in recent years. The steady increase in life expectancy (six years since 1980) and related reduction in premature deaths are evidence of the progress that has been made in improving living conditions, health behaviour and health care (OECD 2010, WHO 2010).

At the same time, Europe’s health systems today are facing comparable social and health policy challenges. The demographic development in almost all EU member states has brought about a change in the health situation of the population which is characterised by an increase in chronic degenerative disorders. Even today, the resultant adjustment measures, such as those taken in the field of health care and the range of available nursing offers (Böhm et al. 2009, Nowossadek 2012) constitute important outline conditions for the further development of the German health system.

Studies and indicators as part of European Health Monitoring
To ensure that the European health systems can respond appropriately to the challenges mentioned above, reliable population-representative data on living conditions, state of health, health behaviour and use of the health system by the population resident in the EU member states are required. The results of the first European health survey EHIS (European Health Interview Survey, see box) can contribute towards this.

At the same time, these data are supposed to enable comparisons which allow the EU member states to learn from one another, with the goal of achieving high-quality health care for the entire EU population as part of the welfare state, and enhancing mutual cooperation. In future, it will all come down to harmonising the effects of the demographic change and other influencing factors relevant to health economics (e.g. medical progress) with the sustainable financing of the health systems.

National and international health data are mainly reported today in the form of standardised measured values – so-called health indicators. Europe-wide standardisation of data collection and analysis is the prerequisite for comparability here. As observation instruments of public health and the health system, health indicators permit the reliable observation and evaluation of chronological developments.

A selection of the ECHI (European Community Health Indicators, see box) are presented in this issue. These indicators are based on the results of EHIS (Eurostat 2011a) and the European Survey on Income and Living Conditions (EU-SILC, European Commission 2010). They enable a comparative observa-
European health interview survey (EHIS)

**Objectives:**
Provision of current data on the state of health, health behaviour and use of health care.

**Survey method:**
Personal interviews, telephone surveys, questionnaires for self-completion.

**Population:**
17 of the 27 EU member states.

**Random sample:**
Total of approx. 190,000 inhabitants aged 15 years and over.

**Survey period:**

**Restrictions:**
As only individual modules of the survey instrument were used in several countries, not all of the data collected in the EHIS are available for all EU countries.

For this reason, the pilot data collected by the RKI within the scope of ECHIM (European Community Health Indicators and Monitoring) pursued the objective of obtaining the corresponding data from the countries that did not participate in EHIS from suitable national surveys or data sources (to the extent possible).

The ECHIM team cooperated here with partners in 34 European countries. EHIS was conducted in Germany as part of the GEDA German Health Update (www.rki.de/geda) and a supplementary telephone interview was conducted by the Robert Koch Institute.

Europeans assess their health status as mainly good

The data of the indicator »self-perceived health« originate from the EU-SILC survey which is mandatory for all EU member states and which is conducted in Germany by the statistical offices of the national and federal state governments (Deckl, Rebeggiani 2012). The indicator shows the percentage of respondents who assess their health status as very good or good.

Despite the subjective nature of the question, the indicator has proven to be a reliable predictor for use of the health system as well as mortality (Miilunpalo et al. 1997, DeSalvo et al. 2006). Even though the option of direct quantitative comparisons and their interpretation is restricted with indicators taken from information provided by the respondents themselves, because they are influenced by social and cultural factors, national trend analyses nevertheless permit conclusions on the development in the individual countries.

Accordingly, it can be seen that the majority of the population in all EU member states estimate their health as being good or very good (see chart). The average value for the 27 EU states is 68.5%. Big differences between the individual countries can be observed here. Whereas 82.9% of the Irish population perceive their health as good or very good, the same figure for Portugal is only 49.0%. Germany lies in the lower-middle half of the table with a value of 65.2%.

In all countries, men perceive their health on average slightly better than women do. A trend analysis for Germany shows that the proportion of people who estimate the state of their own health to be good or very good has increased by around five percentage points since 2005. The equivalent value in the EU has risen by roughly 4 percentage points over the same period (Eurostat 2012a).

**Chronic diseases are widespread in Europe**

Chronic diseases such as diabetes mellitus, cardiovascular conditions and chronic respiratory disorders make up a significant proportion of the burden of disease in the population of the EU (OECD 2010). They are usually connected with a loss of quality of life for those affected and they incur significant costs for each national economy.

The proportion of women and men who claim to be chronically ill lies at around 36% in Germany according to the EU-SILC survey from 2010. Among the EU states, Germany ranks fourth after Finland, Estonia and France. There are no substantiated findings on the causes of this prevalence, which is relatively high in European compari-
The European population is frequently affected by asthmatic disorders

Bronchial asthma, a chronic inflammatory disease of the respiratory tract, occurs in different forms (allergic, non-allergic, mixed forms). The available data from EHIS and national health interview surveys do not differentiate between the allergic and non-allergic asthma forms. The prevalences of the various forms are viewed and compared together for this reason.

The ECHI indicator reported here is defined as the proportion of respondents who stated that they had a medically diagnosed case of asthma in the last 12 months.

The average prevalence of asthmatic disease in the 19 EU states whose data were included in this comparison is 3.7 %. Men (3.2 %) are affected on average slightly less often than women (4.2 %).

In a country comparison, Denmark has the highest values with a total prevalence of 6.4 % (women 7.3 %, men 5.4 %), followed closely by Germany, Hungary and Malta. The lowest prevalences are reported from Romania (1.6 % total, 1.6 % women, 1.5 % men), and Bulgaria (2.0 % total, 2.4 % women, 1.6 % men).

Substantiated findings on the chronological development of asthma prevalence have only been available up to now from special epidemiological tests and countries with regularly repeated health surveys (Pleis et al. 2009, Anandan et al. 2010). According to these, a further increase in asthma prevalence among adults can still be observed in some countries (UK, Hungary) which is attributable mainly to higher prevalences among young adults. Prevalences are stagnating in other countries (e. g. Sweden, Norway) or even declining (Netherlands).

Overweight and obesity occur frequently all over Europe

Overweight and in particular severe overweight (obesity) are important risk factors for a number of widespread chronic diseases, and they constitute a major public health problem all over Europe. The impairments that come with severe overweight can lead to arthritis, cardiovascular disease, hypertension and metabolic disturbances such as Type II diabetes mellitus.

The percentage of persons over 18 years of age with a body mass index (BMI) greater than or equal to 30 kg/m² (BMI = body weight / body height squared, WHO 1995) is reported as the ECHI indicator for obesity. As the BMI values presented here are calculated from the information provided by the respondents themselves, they cannot be compared with BMI values obtained by means of measurement. According to the available figures from 21 European countries (see Table 1), roughly 14 % of men and women in the EU over 18 years of age currently have to be classed as obese. Overall, the percentage ranges from 7.9 % in Romania to 20.0 % in Hungary. With a share of
The frequency of self-reported diabetes varies in the group of 15 to 64-year-olds between 1.9% in Romania and 5% in Hungary. On average, around 3% of the population has contracted diabetes in this group. Prevalence in this age group in Germany lies at 4.1%.

A sharp increase in the frequency of diabetes mellitus is to be observed at an advanced age. Accordingly, the average diabetes prevalence among people aged over 65 in the 22 countries is 14.3%. In a country comparison, Greece (20.4%) and Slovakia (24.1%) have the highest prevalences. The prevalence of 17.5% recorded for Germany lies in the upper third of the country comparison. The lowest rates were reported from Ireland (6%) and Romania (8.7%).

Diabetes mellitus is a disease which occurs frequently among the older population. Where the prevalence rates of diabetes mellitus are concerned in this population group, 15.9% (women 15.6%, men 16.1%), Germany lies mid-table, slightly above the average. As is known from the RKI Health Monitoring studies, there is currently no further rise in the prevalence of overall overweight in Germany, but an increase in the share of people with obesity can be observed (Kurth 2012).

### Frequency of diabetes mellitus varies distinctly in the EU member states

The EHIS data and comparable figures from national health surveys are available for 21 EU countries and Switzerland (see Table 2). The ECHI indicator is defined as being the percentage of respondents who state that they have been medically diagnosed with diabetes mellitus in the last 12 months. For self-reported diabetes (Types I and II), the indicator shows a prevalence of 5.2% for women and 5.1% for men. The

### Table 1

<table>
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<th>Country</th>
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* Data extracted from Eurostat calculations
Blue numbers are unreliable according to Eurostat

### Table 2

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* Data extracted from Eurostat calculations (June 2011)
# age = 18 + years
it has to be taken into account that physicians are consulted and routine blood sugar tests are conducted more frequently. This can contribute to the higher rate observed.

Despite increased diagnostic efforts, Type II diabetes mellitus can remain undetected initially. Estimations of the proportion of non-diagnosed diabetes cases are only available for certain countries. Within the scope of the German Health Interview and Examination Survey for Adults (DEGS1) conducted by the RKI, the laboratory parameters of glycated haemoglobin (HbA1c) and serum glucose which indicate diabetes mellitus were examined. According to the first estimates, the prevalence range of non-diagnosed diabetes lies between 0.7% and 2.1% (Kurth 2012).

In addition to prevalence estimates, connections between various diseases as well as diseases and determinants can be described with the EHIS data. The latter include ecological connections, an example of which is shown in Figure 2 for obesity and diabetes mellitus.

Further analysis makes it possible to show connections between the occurrence of diseases and social influencing factors (e.g. social status).

An example of this is shown in Figure 3 for the spread of diabetes mellitus depending on education level. Accordingly, a higher diabetes prevalence is to be observed in the low education group than in the medium and high education group. Differences in education levels in relation to the occurrence of diabetes mellitus have already been established in a large number of social epidemiological studies (Agardh et al. 2011, Sacerdote et al. 2012).

### International health care: the example of influenza vaccination

The ECHI indicators also cover the area of health care and the health systems. Consequently, they can also be used as benchmarking indicators against the background of the further development of national health systems (Habers et al. 2008). This means, for example, that services provided by the health systems in the area of prevention can be compared and examined for their effectiveness. As an example for the health care area, the ECHI indicator for the use of seasonal influenza virus vaccination (flu vaccination) among persons aged over 65 years is presented below.

Considerable differences in the use of this preventive measure between the European countries can be derived from the results. Vaccination is recommended in Germany for people aged 60 and over and for certain risk groups (RKI 2011). The objective is to reduce the number of serious and deadly cases of seasonal influenza. The World Health Organization recommends a flu vaccination rate of 75% among older people (WHO 2003).

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Outlook

For several years now, the joint ECHIM campaign has been pursuing the goal of establishing a standard for health monitoring and health reporting in the EU based on uniform indicators (Kilpeläinen et al. 2008). The ECHI indicators presented here are based mainly on the results of the first European Health Interview Survey (EHIS), which was conducted on a voluntary basis within the scope of the European statistical system and coordinated by the European statistics authority Eurostat. The national surveys with a uniform questionnaire were conducted between 2006 and 2009 (Eurostat 2011b). Data from other EU countries which were not involved in the EHIS survey were collected by the RKI within the scope of ECHI pilot data collection.

The ECHI indicators presented here constitute the results of European health monitoring selected by way of example and based on mutually developed standards. The added value of these developments can be seen in the fact that these standards have already been used in several European countries (e.g. Cyprus and Malta) for the set-up of a population-related health monitoring system. In addition to this, the ECHI indicators have already been used in several countries (France, Netherlands) for the preparation of so-called benchmarking reports. In national government health reporting, the ECHI indicators constitute a valuable source for making international comparisons.

EHIS and other surveys, which should ideally be repeated at periodic intervals, are necessary to ensure that European health monitoring enables the examination of the health of the population and efficiency of the health systems as a continuous system. For this reason, a uniform legal basis is to be created for the second EHIS survey, which is to be conducted between 2013 and 2015. Only in this way can the necessary harmonisation of the survey instruments and methods be guaranteed. With the existing health monitoring system at the RKI, Germany already has the instruments required for this purpose.

The latest ECHI-compatible indicators for Germany are to be provided via the Federal Statistical Office’s information system (www.gbe-bund.de). The data from the ECHIM pilot data collection are to be integrated into a new European Commission health information system at the end of 2012 and used to prepare new European health information. In addition to this, the data are also to flow into the European edition of the OECD health report (OECD 2012). The report on the results of the joint ECHIM campaign are available through the project’s website (www.echim.org).

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