European Community Health Indicators Monitoring

ECHIM

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ECHIM Pilot Data Collection, Analyses and Dissemination

Joint Action for European Community Health Indicators and Monitoring
(Joint Action for ECHIM)

Final Report Part III

ECHIM Pilot Data Collection, Analyses and Dissemination

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1. New ECHI data: ECHIM Pilot Data Collection

The focus of Joint Action for ECHIM Work Package 5 (WP 5) lay on the collection, analysis and dissemination of new indicator data by means of a Pilot Collection.
This data collection held no official mandate by the European Commission but was based on the voluntary agreement of ten collaborating European countries which signed the Joint Action for ECHIM and a larger number of associated Joint Action partner countries. A major contribution to this quest was delivered by DG Eurostat[1] unit F5 (Education, Health and Social Protection) which provided ECHI-conform indicator data after computation of available micro-data sets gathered from Member States which participated in the first wave of the European Health Interview Survey (EHIS) conducted in 2006 - 2009.
The Pilot Collection built the basis for the objective of WP 5 to be in charge of mapping and description of the data flow concerning the ECHI shortlist indicators.
In that context WP 5 contributed to the process of identifying a sustainable platform for the presentation of ECHI indicators under the aegis of DG Health & Consumers[2], particularly in close liaison with units A4 (Information Systems) and C2 (Health Information).
Lastly, WP 5 – in co-operation with THL/Finland and HI/Lithuania as partners of WP 3 – was supposed to render assistance for the national implementation of ECHI shortlist indicators in Northern and Western Member States and EU.

1.1. Outline, Aims and Methods of the Pilot Collection

Outline:

The pilot collection should add-on to the comparability of health data and contextual information based on the ECHI shortlist. This shortlist contains about 88 indicators, divided into five sections, namely demography and socio-economic conditions, health status, health determinants, health services and health promotion (see: Report II: Part II. ECHI indicator documentation, p. 33 ff.).

About half of the ECHI indicators can be extracted from data collections and international databases such as those maintained by the World Health Organization (WHO), Eurostat, the Organisation for Economic Co-operation and Development (OECD), the European Centre for

[1] Organisation chart of DG Eurostat; http://epp.eurostat.ec.europa.eu/portal/page/portal/about_eurostat/documents/Eurostat-organisation-chart-EN.pdf (lastly accessed on June 05 2012)
[2] Organisation chart of DG Health & Consumers; http://ec.europa.eu/dgs/health_consumer/chart.pdf (lastly accessed on June 05 2012)

Disease Control (ECDC), and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), etc.

But for quite a number of indicators – mainly from the domains of health status and health determinants – data are not or hardly available but can be obtained by means of population based interview and examination surveys, respectively. Furthermore, depending on size and scope of the interview, the majority of health surveys provide essential information on the socio-economic status (SES) of participating individuals. The social dimension is an important variable regarding Public Health policies, information and research. There are several approaches for tackling this subject-sensitive issue, e.g. questions on household income, occupational status and highest completed education. Even from those three items an 'artificial' composite SES index can be formed and used.

From various surveys it is known that questions on household income are more prone to (positive) reporting bias, but also to confusions and refusals of participants. Although wishful to have a complete SES dataset for Public Health matters, the currently most comparable and robust alternative is the information on the highest educational level accomplished. According to the widely used ISCED-97 classification[3], an aggregation in low (ISCED 0-2); medium (ISCED 3+4) and high (ISCED-97 5+6) education has been applied in the recent European Health Interview Survey (EHIS).

Aims:

Taking this common approach into account, the EHIS questionnaire[4] was developed as a standard tool. The main goal of EHIS is to attain survey-based indicator data that are cross-nationally comparable in Europe. For this reason EHIS became the preferred data source for the majority of health status and health determinant indicators of the ECHI shortlist. Accordingly, the ECHIM Pilot Collection focussed on those health survey-deduced indicators that are not readily available from international sources, respectively other European data collections like the European Survey on Income and Living Conditions (EU-SILC) or OECD Health Data.

By 2010 the first wave of EHIS has been completed in 17 European Member States to a varying degree. In total, 26 indicators (see document EHIS indicators guidelines) based on

[3] UNESCO, International Standard Classification of Education (ISCED) http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx ; (lastly accessed on June 05 2012)

[4] Questionnaire for the 1st EHIS round (2007-2008), English Version, uploaded 30/06/2010, http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology/questionnaire_versionpdf/_EN_1.0_, (lastly accessed on June 05 2012)

DG Health & Consumers and DG EMPL needs and covering 3 domains (health status, health determinants and health care) are disseminated on the Eurostat website.

A report[5] on the comparison of EHIS source questions with national survey questions revealed that EHIS was fully or to minor extent partly comparable in ten countries and it was concluded that EHIS was fully implemented hence.

The remaining nine countries implemented only part of the four EHIS modules or included non-comparable elements into their national HIS. At last, nine Member States (DK, IE, FI, LT, LU, NL, PT, SE, and UK) plus Iceland and Croatia either stuck to their formerly customised surveys or did not conduct a population based health survey recently. It must be noted that the conduction of national health surveys following the EHIS guideline[6] was not mandatory for European countries but based on a "gentleman's agreement".

These countries that did not fully or did not implement EHIS at all were the main targets of the ECHIM pilot collection which took place between July 2010 and April 2011.

The overleaf table provides an overview of the selected ECHI shortlist indicators that were attempted to collect (for further specifications of the very indicators see: Report II: Part II. ECHI indicator documentation, p. 33 ff.; it is foreseen to migrate the former ECHIM product website (http://www.healthindicators.eu) which will be terminated on July 01 2012 sometime later to www.echim.org).

[5] Comparison of EHIS source questions with national survey questions; Final report, Revised version, June 2011; http://www.euhsid.org/docs/EHIS_comparison_final.pdf ; (lastly accessed on June 05 2012)

[6] Guidelines for the development and criteria for the adoption of Health Survey instruments, http://circa.europa.eu/Public/irc/dsis/health/library?l=/reports/healthsinterviewssurvey/guidelines_instruments/_EN_1.0_&a=d, (lastly accessed on June 05 2012)

Table 1.1.: Overview of 21 Indicators of the ECHIM Pilot Collection

ECHI #	Name	Type	Domain	Remarks
15	Smoking-attributable deaths	Attributable Mortality	Health status (HS)	Prevalence data of current, former and non/never smokers
16	Alcohol-attributable deaths	Attributable Mortality	HS	Alcohol consumption data according to WHO drinking categories
21 A/B	Diabetes	Prevalence	HS	Diagnosed
23 A/B	Depression	Prevalence	HS	Diagnosed
24	Acute myocardial infarction -AMI- (fatal and non-fatal)	Attack rate	HS	Hospital discharges combined with CoD registries
25	Stroke (fatal and non-fatal)	Attack rate	HS	Hospital discharges combined with CoD registries
26 A/B	Asthma	Prevalence	HS	Diagnosed
27 A/B	Chronic obstructive pulmonary disease (COPD)	Prevalence	HS	Diagnosed
29 A/B	Injuries: home/leisure	Incidence	HS	1. without medical treatment 2. with treatment
30 A/B	Injuries: road traffic	Incidence	HS	1. without medical treatment 2. with treatment
42	Body-Mass-Index (BMI)	Prevalence	Health determi-nants (HD)	Self-reported body weight and height
43	Blood pressure	Prevalence	HD	Diagnosed
44	Regular smokers	Prevalence	HD	Cigarettes only
49	Fruit consumption	Frequency	HD	Self-reported
50	Vegetable consumption	Frequency	HD	Self-reported
57	Influenza vaccinations	Utilisation rates	Health Services (HServ)	Self-reported
58	Breast cancer screening	Utilisation rates	HServ	Self-reported
59	Cervical cancer screening	Utilisation rates	HServ	Self-reported
60	Colon cancer screening	Utilisation rates	HServ	Self-reported
71 A/B	General physician visits	Number of consultations	HServ	Self-reported
72 A/B	Selected outpatient visits	Number of consultations	HServ	1. dentist/orthodontist 2. medical/surgical specialist 3. psychotherapist

In addition to survey-derived indicator data (marked with A), it was also piloted to gather information on morbidity and health care utilisation indicators that could possibly be deduced from administrative and/or register sources (marked with B).
It has to be noted that ECHI# 29 and 30 included two different operationalization and ECHI# 72 involved three different health care professionals.

Methods:

It was deemed necessary that the documentation sheets of all selected ECHI shortlist indicators should be up-dated and finalized, respectively, prior to the Pilot Collection. Their documentation must be ready for implementation and available at the ECHIM product website (formerly: http://www.healthindicators.eu/object_document/o5956n29063.html, will migrate sometime later to www.echim.org) in order to provide hyper-links in the documents and Pilot Collection material. This prerequisite work was performed in close cooperation with ECHIM WP 1 (see also: Report II).
In parallel, ECHIM WP 5 elaborated a user-friendly, hyperlinked and macro-embedded MS© OFFICE EXCEL file questionnaire with detailed instructions how to handle the file and how to operationalize the selected indicators of the shortlist.
The questionnaire contained separate sheets for each indicator, and was further divided in case of survey- and register- based data sources.
Additionally, another MS© OFFICE EXCEL file was prepared which resembled the questionnaire file structure but was meant to provide essential metadata information of each indicator. The concerned metadata sheets were based on a slightly tailored template following largely the Euro SDMX Metadata Structure (ESMS)[7].
The relevant EHIS metadata ESMS[8] template provided essential information in that context, too.

1.2. Conduct, Response and Main Outcomes of the Pilot Collection

Conduct:

Out of the targeted 36 collaborating and associated Joint Action partners, valid email communication could be established with contact points in 34 countries (missing: Liechtenstein and Macedonia). The contact list needed to be up-dated in the course of this

[7] EURO SDMX Metadata Structure (release 3, March 2009); (lastly accessed on June 05 2012), http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/metadata/metadata_structure
[8] European health interview survey (EHIS) – Eurostat Reference Metadata; (lastly accessed on June 05 2012), http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm

process due to shifts of personnel and responsibilities or institutional re-organisations at national level since its compilation in 2008.
Afterwards, in July 2010 ECHIM WP 5 sent the questionnaire and additional instruction documents via email to the national contact points.
From the domain of health status, it was asked for prevalence data on diabetes, depression, acute myocardial infarction, stroke, asthma, COPD, and injury incidence, differentiated by home/leisure and road traffic accidents and by injury severity.
The domain of health determinant indicators was covered by prevalence rates of adiposity (body-mass-index ≥ 30 kg/m^2), high blood pressure, daily smoking, and both fruit and vegetable consumption.
The section of health services was included by indicators such as influenza vaccination rates of elderly, cancer screening rates (breast, cervical and colon) and utilisation of general physicians, medical specialists, dentists/orthodontists and mental health professionals.
12 Member States were spared from providing EHIS- derived ECHI indicators since their micro-data sets were centrally computed and could be obtained from DG Eurostat.
However, all participants were also requested to deliver administrative/register- based data for morbidity indicators, road traffic accidents and health professionals' utilisation, if available.
Regarding acute myocardial infarction (AMI) and stroke attack rates (fatal and non-fatal) it is anyway a necessity to avail specialised registers and/or match hospital discharge records with causes of death registers, respectively.
National contact points were requested to deliver the indicator data according to ECHI definitions and breakdowns by total, sex, varying age groups plus the three educational levels. The contact points and national data holders, respectively, were supposed to provide the relevant metadata of the selected shortlist indicators, too.
The deadline for submission of indicator data was initially set in fall of 2010 but needed to be extended two times until spring 2011. Even after that final deadline two countries (Denmark and Switzerland) submitted nationally available data for the Pilot Collection.
Ultimately, ECHIM WP 5 obtained the missing indicator data of EHIS first wave participating Member States from DG Eurostat according to the corresponding ECHI definitions by June 2011 for completion of data gathering and final compilation.

Response:

The Pilot Collection was a largely successful exercise although the Joint Action for ECHIM neither had an official mandate for this endeavour nor could it provide any resources to assist the associated partner countries.

So the entire quest was depending on the ability and commitment of the Joint Action partner countries and their National Implementation Teams (further details see Report I). The WP 5 study secretariat kept to extensive email and telephone communications with national contact points and individual data holders, respectively. This included both further instructions in response to comprehension- related enquiries from participating countries' contact points / data holders and attempts to sustain contacts in order to maintain the study compliance. The latter was successful for a number of partner countries, even if they were only able to deliver a few indicator data or fewer stratums than defined by ECHI definitions. Once a personal contact was established, it proved to raise and keep commitment by the partners. Ultimately, this approach completed the picture on data types and sources availability at national level.

In the course of the collection period several Joint Action partners reported on serious difficulties to deliver the requested data. Hence, for one reason or another ECHIM WP 5 extended the deadline for redelivery of questionnaires but obtained no pilot data at all from nine countries (BG, GR, LU, PT, SE, SI, SK, HR and TR).

On the other hand, the majority of Joint Action partner countries redelivered the questionnaire (N = 25, response rate = 73.5%) and the related metadata file.

A comprehensive indicator-per-country response overview is presented in Annex I of this report.

Main outcomes:

The ECHI Pilot Collection was a first-time-exercise for all partner countries involved beside the established statistical reporting schemes to DG Eurostat, WHO or OECD. It represented the first pan-European gathering of health indicators according to ECHI- definitions and yielded more recent estimates derived from population based interview surveys.

The Pilot Collection revealed that the majority of participating partner countries keep national (survey) data that could build the fundament for an ECHI- based health reporting system. However, the results of this Pilot Study yielded indicator data of a varying extend of completeness and ECHI- conform breakdowns, respectively.

Both attempts to collect prevalence percentages on alcohol and tobacco pattern of consumption proved insufficient in order to compute ECHI#15 (smoking-attributable deaths) and ECHI# 16 (alcohol-attributable deaths). Beside the fact that surveys on alcohol consumption are prone to a larger social desirability bias (underreporting), the alcohol module of EHIS first wave proved unsuitable to assess the daily mean pure ethanol intake [in

grams] which is required for collating the four WHO drinking categories[9]. The data obtained were assessed as too underestimated figures if roughly compared with alcohol production and sale figures, and expert reports[10], too.
Regarding ECHI#15 (smoking-attributable deaths), several Pilot Collection countries as well as the central EHIS computations of DG Eurostat delivered too many statistical uncertain prevalence data for former and non/never- smokers. The latter represent the reference group for the relative risk (RR) calculation of ECHI#15 (see: Report II: Part II. ECHI indicator documentation, chapter 15.)

In the course of the collection period several Joint Action partners reported on serious difficulties to deliver the indicator data in its requested form. Main factors to mention are shortage of manpower at national statistical offices or public health institutes, lack of institutional and / or political commitment, shift of personnel, and cumbersome fragmentation of data sources. Several countries, in particular in Eastern Europe, have no consistent system of health monitoring and reporting or are in a transitional phase in order to build such structures, which included the lack of appropriate registers.

Generally, the collection of administrative/ register- based indicator data was less successful than initially expected. Often countries either maintain available morbidity registers and keep no corresponding survey data or vice versa. Additionally, the 'quality' of registers depends strongly on proper IDC-9/10 coding practice (sometimes also matching with causes of death tables) and a sufficient coverage of the national population. The lack of SES information is register inherent (also stratification to age bands is not granted) and was therefore expected in advance.
Except for ECHI#24 AMI and #25 Stroke attack rates the registers of morbidity and healthcare utilisation predominantly keep data on total numbers and often only differentiated by sex but not stratified by age groups according to ECHI. Additionally, the register-based indicator values for ECHI should be reported as age-standardised (WHO-EU 1976 population), while the EHIS data are not standardised but should gain population

[9] Comparative Quantification of Health Risks, Vol. 1, Chapter 12: Alcohol Use, pp. 968, Nonserial Publication, WHO (2004); http://www.who.int/publications/cra/chapters/volume1/0959-1108.pdf (lastly accessed on June 05 2012)
[10] WHO Expert Committee on Problems related to Alcohol Consumption, Technical Report Series, No. 944, WHO Geneva (2007);
http://www.who.int/substance_abuse/expert_committee_alcohol_trs944.pdf (lastly accessed on June 05 2012)

representativeness through the sample composition and likely ex-post application of weighting factors (see Annex II).
These source-dependant characteristics disable a direct intra-country equality check between survey results and registers and thus also hamper the intended cross-country comparison.

The indicator data attained during the Pilot Collection were pooled with the centrally computed ECHI- conform data from DG Eurostat in June 2011. Although first wave EHIS participating Member States were spared from EHIS- deduced indicator submission, four countries (BE, EE, FR and AT) voluntarily sent their nationally computed data, which enabled a further opportunity: a small-scale comparison between national results and DG Eurostat's consistent computation methodology.
While the Belgium and Austrian data matched very close with DG Eurostat's results, the deviations were partly larger for the other two Member States. In the case of Estonia it must be noted that this country was the first that carried out a complete EHIS in 2006 (so to say: the PILOT EHIS), which enlarges the likelihood of introducing both random and systematic errors in conduction and processing of EHIS data, alike. Whenever such deviations could not be sorted out bilaterally, ECHIM WP 5 opted for the data computed by Eurostat and utilized those for the Joint Analyses.
Ultimately, it must be stressed that the ECHIM WP 5 study centre could only perform face-validity-checks of the obtained indicator data. In the event of obvious strange figures subsequent bilateral consultations with data holders or national contact points led to the submission of re-calculated or corrected data in a small number of cases.
A more efficient ‘quality control’ of the submitted data cannot be safeguarded from remote. Even the performance of first wave EHIS under the aegis of DG Eurostat revealed larger discrepancies concerning the modes of conduct, sample size/composition, response rates and weighting factor application (see Annex II).
In summary, the accuracy and validity of data generation (fieldwork), processing and ultimate indicator reporting incurs the liability of national authorities and further stakeholders. With regard to second wave EHIS (scheduled for 2014) this remains a crucial factor at least for the field work.

1.3. Indicator Data Sheets (IDS)

Main output of WP 5 is the analyses of the newly gathered ECHI- conform indicator data. The majority are based on (E)HIS results, except three register/ administratively- deduced

indicators. Wherever possible, rough intra-country comparisons of register/ administratively-deduced data (B indicators) are attempted with their related survey-based (A) indicators (see Table 1.1).
However, each analysed indicator is covered by its own Indicator Data Sheet (IDS), and since two indicators on injuries contained two definitions (according to severity of accidents) and one indicator comprised even three operationalizations (medical professional's utilisation), it was decided to elaborate seven single IDS out of the three ECHI indicators. This approach is regarded as user-friendly and more easy-to-comprehend.
Altogether, 24 IDS will be presented which entails 21 (E)HIS deduced indicator data sheets and three register/ administratively- based IDS on AMI and stroke attack rates plus the incidence rates of non-fatal road traffic accidents.
All indicator data sheets (IDS) comprise four paragraphs:

A Documentation (definition, Operationalisation. ID-codes, dimensions, sources, rationale)

B Data Presentation (figures according to breakdowns, tables in ANNEX III)

C Data Analysis (descriptive, min-max-means-rankings, correlations if feasible)

D Remarks and Further Information (comparison with other data sources, relevant literature and charts / figures, suggestions for data interpretation, discussion of "outliers", documentation of quoted literature)

The ECHI ID-codes provided in paragraph A refer to the numbering of the list of operational ECHI shortlist indicators (see Report II).
In paragraph D other data sources like OECD, WHO, certain Research Institutes / Federations and suitable reports / publications are utilized for initial intra- and international comparisons, in order to appraise the rating of the new ECHI data.
Such comparability and discussion quest needs timely updates and further expert knowledge so that the IDS discussion and interpretation section cannot be regarded as exhaustively elaborated. Further in-put is deemed to be necessary and will give more life to the envisaged wiki-like functionalities of DG Health & Consumers HEIDI (**H**ealth in **E**urope: **I**nformation and **D**ata **I**nterface) after the end of the Joint Action for ECHIM.
Ultimately, the information provided in paragraphs C and D shall be part of additional metadata to be displayed in the HEIDI data tool, beyond the mere indicator value presentations. Possible solutions and functionalities of DG Health & Consumers HEIDI data tool and wiki are presented in Chapter 2 of this report.

1.3.1. ECHI# 21 Diabetes

ECHIM Indicator name	**B) Health status** 21. Diabetes: 12 months prevalence (self-reported and diagnosed) → ECHI ID Codes: 212a01 - 212a08
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 21a.**
Definition	Proportion of individuals reporting to have ever been diagnosed with diabetes and to have been affected by this condition during the past 12 months.
Calculation	Proportion of individuals reporting to have ever been diagnosed with diabetes and to have been affected by this condition during the past 12 months, derived from European Health Interview Survey (EHIS) questions HS.4/5/6: HS.4: Do you have or have you ever had any of the following diseases or conditions? (11. Diabetes) (yes / no). If yes: HS.5: Was this disease/condition diagnosed by a medical doctor? (yes / no). HS.6: Have you had this disease/condition in the past 12 months? (yes / no). Combination of all times HS.4/5/6: yes are counted. EHIS data will not be age standardized
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-64, 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Diabetes has become one of the most important public health challenges of the 21st century. It is strongly associated with overweight and obesity. Diabetes can be treated and partly prevented. Diabetes is a risk factor for cardiovascular diseases, and complications can result in severe conditions such as foot infections and amputations, blindness and end stage renal disease. Comparisons at international and regional level can serve as benchmark to identify gaps in health care.

B	DATA PRESENTATION
Table 1.3.1	See: Annex III
Fig. 1.3.1.1	**Diabetes by sex and age groups**

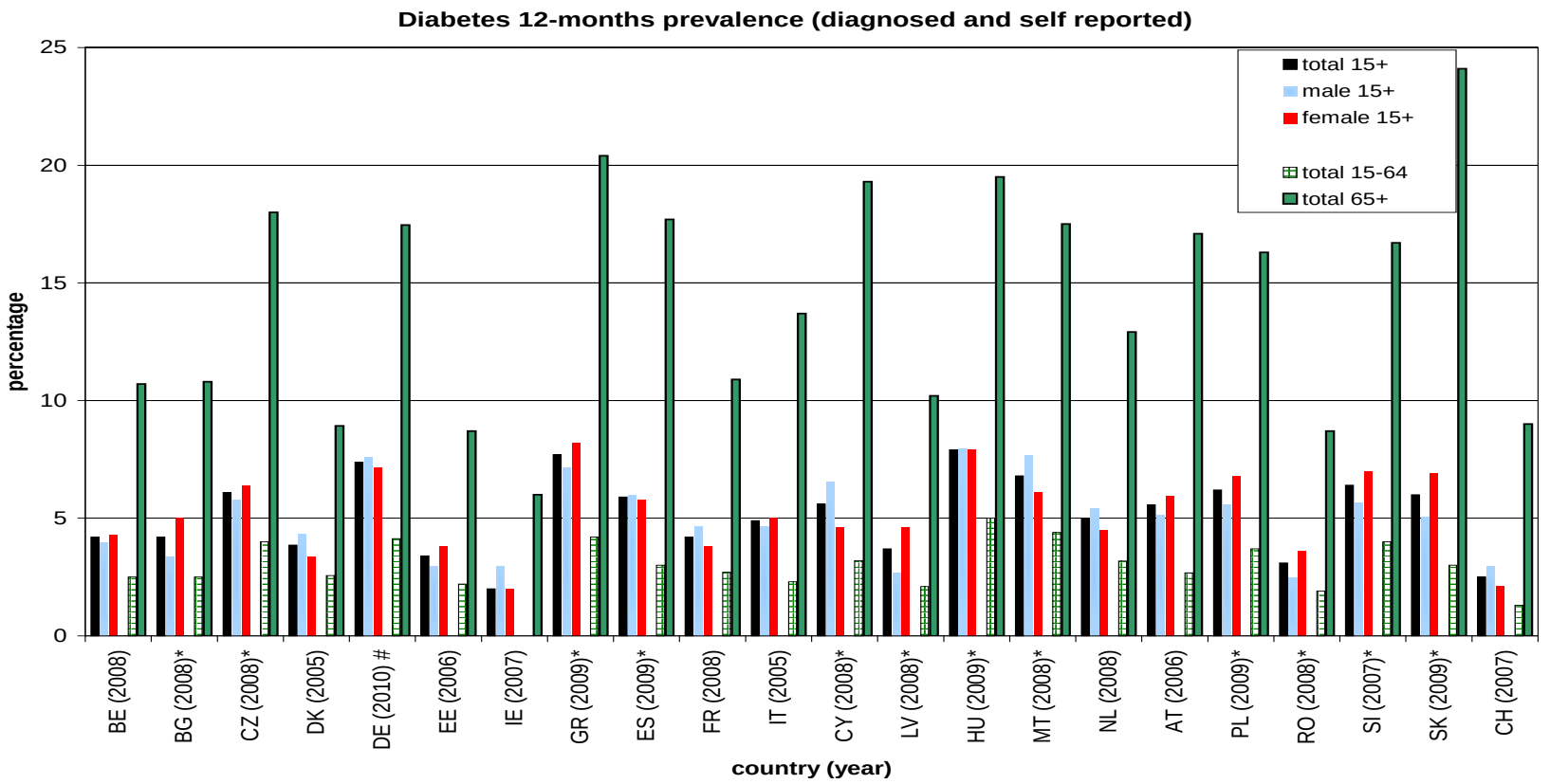
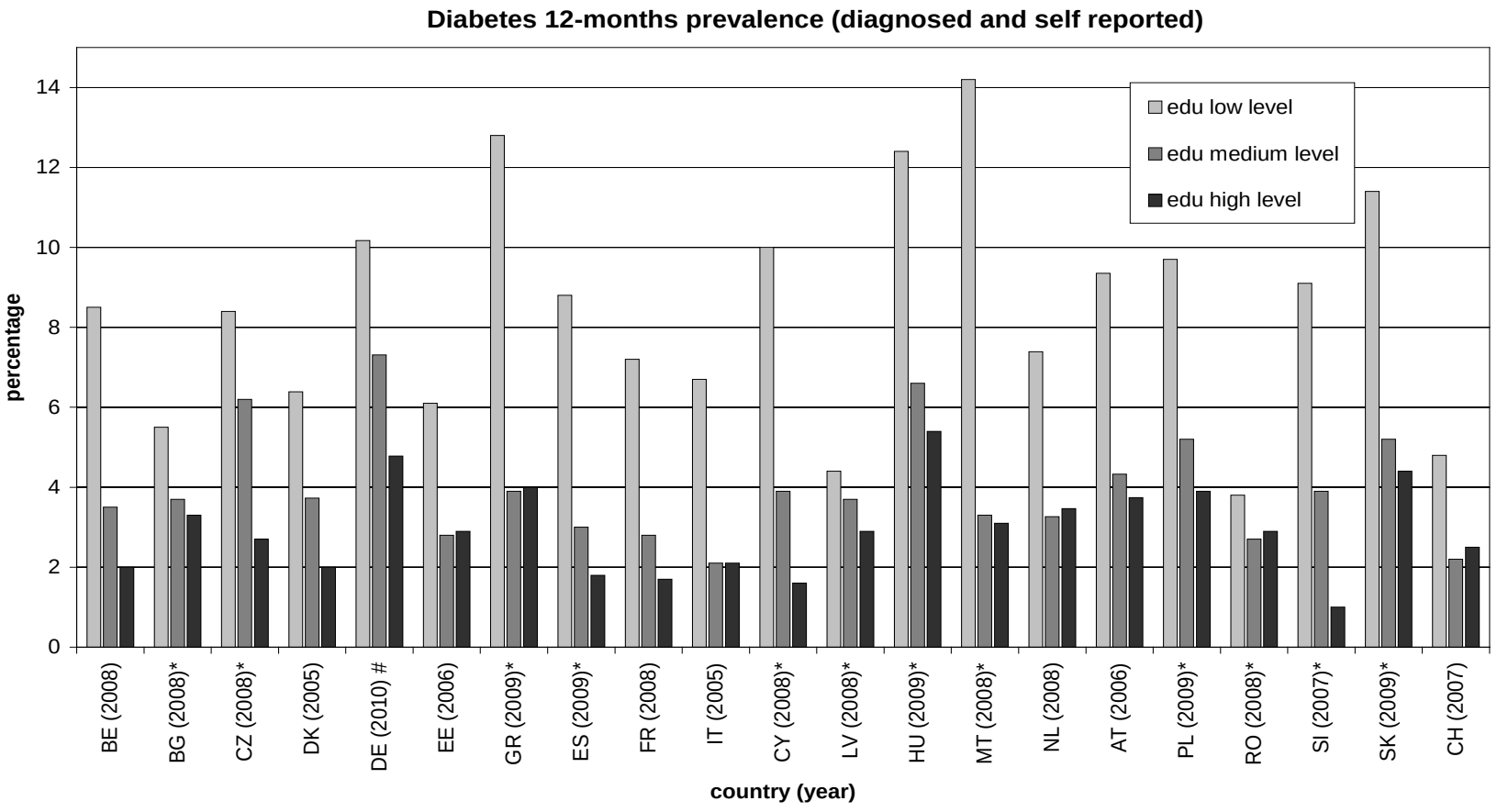
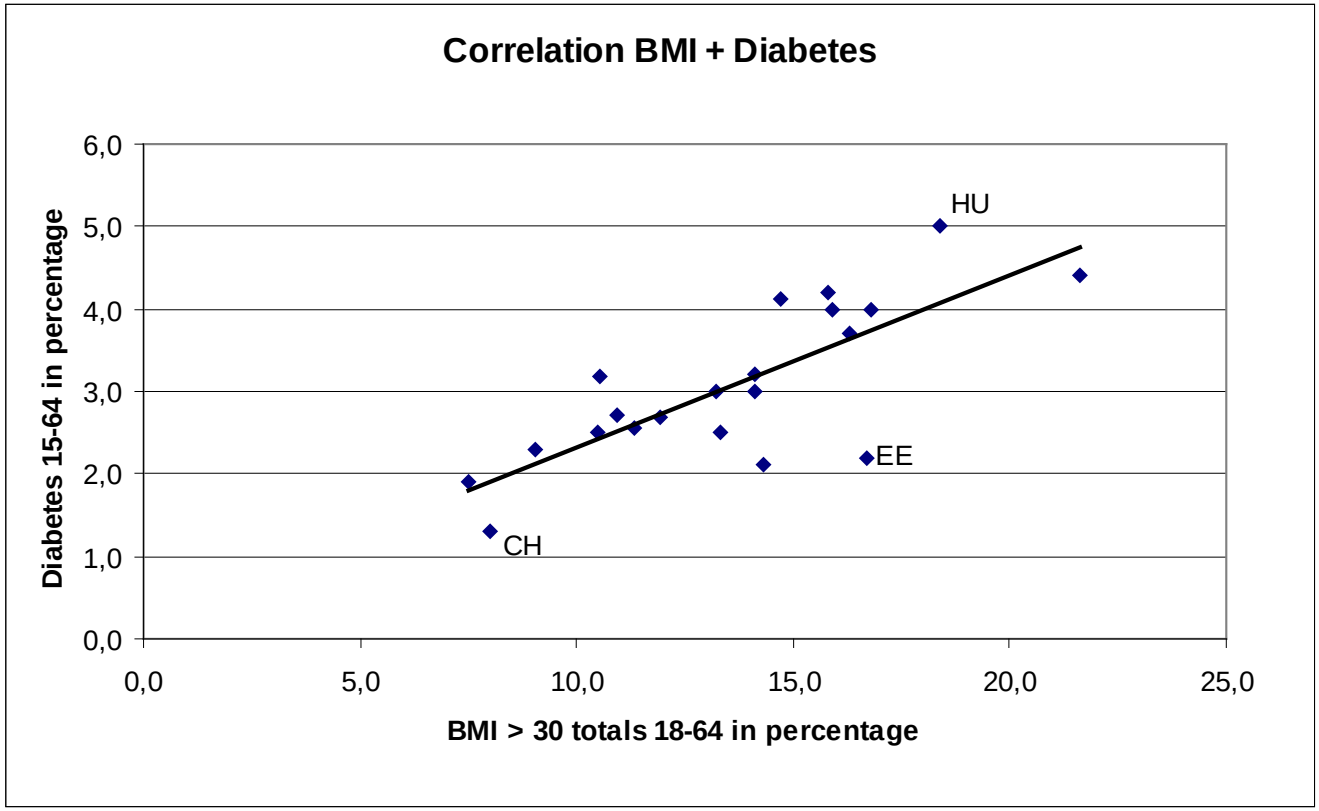


Fig.1.3.1.2	**Diabetes by educational level**
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age = 18+

C	DATA ANALYSIS
	Overall reported diabetes prevalence percentages (total age 15+) ranges between 2% in Ireland and 7.9% in Hungary (average 5.1%). While there is not much difference in prevalence data among the sexes and within the age group 15-64 years, the focus should be laid on the age group of 65+, where the on-set of diagnosed diabetes type II becomes visible. Thus, the high average of 14.3% shows a range of 6% in Ireland and 24.1% in Slovakia (see Figure 1.3.1.1). When data are interpreted by three educational levels (see Figure 1.3.1.2), there is clear evidence that the prevalence percentages are highest among the lower educated people with an average of 8.4%, providing a minimum of 3.8% in Romania and a maximum of 14.2% in Malta. This corresponds with the high prevalence of diabetes in individuals aged 65+ by taking into account that elderly people predominantly possess lower educational grades than younger people nowadays. Accordingly, there is an overall descending order of diabetes prevalence percentages from lower to higher educated persons with the exception of Estonia, the Netherlands, Romania and Switzerland where the data for medium and highly educated persons depict a slightly reversed trend. The occurrence of diabetes type II is strongly associated with overweight, an unbalanced nutritional behaviour and a lack of physical activity which makes it a largely preventable "lifestyle disease" and a rising burden for the national health systems. Regarding the impact of obesity, a correlation with ECHI #42 (BMI) can currently be attempted (see Figure 1.3.1.3). In the future, this could also apply to ECHI #52 (Physical activity).

Fig.1.3.1.3	Correlation between BMI ≥ 30 (18-64 y) and Diabetes (15-64 y)
	
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] Currently, the questionnaire for the second wave (planned for 2014) is under revision, inter alia to improve the module

on physical activity. This might allow for a better understanding of the association between low physical activity and on-set of diabetes type II.
It must also be considered that ECHI #21(diabetes) only depicts diagnosed diabetes and that a substantial number of people in actuality live with the as yet unapparent but progressive disease.
The occurrence of diabetes type II is strongly associated with overweight (see Figure 1.3.1.3), an unbalanced nutritional behaviour and a lack of physical activity [2]. This poses a public health threat also concerning the children of families exposed to such behavioural pattern of life style. There is evidence that children who come from a disadvantageous family background have a higher chance of an early onset of diabetes type II. [3]
However, diabetes type II can be treated. First steps are weight reduction, a diabetic diet, and exercise. When these measures fail to control the elevated blood sugars, oral medications are often used. If oral medications are still insufficient, insulin medications must be considered.

Administratively deduced and register-based data on diabetes mellitus are available from the Czech Republic, Hungary, Latvia, Lithuania, the Netherlands, Finland and the United Kingdom (the latter providing totals only, FI, LT and UK data not shown). If compared with survey data which is possible for the Czech Republic, Hungary, Latvia, and The Netherlands, the register derived data of Hungary come closest to the survey based prevalence percentages.

Breakdown/ Country (year)	Percentage CZ (2009)	Percentage HU (2009)	Percentage LV (2009)	Percentage NL (2009)
Total	5.42	7.87	3.00	3.7
Men	5.75	7.68	2.20	4.0
Women	5.10	8.05	3.68	3.5
Individuals aged 15-64	4.05	5.87	1.84	2.8
Individuals aged 65+	24.20	23.16	9.86	16.5

While the register data from the Czech Republic and Latvia are partly above and below the percentages of similar survey strata, the Dutch register data are constantly below the survey-deduced figures.
Larger deviations can be observed only for the age group 65+, where register deduced data show higher prevalence percentages than reported from surveys, e.g. 24.2% vs. 18.0% in the Czech Republic, 23.2% vs. 19.5% in Hungary, and 16.5% vs. 12.9% in The Netherlands.

	This phenomenon might be explainable by the fact that register based data are age standardized (requested) while the EHIS data are not. The surveys should gain population representativeness by their sample composition and ex post application of weighing factors. It is hard to judge from the ECHIM side to which extent the individual (E)HIS sample compositions are representative and if there is no impact of a responder bias introduced by the elderly. Another valuable source for a face-to-face comparison can be the International Diabetes Federation (IDB) [4] which delivers national diabetes prevalence percentage estimates for nearly every country. Although other standardisation methods are used and values refer only to individuals aged 20-79, the national estimates for European countries show a fair match with most of the ECHI- diabetes data. The national IDF data tend to slightly overestimate the prevalence percentages since they claim to present also a significant amount of undiagnosed cases of diabetes. Romania is a drastic example in that regard: while EHIS delivered a total prevalence percentage of 3.8%, the IDF reported a national estimate of 9.2%. Also the low survey figures of Ireland (2%) are not reflected by the IDF table (6%).
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] "Diabetes Public Health Resource"; http://www.cdc.gov/diabetes/projects/cda2.htm; Page last reviewed: May 20, 2011 [3] Kenneth C. Copeland et al. "Type 2 Diabetes in Children and Adolescents: Risk Factors, Diagnosis, and Treatment"; Clinical Diabetes, October 2005, Vol. 23 No. 4 181-185; http://clinical.diabetesjournals.org/content/23/4/181.full [4] IDF: http://www.idf.org/diabetesatlas, therein http://www.idf.org/diabetesatlas/5e/detailed-data-and-interactive-map and download: IDFAtlas5E_Detailed_Estimates.xls = IDF Diabetes Atlas 5th Edition - Country Estimates Table 2011 **→ all source URLs lastly accessed on June 05 2012**

1.3.2. ECHI# 23 Depression

ECHIM Indicator name	**B) Health status** 23. Depression: 12 months prevalence (self-reported and diagnosed) → ECHI ID Codes: 212a01-212a08
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 23a.**
Definition	Proportion of individuals reporting to have ever been diagnosed with chronic depression and to have been affected by this condition during the past 12 months.
Calculation	Proportion of individuals reporting to have ever been diagnosed with chronic depression and to have been affected by this condition during the past 12 months, derived from European Health Interview Survey (EHIS) questions HS.4/5/6: HS.4: Do you have or have you ever had any of the following diseases or conditions? (19. Chronic depression) (yes / no). If yes: HS.5: Was this disease/condition diagnosed by a medical doctor? (yes / no). HS.6: Have you had this disease/condition in the past 12 months? (yes / no). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-64, 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Depression has become a high-burden disease. Because of the high frequency of mental health problems in developed societies and the importance of their costs in human, social and economic terms, mental health must be regarded as a public health priority. The Global Burden of Disease study reckons that mental disorders represent four of the ten leading causes of disability worldwide. Depression is a major mental condition that is amenable to intervention

B	DATA PRESENTATION
Table 1.3.2	See: Annex III
Fig. 1.3.2.1	**Depression by sex and age groups**

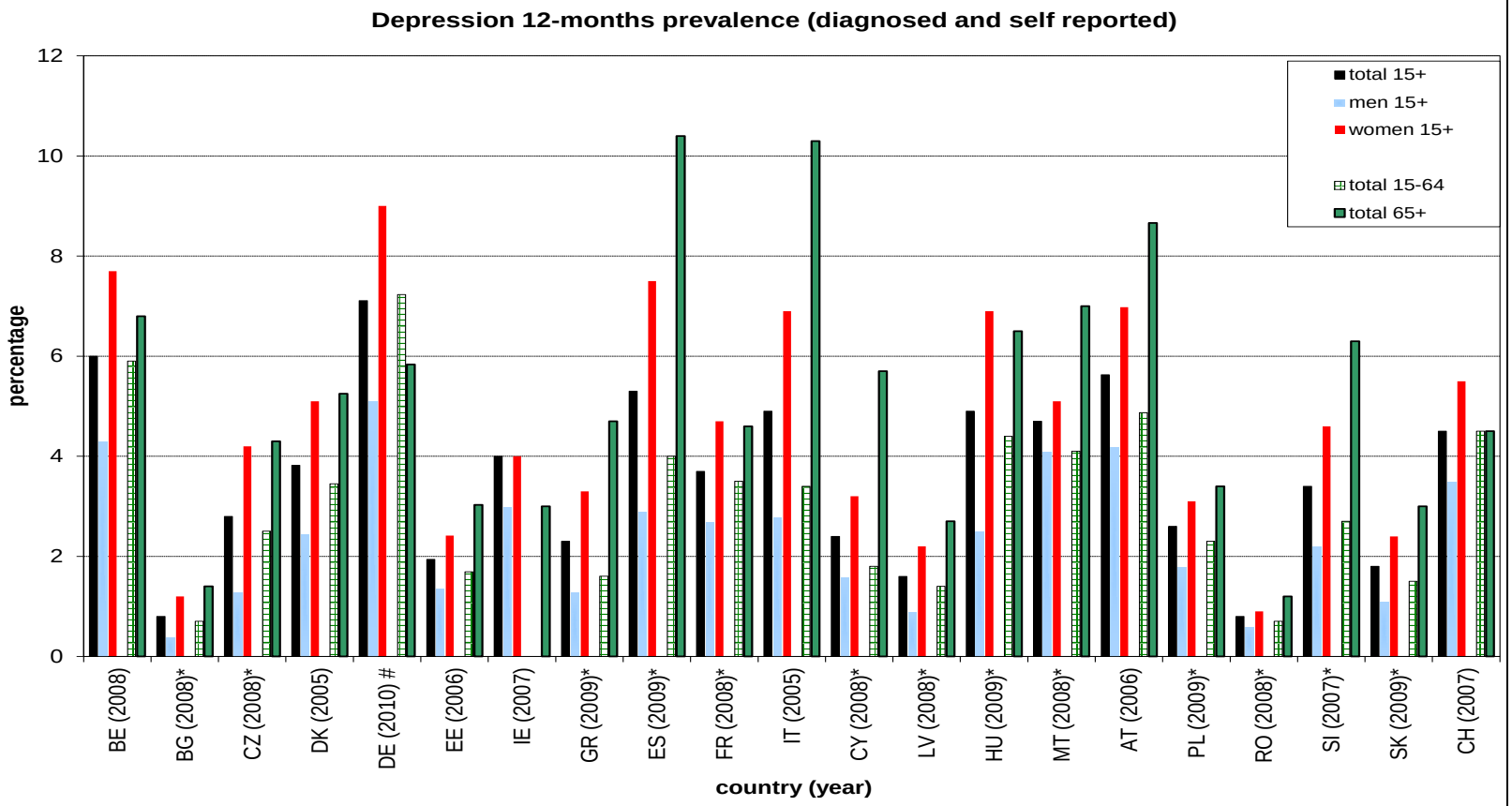
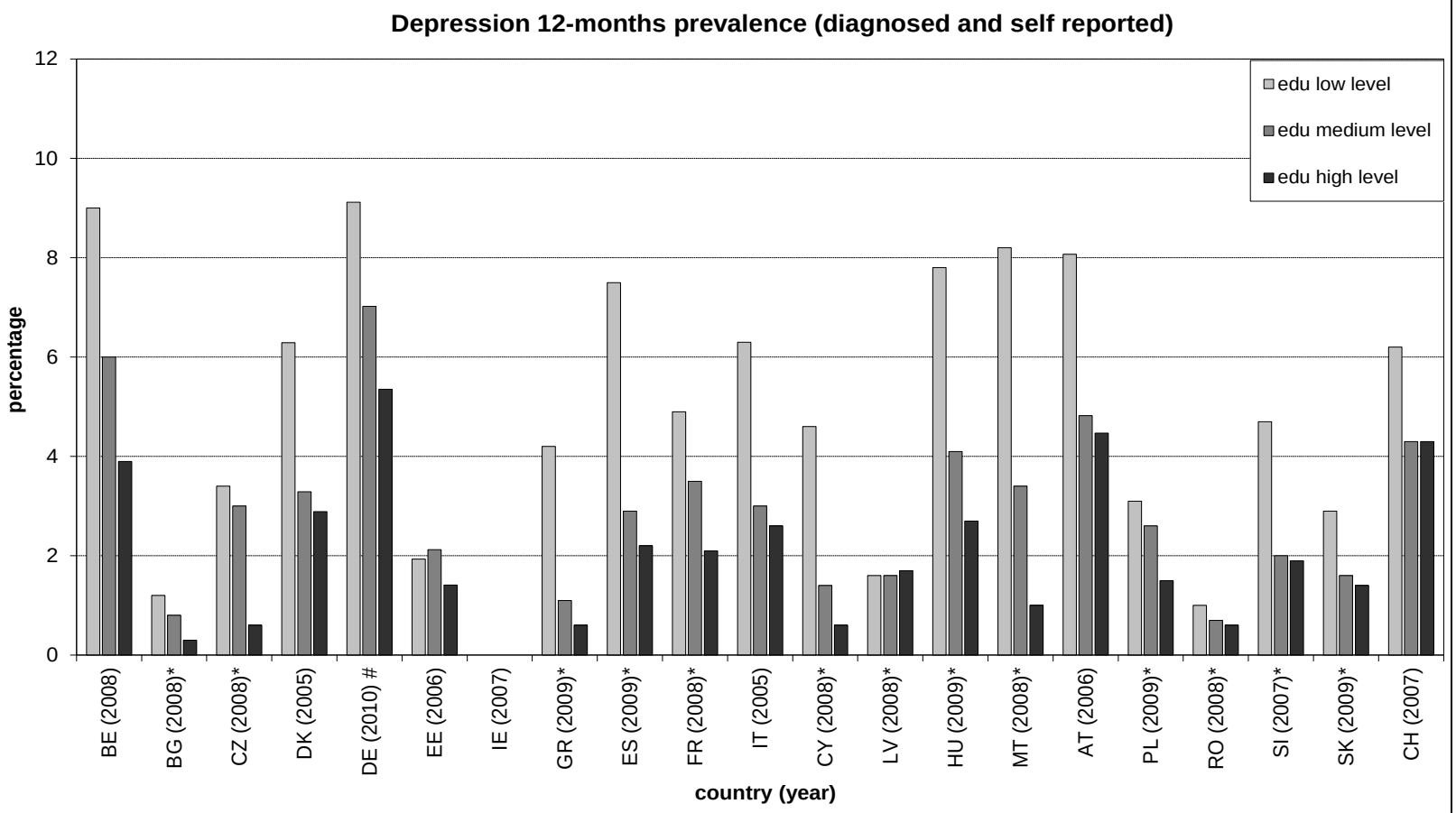


Fig.1.3.2.2	**Depression by educational level**
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+

C	DATA ANALYSIS
	Overall depression prevalence percentages (total age 15+) range between 0.8% in Romania and 7.1% in Germany (21 countries average is 3.6%). In general there is a trend that women (total average 4.6%, maximum 9.1%) seem more often affected than the average of men (2.4%, maximum 5.1%) (see Figure 1.3.2.1). Among the age group 15-64 years, prevalence percentages are usually lower (range 0.7 - 7.2%, average 3.1%) than among the elderly persons aged 65+ (range 1.2% - 10.4%, average 5.2%; most strikingly high rates in Spain and Italy). Only Germany shows an opposite pattern where the labour force strata seem to be more affected by depressions than the elderly. In the cross-country comparison, Germany heads the statistic (except for the age strata 65+). The lowest prevalence of diagnosed depression is reported from Bulgaria and Romania. This phenomenon might be explained with cultural differences (social bias, underreporting, and see Section 4. REMARKS), a general problem of MD accessibility, as well as major transitions in their national health care systems if compared with core EU countries. When data are interpreted by three educational levels (see Figure 1.3.2.2), there is clear evidence that the prevalence is highest among the lower educated people with an average of 5.4%, a minimum of 1% in Romania and a maximum of 9.1% in Germany. This is a visible socio-economic descent of prevalence percentages from lower to higher educated individuals, though the magnitudes vary largely (e.g. Belgium versus Bulgaria). Only exceptions from this general trend are reported for Latvia and Switzerland where the data for medium and highly educated persons depict a slightly different pattern.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] Depressions gained more attention in recent years which is partly related to rising competition and pressure upon the individual in a globalized labour market and rapid sociological changes within communities and societies. However, mental health problems are often still stigmatized and affected individuals might tend to hide their

	occurrence which leads to substantial underreporting. It is known fact that the neglect of depressive disorders seems particularly widespread among men who in return seek professional help to a minor extend and at later stages, respectively. The current EU Men's Health Report [2] outlines that men’s depression and other mental health problems are under detected and under treated in all European countries. This is due to men’s difficulty in seeking help, health services' limited capacity to reach out to men, and men’s different presentation of symptoms to women with higher levels of substance abuse and challenging behaviours. Furthermore, it is noticed that more than three times as many men as women commit suicide and the difference increases to up to five times among the elderly. The higher suicide rates in men are linked to undiagnosed mental health problems. These facts are most likely the explanation for the visible gender gap in Figure 1.3.2.1. Besides the cultural differences and larger deviations in patient-centred care, the national health care systems in "new" EU Member States are under fundamental transitions by a shift into the private sector, so that a number of depressive disorders may remain undiagnosed and untreated. On the other side may an inflated patient-centred care like in Germany, Belgium, Spain, Italy and Austria explain the larger number of diagnosed depression prevalence percentages. Interestingly it is only Germany that reports the highest prevalence percentages among the women and the labour force strata. Both groups might be affected by the rising pressure on the labour market. On the other hand, if depressive disorders are detected and treated in young or middle age, it can explain that depression is less rampant in German elderly compared with other core group Member States. Furthermore, several studies have revealed the interrelation of risky lifestyle behaviour (lack of physical exercise, smoking and drinking, unbalanced diet) and the onset of mental disorders like depression [3, 4]. This correlation can be sustained by the fact that people with low education mostly show such unhealthy lifestyle and accordingly take the lead in depression prevalence compared with the medium or high educated strata. Not at least there are several clinical tools for identification and classification of severity of depressions in use, such as DSM IV, PHQ 8/9; MHI5, EVI, or CIDI-SF [5]. This hampers common definitions and cross-national comparisons alike. Additionally, in the EHIS wave 1 [1a] it was asked for the occurrence of a "chronic depression" within the last 12

months. A glance at the ICD-10 catalogue [6] reveals that only "depressive episodes" with variations of duration and severity are listed and codable with ICD-10 F32.-F34.-, and that the specification "chronic" does not appear at all but "recurrent" and "major" depressive episodes. Currently the questionnaire for the second EHIS wave (planned for 2014) is under revision, inter alia to improve the module on mental health. This might lead to a more consistent picture on depressions throughout Europe.

Administratively deduced and register- based data on depression were delivered by the Czech Republic, Estonia, Finland, Hungary, Latvia, Lithuania, The Netherlands and the United Kingdom (the latter providing totals only). A comparison with survey data which is possible for the Czech Republic, Estonia, Hungary, and Latvia.

Breakdown/ Country (year)	Percentage CZ (2009)	Percentage EE (2009)	Percentage HU (2008)	Percentage LV (2009)
Total	0.91	1.0	2.31	0.18
Men	0.45	0.7	1.32	0.08
Women	1.29	1.2	3.21	0.27
Individuals aged 15-64	1.09	X 1.0	2.62	0.19
Individuals aged 65+	1.61	X	3.11	0.27

X = individuals 15+ but no strata for elderly

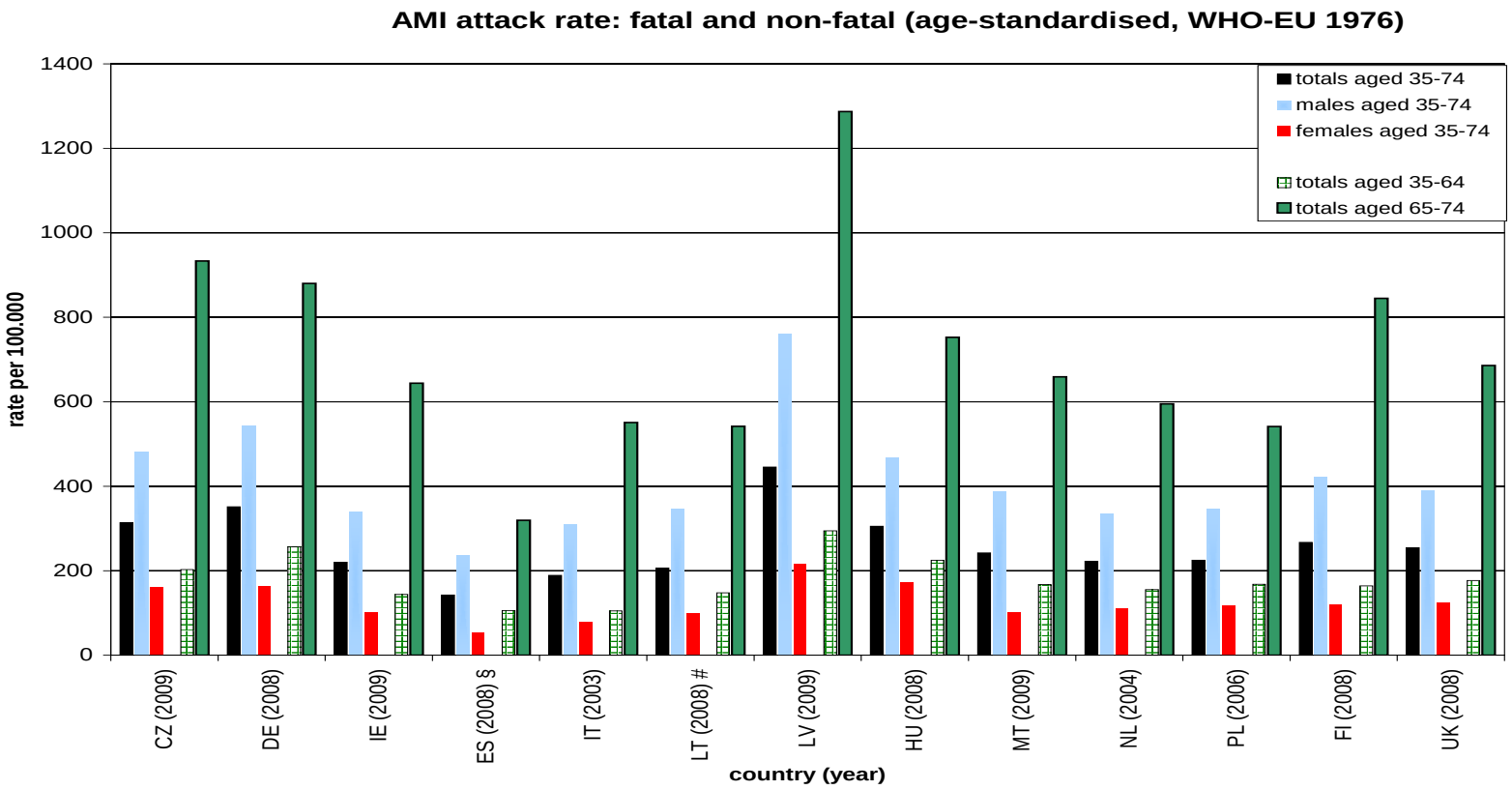
All of them provide much lower figures. The main reasons can be due to different coding procedures (see ICD-10 issue above), data sources and coverage of the total population. The exact reason is not known. Nevertheless, the pattern of men vs. women and labour force vs. elderly resembles the survey results.

As a most drastic example, the United Kingdom (2009) reported a total depression prevalence percentage of 10.6% which exceeds all survey-based data of totals in other countries. The UK did not deliver any survey data and the reported estimates are based on the number of individuals aged 18+ from General Physicians' Practices as extracted from the Quality and Outcomes Framework (QOF) [7].
In the ECHIM pilot data collection, each EU Member State itself decided which is (are) the best data source(s) for calculating the register based estimates. Given the fact that not in all MS the health information system is well aligned with the health care system, there must be limitations to the intra- and inter-comparability of national

	estimates.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] "The State of Men's Health in Europe"; http://ec.europa.eu/health/population_groups/docs/men_health_extended_en.pdf, ISBN 978-92-79-20169-1; EU 2011 [3] Harrington J, Perry IJ, Lutomski J et al. 'Living longer and feeling better: healthy lifestyle, self-rated health, obesity and depression in Ireland.' European Journal of Public Health (2010) vol. 20: 91–95 [4] Luppino FS, de Wit LM, Bouvy PF et al. 'Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies.' Archives of Genetic Psychiatry (2010) vol. 67: 220–229 [5] MINDFUL - Mental Health Information and Determinants for the European Level http://info.stakes.fi/mindful/EN/frontpage.htm, Published 31.1.2006, Updated 29.4.2009 [6] International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) Version for 2010, Chapter V; Mental and behavioural disorders (F00-F99) http://apps.who.int/classifications/icd10/browse/2010/en#/F30-F39, [7] "The Quality and Outcomes Framework"; http://www.ic.nhs.uk/statistics-and-data-collections/audits-and-performance/the-quality-and-outcomes-framework, © 2012, The Health and Social Care Information Centre **→ all source URLs lastly accessed on June 05 2012**

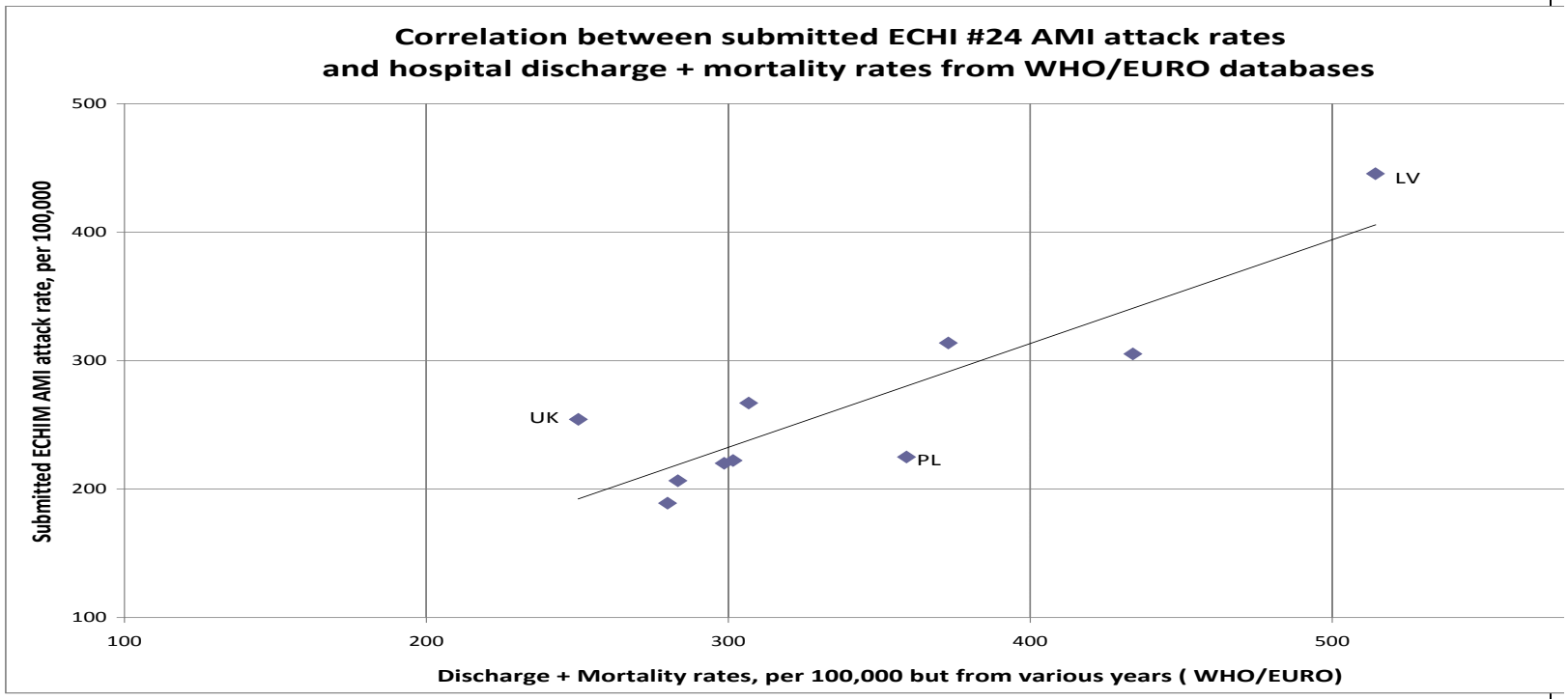
1.3.3. ECHI# 24 Acute Myocardial Infarction (AMI)

ECHIM Indicator name	**B) Health status** 24. Acute Myocardial Infarction (AMI) → ECHI ID Codes: 21501 - 21505
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 24.**
Definition	Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000 population.
Calculation	Age-standardized attack rate by sex in the age group 35-74 in the population in a given calendar year, based on combined hospital discharge (ICD-10 codes I21, I22) and mortality data (ICD- 10 codes I20-I25) (EUROCISS project recommendation). Attack rate counts the first and recurrent events, whenever there are at least 28 days between the onsets of the events. Age standardization should be done for men and women separately, according to the direct method, using the 1976 WHO European population as a standard population (this is the method applied for the Eurostat diagnosis-specific morbidity statistics; see references (document principles and guidelines in CIRCA).
Relevant dimensions and subgroups	- Calendar year - Country - Sex - Age groups: -- for age standardization, data must be collected by 5 year age groups for ages 35-74 -- for data presentations, it is required to present the following age groups; 35-64, 65-74
Preferred data type and source	Preferred data type: - Hospital discharge registries combined with causes of death registries - Alternatively: population-based AMI registers Preferred source: national data sources (no data available in international data sources according to preferred definition)
Rationale	High-burden disease and cause of death although this disease spectrum is preventable.

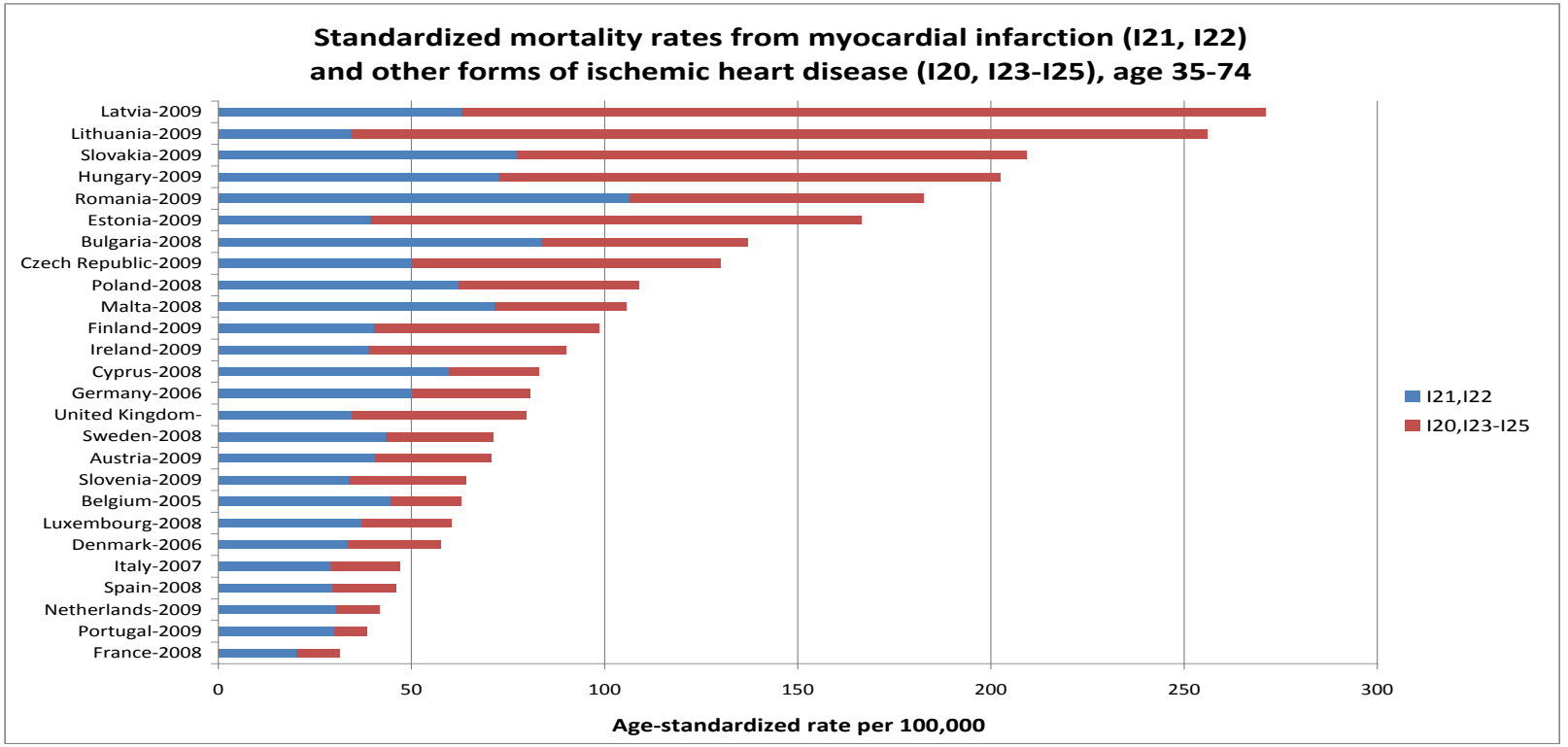
B	DATA PRESENTATION
Table 1.3.3	See: Annex III
Fig. 1.3.3.1	**Acute Myocardial Infarction by sex and age groups**
	
	Legend: § refer to total discharges from hospitals (fatal and non-fatal) only; # Counted individuals

C	DATA ANALYSIS
	A high percentage of AMI patients die before reaching the hospital. Therefore, only the combination of mortality data and hospital discharge records can provide a complete picture of the burden of the disease. Aggregated hospital discharge and mortality data are separately available for many countries in the databases of EUROSTAT and WHO/EURO. For the proper calculation of AMI incidence and prevalence, these data should first be linked at subject level. The problem is the limited possibilities for such linkage due to personal data protection regulations in most countries. This was the reason for selecting the AMI attacks instead of AMI patients, as a basic observation unit for this ECHI indicator, although both should give rather close estimates. Thirteen countries have submitted data and related metadata on AMI during the ECHIM pilot data collection. This overview is mainly focused on the comparability assessment of the submitted data. One country (IT) provided estimates based on the National Register of Coronary and Cerebrovascular events in eight areas applying standard MONICA project diagnostic criteria. Data from other countries are based on other combinations of data extracted from general hospital discharge and mortality registers. The UK pointed out that the number of hospital discharges (I21, I22) is not identical to the number of AMI attacks. This statement is obviously valid for other countries as well. One country (LT) attempted the linkage of hospital discharge and mortality data records at subject level and provided data in "patient" units. Judging from the provided metadata, a number of other countries could do or did the linkage at subject level as well. Spain used only hospital discharge data. Hungary combined data by adding all hospital discharges and out-of-hospital deaths. Several countries stated in the metadata that they combined non-fatal hospital discharges and all deaths. Other countries have mentioned the same addition of aggregated data without explicitly mentioning whether they used only non-fatal hospital discharges or all cases. Presumably, they included non-fatal cases as well, otherwise, the fatal hospital cases would be counted twice as they also appear in mortality records. Lithuania took into account only AMI diagnoses (I21, I22) in the mortality data component, while others took into account all IHD (I20-I25) deaths. The submitted AMI attack rates in the age group 35-74 vary from 142 (IT) to 446 (LV) with an average of

	260 per 100,000 population (see Figure 1.3.3.1). Country rankings using other sex- and age-specific values of the indicator are very similar, meaning that all countries demonstrate similar relative sex and age patterns of the disease. In order to evaluate the compatibility of submitted AMI pilot data with available hospital discharge and mortality data in international sources, an artificial indicator was constructed, as the sum of age-standardized (for age group 35-74) hospital discharge (I21, I22) rates and mortality rates (I20-I25, except LT), using WHO/EURO Hospital morbidity and Detailed mortality databases [1]. In theory, assuming relatively similar AMI lethality rates in countries, this WHO/EURO deduced indicator should show high correlation with the ECHI#24 indicator, as the difference should only be in the lethal cases in hospital discharge and mortality data components that were counted twice. However, the observed difference varies widely from 60% (PL) or 48% (IT) to 15% (FI, LV) with an average of 28%. In the UK, the sum of discharge and mortality rates was even below the submitted ECHI#24 indicator value by 2%. Although there is a certain correlation (see Figure 1.3.3.2), the relative differences between these indicators vary too much to be explained by differences in AMI lethality alone. Differences in AMI diagnostic, coding and recording practices and particularly in the data processing specifications cause biases and have a strong impact on international comparability of calculated AMI incidence or attack rate estimates.

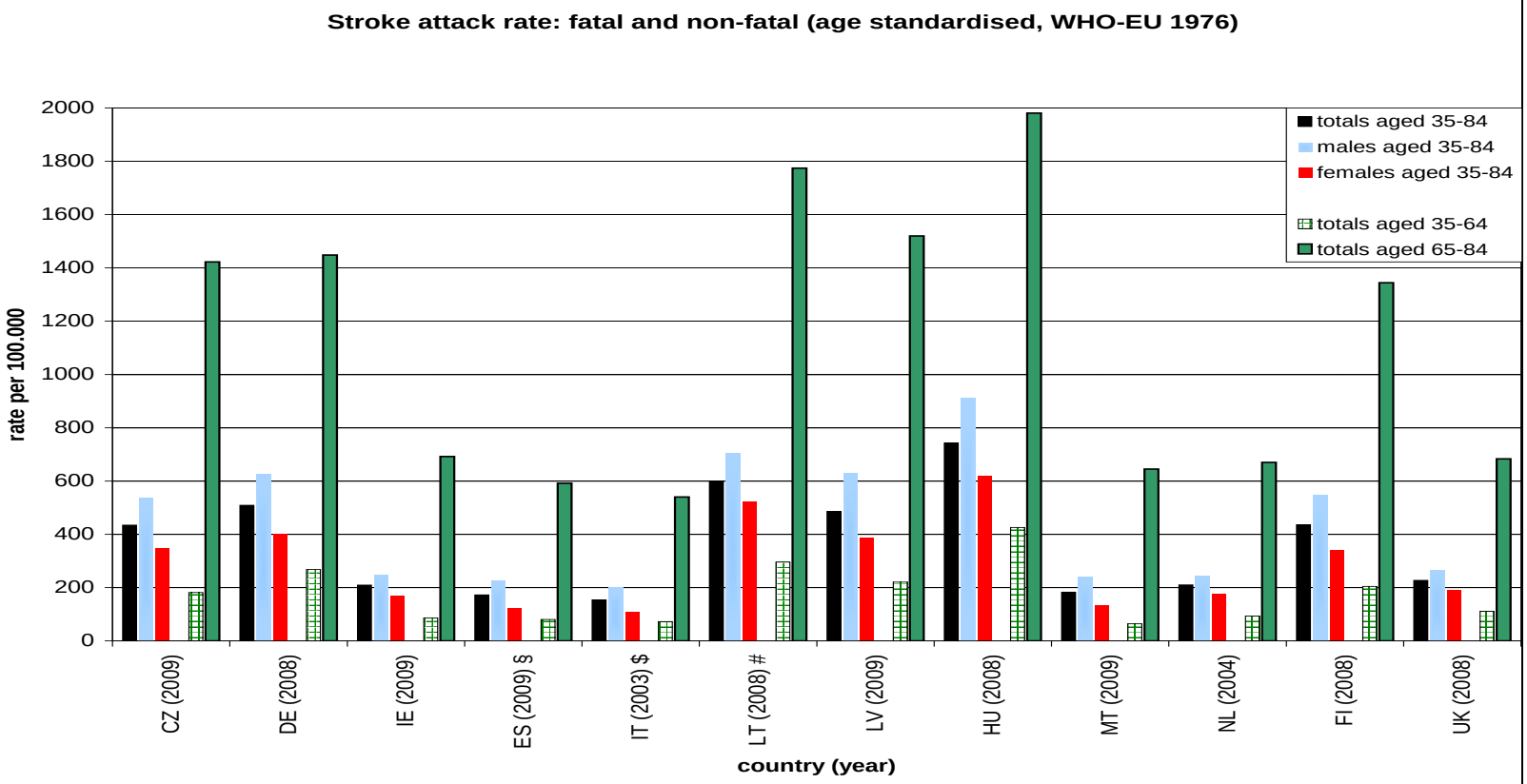
Fig.1.3.3.2	**Compatibility of submitted AMI pilot data (age 35-74) with hospital discharge and mortality data available in international sources [Source: WHO/EURO]**
	
D	**REMARKS AND FURTHER INFORMATION**
	As it was a pilot data collection, not all national Joint Action for ECHIM partners were able to devote adequate efforts, resources and time for accessing primary data sources and developing and testing new data processing procedures in order to calculate required indicators. Further international joint efforts and support for EU countries are needed to establish more permanent structures and procedures for indicator calculation in order to improve the availability of internationally comparable data for this and other administrative data-based ECHI indicators.

	The experience of the ECHIM pilot collection suggests that the international comparability of this indicator could be further improved by providing countries with more detailed definitions and technical specifications for a standard indicator calculation. The revision of the current ECHI#24 indicator definition, at least in the following two aspects, could also be recommended: 1) The inclusion of all IHD codes (I20-I25) in the mortality component causes large overestimation of AMI rates, particularly in countries where mortality from chronic IHD is high, i.e. LV, LT, EE, HU, CZ, etc. (see Figure 1.3.3.3). There are studies showing that a significant part of these cases of chronic IHD is actually misclassified as other causes of death, e.g. accidental alcohol poisonings [2]. Limiting the mortality component to only AMI codes (I21, I22) would improve the international comparability and would conceptually be more correct. 2) A single hospital discharge record with diagnosis I21, I22 does not always correspond to a separate AMI case and this depends on hospitalization practices at national level. The possibility of linking hospitalization episodes at the subject level and the variation of how a single AMI attack is defined in the case of multiple hospital discharges is another source of distortion, limiting international comparability. This could be avoided by counting AMI patients instead of AMI attacks, i.e. counting persons who have had at least one hospital discharge with diagnosis I21, I22 during the year. It is likely that most countries use some kind of internal patient identification in their hospital discharge databases allowing the linking of hospital discharge records for the same patient. Such internal linking should be less problematic to do than cross-registry linking, i.e. between hospital discharge and mortality databases.

Fig. 1.3.3.3	**Differences in mortality from AMI and other IHD forms [Source: WHO/EURO, DMDB (European Detailed Mortality database)]**
	
	[1] WHO/EURO Hospital morbidity database (HMDB) and Detailed mortality databases (DMDB); © WHO 2012 http://www.euro.who.int/en/what-we-do/data-and-evidence/databases [2] Ricardas Radisauskas et al., 'Recent Heavy Alcohol Consumption at Death Certified as Ischaemic Heart Disease: Correcting Mortality Data from Kaunas (Lithuania)' Alcohol and Alcoholism Vol. 46, No. 5, pp. 614–619 (2011); http://alcalc.oxfordjournals.org/content/46/5/614.full.pdf?keytype=ref&ijkey=umU0dFrpfSDPKbr **→ all source URLs lastly accessed on June 05 2012**

1.3.4. ECHI# 25 Stroke

ECHIM Indicator name	**B) Health status** 25. Stroke → ECHI ID Codes: 21601 - 21605
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 25.**
Definition	Attack rate of stroke (non-fatal and fatal) per 100,000 population.
Calculation	Age-standardized attack rate by sex in age group 35-84 in the population in a given calendar year, based on combined hospital discharge and mortality data (ICD-10 codes I60-I64) (EUROCISS project recommendation). Attack rate counts the first and recurrent events, whenever there are at least 28 days between the onsets of the events. Age standardization should be done for men and women separately, according to the direct method, using the 1976 WHO European population as standard population (this is the method applied for the Eurostat diagnosis-specific morbidity statistics; see references (document principles and guidelines in CIRCA)).
Relevant dimensions and subgroups	- Calendar year - Country - Sex - Age groups: -- for age standardization, data must be collected by 5 year age groups for ages 35-84 -- for data presentations, it is required to present the following age groups; 35-64, 65-84
Preferred data type and source	Preferred data type: - Hospital discharge registries combined with causes of death registries - Alternatively: population-based stroke registers Preferred source: national data sources (no data available in international data sources according to preferred definition)
Rationale	High-burden disease and cause of death although this disease spectrum is preventable.

B	DATA PRESENTATION
Table 1.3.4	See: Annex III
Fig. 1.3.4.1	**Stroke by sex and age groups**
	
	Legend: § refers to total discharges from Hospitals (fatal and non-fatal) only; $ max. age is 74 years, # Counted individuals

C	DATA ANALYSIS
	As in the case of acute myocardial infarction, a relatively large proportion of stroke patients die suddenly before reaching the hospital. A combination of mortality data and hospital discharge records only can provide a complete picture of the burden of these diseases. Aggregated hospital discharge and mortality data are separately available for many countries in the databases of EUROSTAT and WHO/EURO. For the proper calculation of stroke incidence and prevalence, these data should first be linked to the subject level. The problem is the limited possibilities for such linkage in most countries due to personal data protection regulations. This was the reason for selecting the stroke attacks instead of stroke patients as a basic observation unit for this ECHI indicator, although both should give rather close figures. Twelve countries have submitted data and related metadata on stroke for the ECHIM Pilot data collection. This overview is mainly focused on the comparability assessment of submitted data. Italy provided estimates based on the National Register of Coronary and Cerebrovascular events in eight areas applying standard MONICA project diagnostic criteria and limiting data to the ages 35-74. Data from other countries are based on one or another combination of data extracted from general hospital discharge and mortality registers. The UK pointed out that the number of hospital discharges with the stroke diagnosis (I60-I64) is not identical to the number of stroke attacks. This statement is obviously valid for other countries as well. One country (LT) attempted the linkage of hospital discharge and mortality data records at subject level and provided data in "patient" units. Judging from the provided metadata, some other countries did or could do the linkage at subject level as well. Spain used only hospital discharge data. Hungary combined data by adding all hospital discharges and out-of-hospital deaths. Several countries stated in the metadata that they combined non-fatal hospital discharges and all deaths from mortality register. Other countries have mentioned the same addition of aggregated data without explicitly mentioning whether they used non-fatal hospital discharges only or all cases. Presumably, they meant non-fatal cases as well, otherwise the fatal hospital cases would be counted twice as they also appear in mortality records as well.

	The submitted stroke attack rates in the age group 35-84 (35-74 in case of IT) vary from 154 (IT) to 743 (HU) with an average of 364 per 100.000 population (see Figure 1.3.4.1). Country rankings using other sex- and age-specific values of the indicator are very similar, meaning that all countries demonstrate similar relative sex and age patterns of the disease. In order to evaluate the compatibility of submitted stroke pilot data with available hospital discharge and mortality data in international sources, an artificial indicator was constructed, as the sum of age-standardized (for the ages 35-84) stroke hospital discharge rates and mortality rates (I60-I64), using WHO/EURO Hospital morbidity and detailed mortality databases [1]. In theory, assuming relatively similar stroke lethality rates in countries, this indicator should show high correlation with the ECHI#25 indicator, as the difference should only be in the double counted lethal cases in hospital discharge and mortality data components. It was possible for five countries only to calculate this indicator since some countries have reported hospital discharge data to the WHO at too aggregated levels. The observed correlation suggests better consistency between the constructed “discharge + mortality” indicator and the submitted stroke attack rates (see Figure 1.3.4.2), as compared to the ECHI#24 AMI indicator. However, the observed difference still varies from 43% (LT) to 7% (UK) with an average of 27%. Comparison of stroke mortality rates suggests that there are large differences in national diagnostic practices in using diagnoses of cerebral infarction (I63) and stroke, not specified as haemorrhagic or infarction (I64) (see Figure 1.3.4.3). These two diagnoses contribute most to the total stroke mortality variation between countries, as compared to the haemorrhagic stroke (I60-I62).

Fig. 1.3.4.2	Compatibility of submitted stroke pilot data (ages 35-84) with hospital discharge and mortality data available in international sources [1]

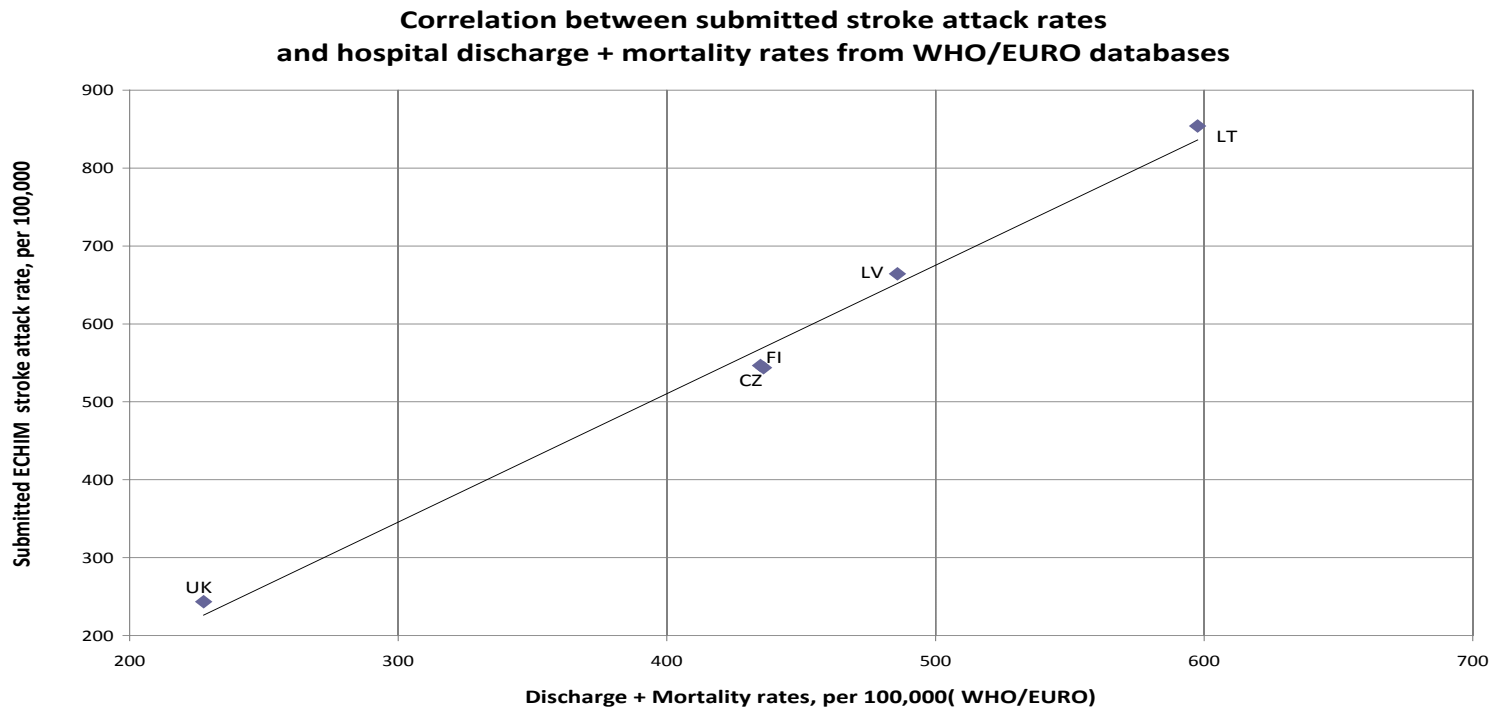
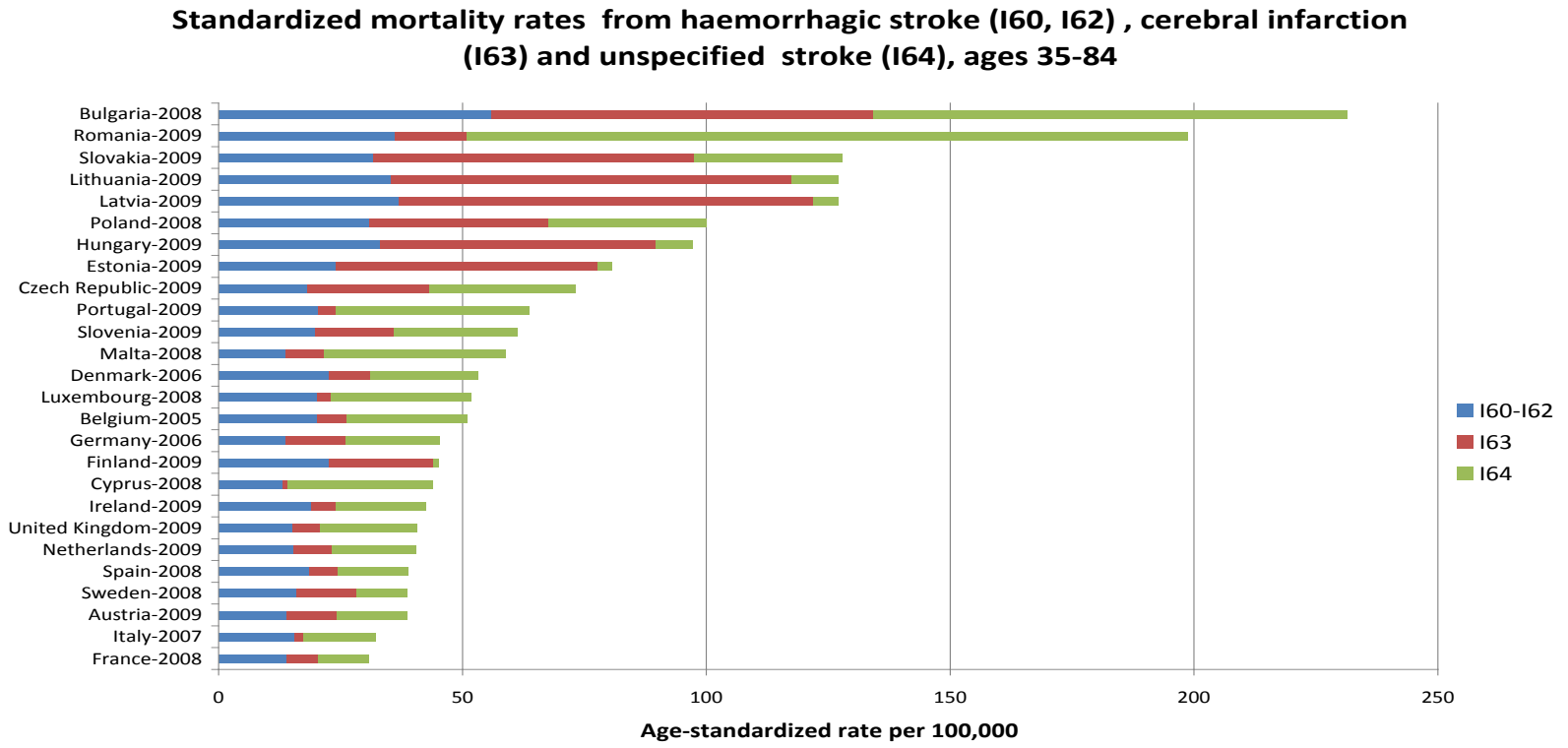


Fig.1.3.4.3	Differences in mortality from haemorrhagic and other types of stroke [1]
	
D	**REMARKS AND FURTHER INFORMATION**
	As it was a pilot data collection, not all national Joint Action for ECHIM partners were able to devote adequate efforts, resources and time for accessing primary data sources and developing new data processing procedures in order to calculate the required indicators. Further international joint efforts and support for countries are needed for establishing more permanent structures and procedures for indicator calculation in countries in order to improve the availability of internationally comparable data for this and other administrative data-based ECHI

	indicators. The experience of ECHIM pilot data collection suggests that the international comparability of this indicator could be further improved by providing countries with more detailed definitions and technical specifications for a standard indicator calculation. The revision of the current ECHI#25 indicator definition, at least in the following aspect, could also be recommended. A single hospital discharge record with stroke diagnosis does not always correspond to a separate stroke attack and this depends on hospitalization practices in countries. The ability of linking hospitalization episodes at subject level and variation how a single stroke attack is defined in case of multiple hospital discharges is an important source of distortion limiting international comparability. This could be avoided by counting stroke patients instead of stroke attacks, i.e. counting persons who have had at least one hospital discharge with diagnosis I60-I64 during the year. It is likely that most countries use some kind of internal patient identification in their hospital discharge databases allowing the linkage of hospital discharge records for the same patient. Such internal linkage should be less problematic to do than cross-registry linkage, i.e. between hospital discharge and mortality databases.
	[1] WHO/EURO Hospital morbidity database (HMDB) and Detailed mortality databases (DMDB); © WHO 2012 http://www.euro.who.int/en/what-we-do/data-and-evidence/databases **→ source URL lastly accessed on June 05 2012**

1.3.5. ECHI# 26 Asthma

ECHIM Indicator name	**B) Health status** 26. Asthma: 12 months prevalence (self-reported and diagnosed) → ECHI ID Codes: 217a01 - 217a06
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 26a.**
Definition	Proportion of individuals reporting to have ever been diagnosed with asthma and to have been affected by this condition during the past 12 months.
Calculation	Proportion of individuals reporting to have ever been diagnosed with asthma and to have been affected by this condition during the past 12 months, derived from European Health Interview Survey (EHIS) questions HS.4/5/6: HS.4: Do you have or have you ever had any of the following diseases or conditions? 1. Asthma (allergic asthma included) (yes / no). If yes: HS.5: Was this disease/condition diagnosed by a medical doctor? (yes / no). HS.6: Have you had this disease/condition in the past 12 months? (yes / no). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15+) - Socio-economic status (educational level; ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Asthma is a significant public health problem and a high-burden disease for which prevention is partly possible and treatment can be quite effective.

B	DATA PRESENTATION
Table 1.3.5	See: Annex III
Fig. 1.3.5.1	**Asthma by sex and age 15+**

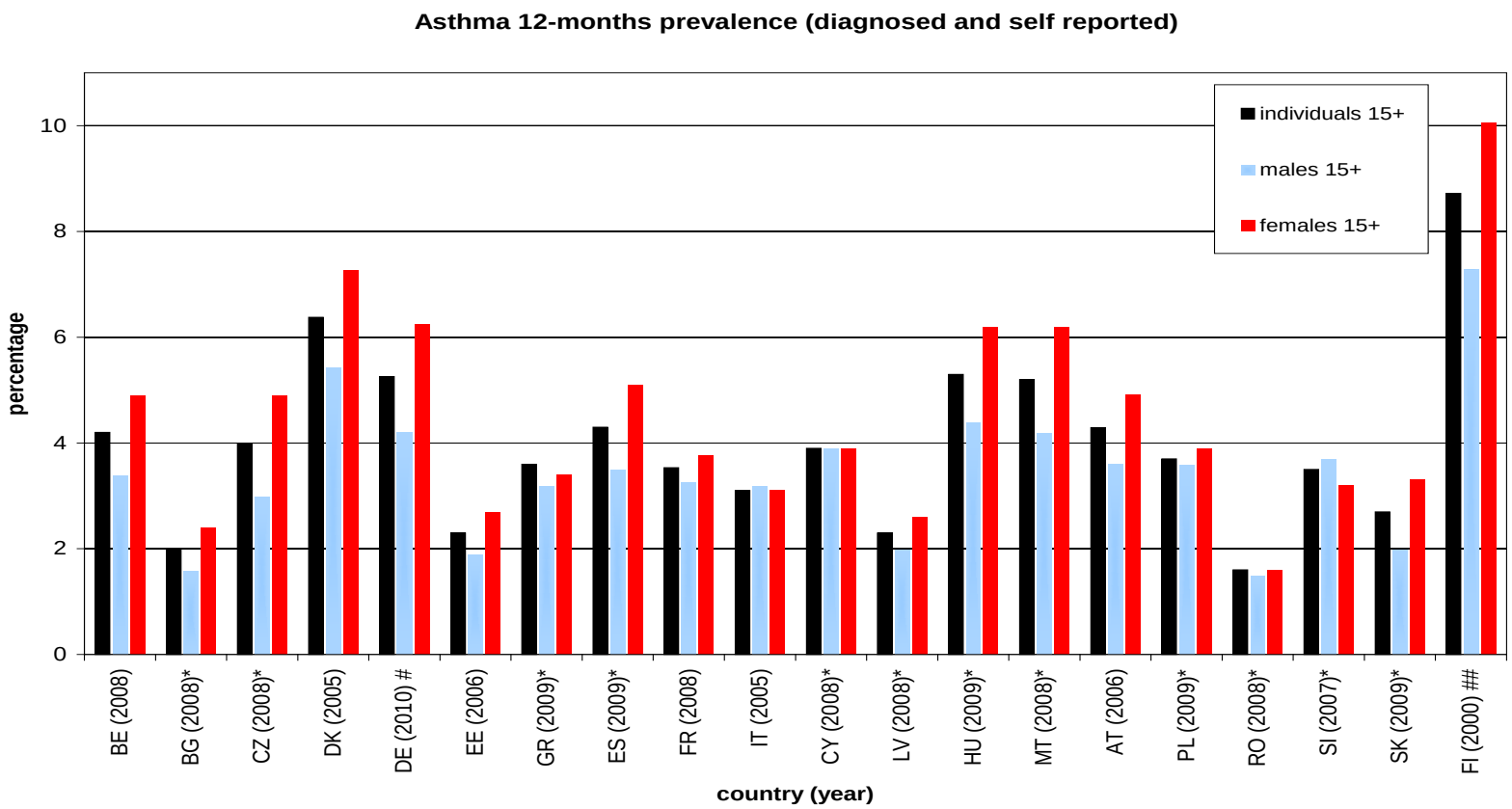
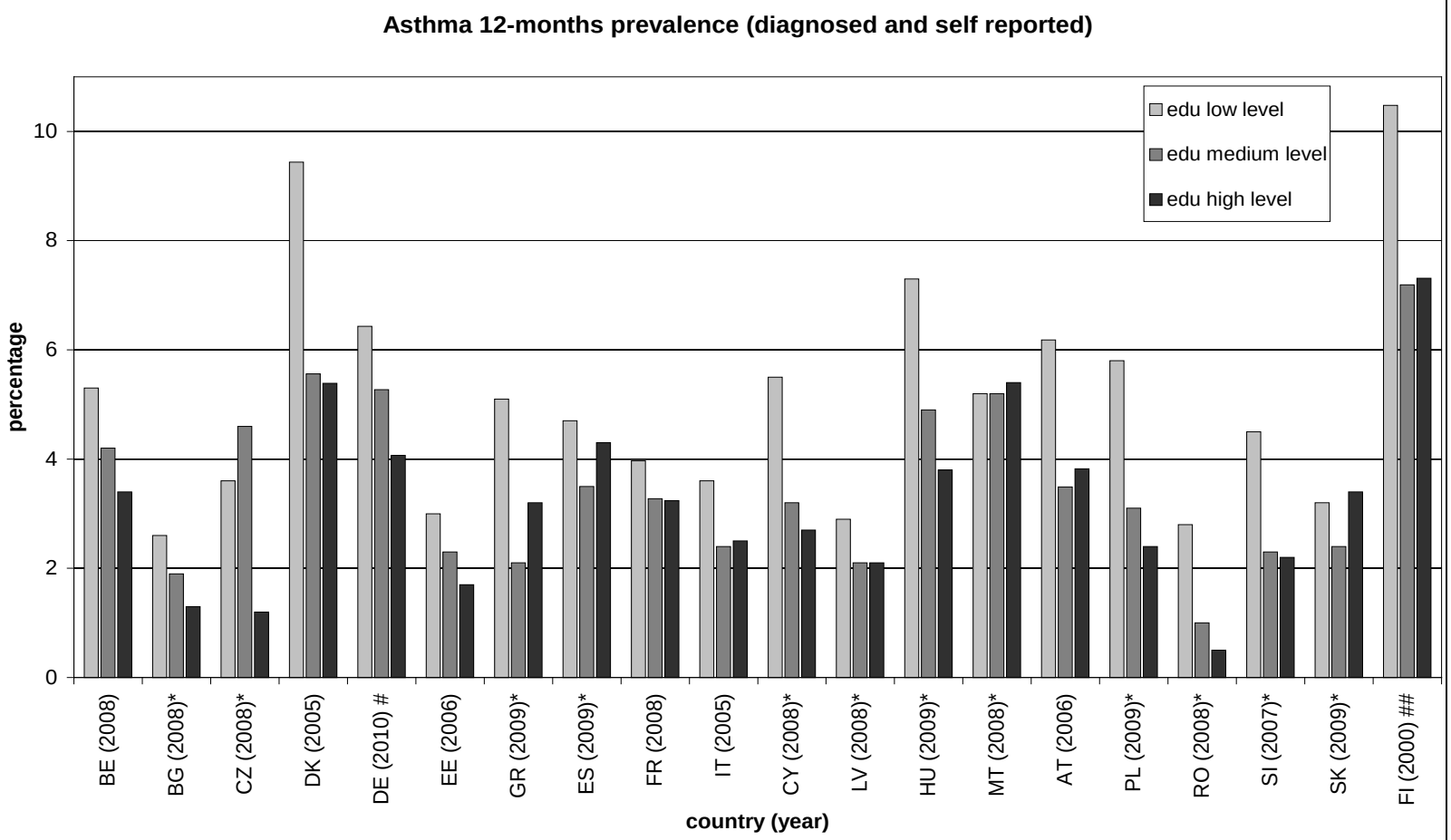


Fig.1.3.5.2	Asthma by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+; ## = reported but not diagnosed

C	DATA ANALYSIS
	Overall asthma prevalence percentages (total age 15+) ranges between 1.6% in Romania and 6.4% in Denmark (average 3.7%). With regard to prevalence percentages among the sexes, it is obvious that women are more affected with an average of 4.2% than men with an average of 3.2% (see Figure 1.3.5.1). The minimum and maximum prevalence rates for both sexes are reported from the same two countries as for the totals above; Denmark takes the lead while Romania brings up the rear. There seems to be a general trend that "new" EU Member States (e.g. Bulgaria, Romania, Estonia, Latvia and Slovenia) provide lower prevalence values for a number of health status indicators if compared to the "old" EU countries. (see: REMARKS) When data are interpreted by three educational levels (see Figure 1.3.5.2), a more inhomogeneous pattern is visible as with other health status indicators. The typical descending order from lower to higher educated people can be observed in 11 out of 20 countries, inter alia in Belgium, Bulgaria, Denmark, Germany, Estonia, Hungary and Poland. A varying order is reported from the Czech Republic, Greece, Spain, Malta, Austria – and most striking – from Malta. This picture is reflected in particular by the small differences among the mean values of medium educated (3.3%) and the high educated group (3.0%), while low educated persons show an average of 4.8%. Without the data from Denmark these differences would even be smaller. This indicates that the prevalence of asthma in adults seems also associated with wealth and lifestyle factors, but to a more complex extent like it could be concluded for diseases such as Diabetes and COPD.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in EHIS wave 1 and their data were obtained from Eurostat calculations. The remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] NB: The Finnish data do not comply with the ECHI-definition of diagnosed cases and originate from the year 2000. In the following, the data of Finland will neither be considered nor computed.

	For ECHI#26, it was not differentiated between the allergic and non-allergic forms of asthma. The allergic asthma dominates in children (which have not been covered by EHIS), while 30-50% of adult asthmatics suffer from the non-allergic type, often provoked by respiratory infections. Finally, there are also mixed forms of allergic and non-allergic asthma. [2]. The President of the European Federation of Allergy and Airways Diseases Patients' Associations (EFA) gave a summary of the *Global Burden of Asthma* report and commented in 2004 that in the 20 years from the mid 1970s to the mid 1990s, the prevalence of asthma in children rose by 200%.[3] Asthma prevalence in Europe varies widely, from 18.4% in Scotland to 2.3% in Switzerland. Key findings for EU included: • The United Kingdom has amongst the highest prevalence of asthma in the world, with asthma occurring in 16% of the population • During the next decade the increase in prevalence of asthma is likely to be particularly marked in the former socialist countries and the Baltic region, as these communities increasingly adopt the Western lifestyle. The phenomenon of the quite low prevalence percentages in "new" EU countries may be explained with the on-going transitional processes of national health care systems if compared with core EU countries, and a general limited access to health care services. A glance at Eurostat's EU SILC indicator 08 [4] "People with unmet needs for medical examination by sex, age, reason and income quintile (%)" provides the information that particular persons belonging to the lower three income quintiles report large financial barriers in the mentioned "new" Member States. So people might suffer from certain types of asthma but can neither afford MD consultations (therefore no diagnoses) nor suitable medications. If largely privatised health systems and severe out-of-pocket expenditures exclude the poor from adequate health care provision, it poses a challenge for fighting health inequalities throughout the European Union, too. Since the lowest prevalence percentages of health status indicators are mostly reported from eastern European and Baltic countries, it will be interesting to follow future developments of asthma prevalence. The next EHIS is planned for 2014, but also administrative sources or smaller projects could throw some light on the above stated association [3] between western lifestyle and asthma.

Administratively deduced and register-based data on asthma (data not shown) were delivered from the Czech Republic, Hungary, Lithuania, The Netherlands, Finland, and the United Kingdom, although the latter delivered estimates on totals of 6%. The UK data represent the number of individuals on General Practice asthma registers, excluding patients with asthma who have been prescribed no asthma-related drugs in the previous twelve months, as extracted from the Quality and Outcomes Framework (QOF) [5]. The different underlying methodologies might explain the strong discrepancy of figures provided by the EFA [3].
Comparisons with survey data are only possible for the Czech Republic and Hungary.

Breakdown/ Country (year)	Percentage CZ (2009)	Percentage HU (2008)
Total	3.7	2.8
Men	3.4	2.4
Women	4.0	3.0

While the latter reported data from the year 2008, which are about 30-50% below the survey results of 2009, the Czech data come close to the survey-based prevalence percentages.

An interesting aspect of the administratively deduced data on asthma is the fact that it could also deliver prevalence data of the age group 0-14 years, which was excluded from EHIS. In all countries figures for children take the lead and show the impact of predominantly allergic induced asthma, as there is a general trend of increasing allergic ailments in western societies.
The reasons for this increase are still under discussion [2] and comprise inter alia genetic predispositions, the impact of industrialised food production and rising consumption (convenience food, hundreds of additives) and exaggerated hygiene measures in the domestic / family environment, which both can trigger typical allergic asthma reactions.

[1a+b] EHIS description
http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data:
http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011.

	[2] ERS European Lung White Book- Sample chapter on Asthma, Nov. 25, 2003, Brussels; http://dev.ersnet.org/268-white-book.htm [3] New European Asthma figures released in Global Report - Failure in Asthma Management reported by Asthma Experts; EFA-Asthma, press release, Belgium 2004; http://www.efanet.org/enews/documents/BurdenofAsthmainEuropeFactSheet_140504.doc [4] Eurostat database, health_silc_08: "People with unmet needs for medical examination by sex, age, reason and income quintile (%)"; http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_silc_08&lang=en [5] The Quality and Outcomes Framework (QOF); http://www.ic.nhs.uk/statistics-and-data-collections/audits-and-performance/the-quality-and-outcomes-framework and most recent data within " Quality and Outcomes Framework Achievement Data 2009/10", NHS, © 2010, The Health and Social Care Information Centre; http://www.ic.nhs.uk/webfiles/QOF/2009-10/QOF_Achievement_Prevalence_Bulletin_2009-10_v1.0.pdf **→ all source URLs lastly accessed on June 05 2012**

1.3.6 ECHI# 27 Chronic obstructive pulmonary disease (COPD)

ECHIM Indicator name	**B) Health status** 27. COPD (chronic obstructive pulmonary disease): 12 months prevalence (self-reported and diagnosed) → ECHI ID Codes: 217a01 - 217a06
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 27a.**
Definition	Proportion of individuals reporting to have ever been diagnosed with chronic obstructive pulmonary disease (COPD) and to have been affected by this condition during the past 12 months.
Calculation	Proportion of individuals reporting to have ever been diagnosed with chronic obstructive pulmonary disease (COPD) and to have been affected by this condition during the past 12 months, derived from European Health Interview Survey (EHIS) questions HS.4/5/6: HS.4: Do you have or have you ever had any of the following diseases or conditions? 2. Chronic bronchitis, chronic obstructive pulmonary disease, emphysema (yes / no). If yes: HS.5: Was this disease/condition diagnosed by a medical doctor? (yes / no). HS.6: Have you had this disease/condition in the past 12 months? (yes / no). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-64, 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	COPD is a high-burden disease causing disability and impairing quality of life, as well as generating high costs. COPD is among the leading causes of chronic morbidity and mortality in the EU. Prevention is partly possible and treatment can be quite effective. Tobacco smoking is the major risk factor for COPD.

B	DATA PRESENTATION
Table 1.3.6	See: Annex III
Fig. 1.3.6.1	**COPD by sex and age groups**

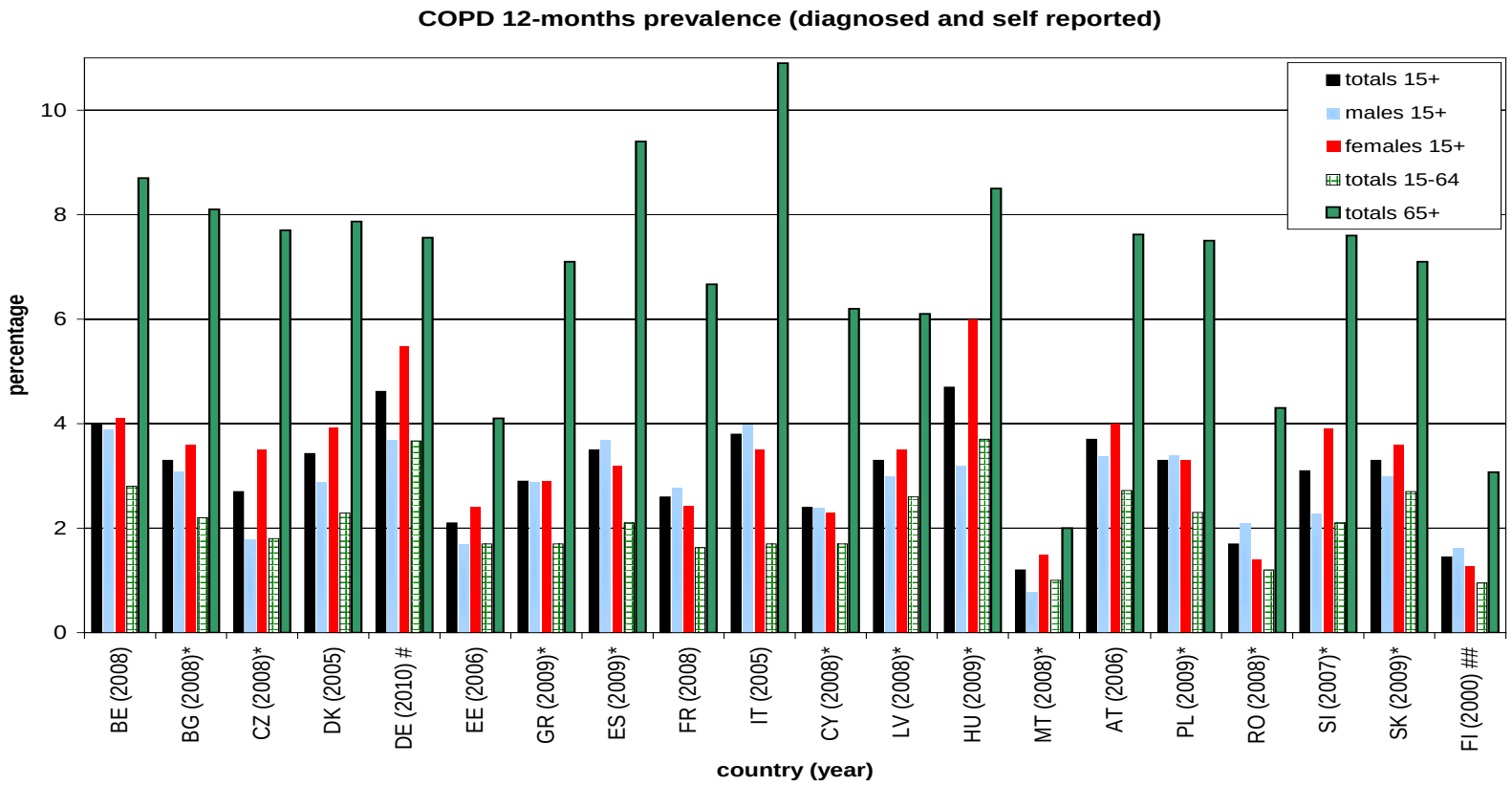
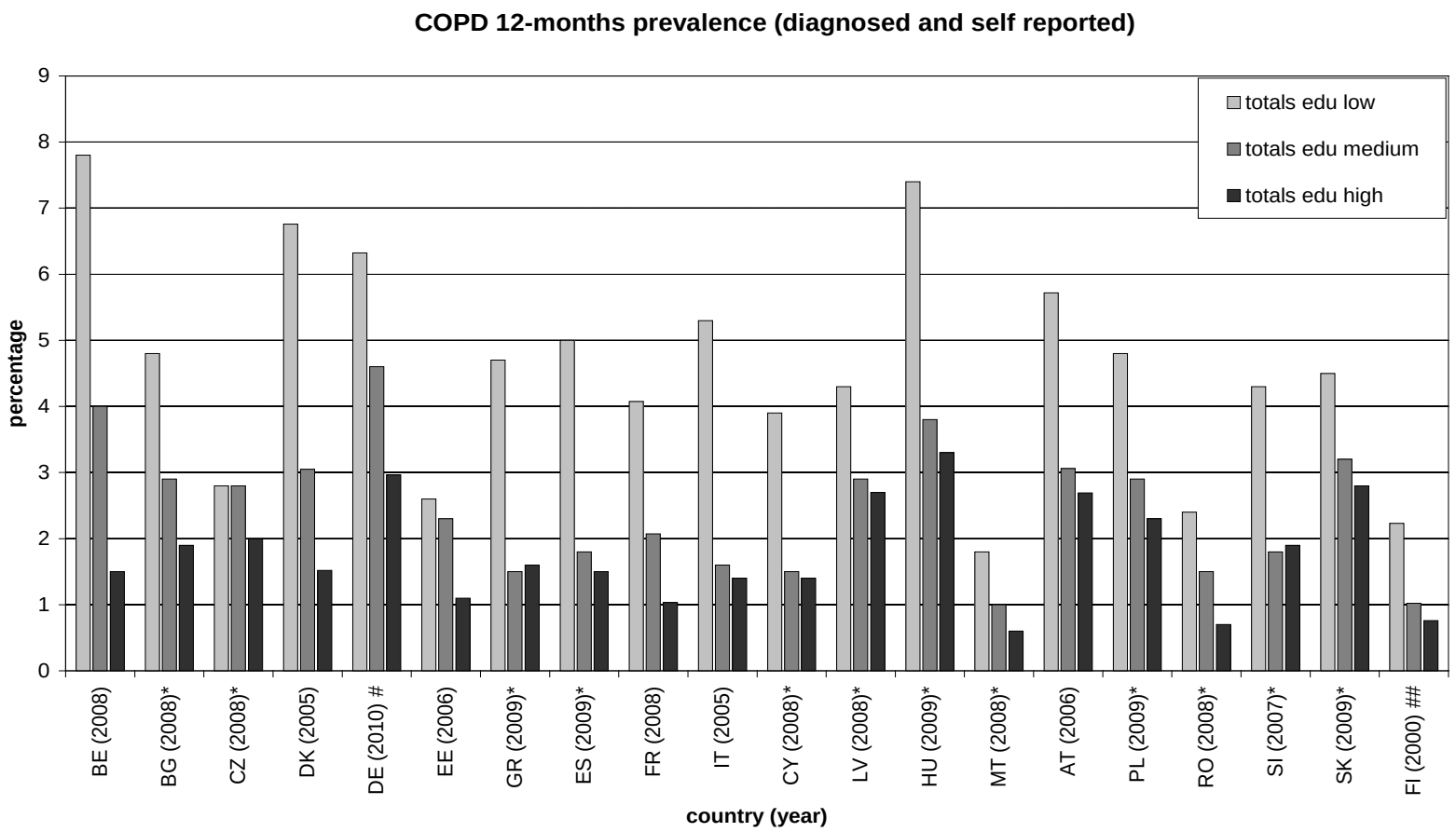
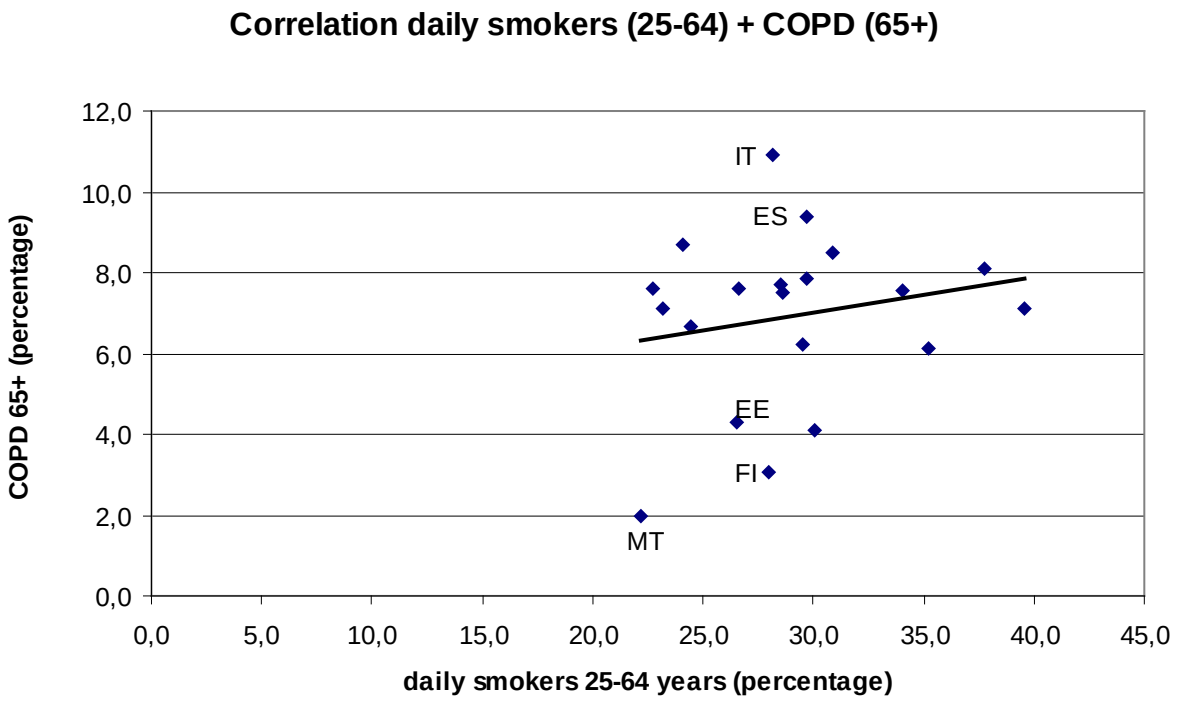


Fig.1.3.6.2	COPD by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+ and asked for "chronic bronchitis" only; ## = age is 30+

C	DATA ANALYSIS
	Overall COPD prevalence percentages (total age 15+) range between 1.2% in Malta and 4.7% in Hungary (average 3.1%). With some exceptions, there is a general trend that women (total average 3.4%, maximum 6% in Hungary) seem to be affected more often than men (mean 2.8%, maximum 4% in Italy) (see Figure 1.3.6.1). Among the age group of 15-64 years, prevalence percentages are usually much lower (range 1.0% in Malta to 3.7% in Hungary, average is 2.2%) when compared with the elderly persons aged 65+ (range 2.0% again in Malta to 10.9% in Italy, average is 7.1%). The circumstance of the prevalence percentages of the elderly being two to three times higher than any other strata can be explained by major risk factors like smoking, occupational smoke and dust exposure or intense air pollution. The first two health hazards usually come along with a long period of latency if exposure persists. Since there were many beneficial measures in the field of occupational safety such as protection masks and air filters / improved ventilation in the last decades, the main risk factor in Europe remains tobacco smoking. An "artificial correlation" between regular smokers within the age group of 25-64 years and the occurrence of COPD in elderly has been attempted and can be seen in Figure 1.3.6.3. This correlation is somewhat constructed because it is not based on a cohort study of smoking individuals with the outcome COPD. With the data of a cross-sectional (E)HIS study it is simply assumed that the current smokers remain smokers until 65+ years with COPD as outcome variable which is not valid to compare different individuals at the same point in time. As can be drawn from Figure 1.3.6.3, there is some form of positive correlation, but also a number of outliers which distort the overall "constructed correlation" as expected. When data are interpreted by three educational levels (see Figure 1.3.6.2), there is clear evidence that prevalence percentages are highest among the lower educated people with an average of 4.7% and a minimum of 1.8% in Malta and a maximum of 7.8% in Belgium. The means for medium and high educated persons are 2.5% and 1.8%, respectively. This is a visible educational descent of prevalence percentages from lower to higher educated individuals, with slight exceptions in the Czech Republic and in Slovenia. The descent gradient resembles the patterns observed also for other health status indicators (e.g. diabetes and asthma), and again it must be taken into account that elderly people mainly hold lower educational degrees and are predominantly part of the 65+ years strata (good examples: Belgium and Hungary).

Fig. 1.3.6.3	Correlation between daily smokers (25-64 years) and COPD in individuals 65+
	
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the EHIS wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] NB: The Finnish data do not comply with the ECHI- definition and originate from the year 2000. In the following, the data of Finland will neither be considered nor being part of the computation.

Administratively deduced and/or register-based data on COPD were delivered from the Czech Republic, Hungary, Lithuania, The Netherlands, Finland, and the United Kingdom, whereas the latter delivered only data on totals. Comparisons with survey data are only possible for the Czech Republic and Hungary.

Hungary provided administrative data which were consistently above the survey-reported data (approx. 20-50%). Data from the Czech Republic were in the majority much closer to the survey results (10-20%), sometimes nearly equal (7.7% vs. 7.5% for individuals aged 65+) and sometimes slightly below (2.2% vs. 3.5% for total females) the survey prevalence percentages.
These discrepancies might be explainable with different coding procedures and the age-standardisation of register- data.

Breakdown/ Country (year)	Percentage CZ (2009)	Percentage HU (2009)
Total	2.43	3.16
Men	2.71	3.38
Women	2.23	2.96
Individuals aged 15-64	2.04	2.46
Individuals aged 65+	7.50	7.91

When looking into literature, different approaches with regard to define COPD in terms of ICD codes are being applied. Commonly, however, ICD-10 codes [2] J40-J44 are being used to describe COPD as an "umbrella condition", including the different disease entities chronic bronchitis and lung diseases like emphysema, obstructive asthma and other chronic lower respiratory diseases. That may have an impact on disease coding and subsequently the extractions from clinical records / insurance data and matching of data sources, besides the coverage of the total population.

In the ECHIM pilot data collection, each Member State decided for itself which is (are) the best data source(s) for calculating the register based estimates. Given the fact that not in all MS the health information system is well aligned with the health care system, there must be some limitations to the intra- and inter-comparability of national estimates.

	Regarding the various national health interview surveys, it is not known how many people are familiar with the term COPD as abbreviation of 'chronic obstructive pulmonary disease' in order to give the appropriate answers, respectively whether the term COPD is used in the questionnaires at all. For example, in Germany, participants were asked about "chronic bronchitis" (ICD-10: J41-J42) only.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] ICD-10, WHO Version: 2010; Chapter X: Diseases of the respiratory system, ICD- J40-J47 Chronic lower respiratory diseases; http://apps.who.int/classifications/icd10/browse/2010/en#/J40-J47 **→ all source URLs lastly accessed on June 05 2012**

1.3.7. ECHI# 29 A-1 Injuries: home, leisure, school

ECHIM Indicator name	**B) Health status** 29 (A-1). Injuries_ home, leisure, school (self-reported incidence) → ECHI ID Codes: 220a01-220a09
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 29a.**
Definition	Proportion of individuals reporting to have had an accident at home, during leisure activities, and/or at school during the past 12 months, which resulted in injury.
Calculation	Proportion of individuals reporting to have had a home and leisure accident during the past 12 months, derived from EHIS question HS.7: In the past 12 months, have you had any of the following type of accidents resulting in injury (external or internal)? 3. Accident at school, and 4. Home and leisure accident (yes / no). Respondents answering yes to either or both of the above mentioned HS7 answering categories should be added. EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6) - Region (according to ISARE recommendations; see data availability)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Annually, in the EU more than 60 million people receive medical treatment for an injury, from which an estimated 7 million are admitted to hospital. Two-thirds of all injuries occur in home and leisure environments - a trend that is on the increase across Europe. Detailed injury data (in particular on external circumstances as activities, settings, products involved) makes it possible to develop prevention measures, monitor injury trends, prioritise issues, guide policies and evaluate the success of interventions designed to reduce injuries.

B	DATA PRESENTATION
Table 1.3.7	See: Annex III
Fig. 1.3.7.1	**Injuries at home, leisure or school by sex and age groups**

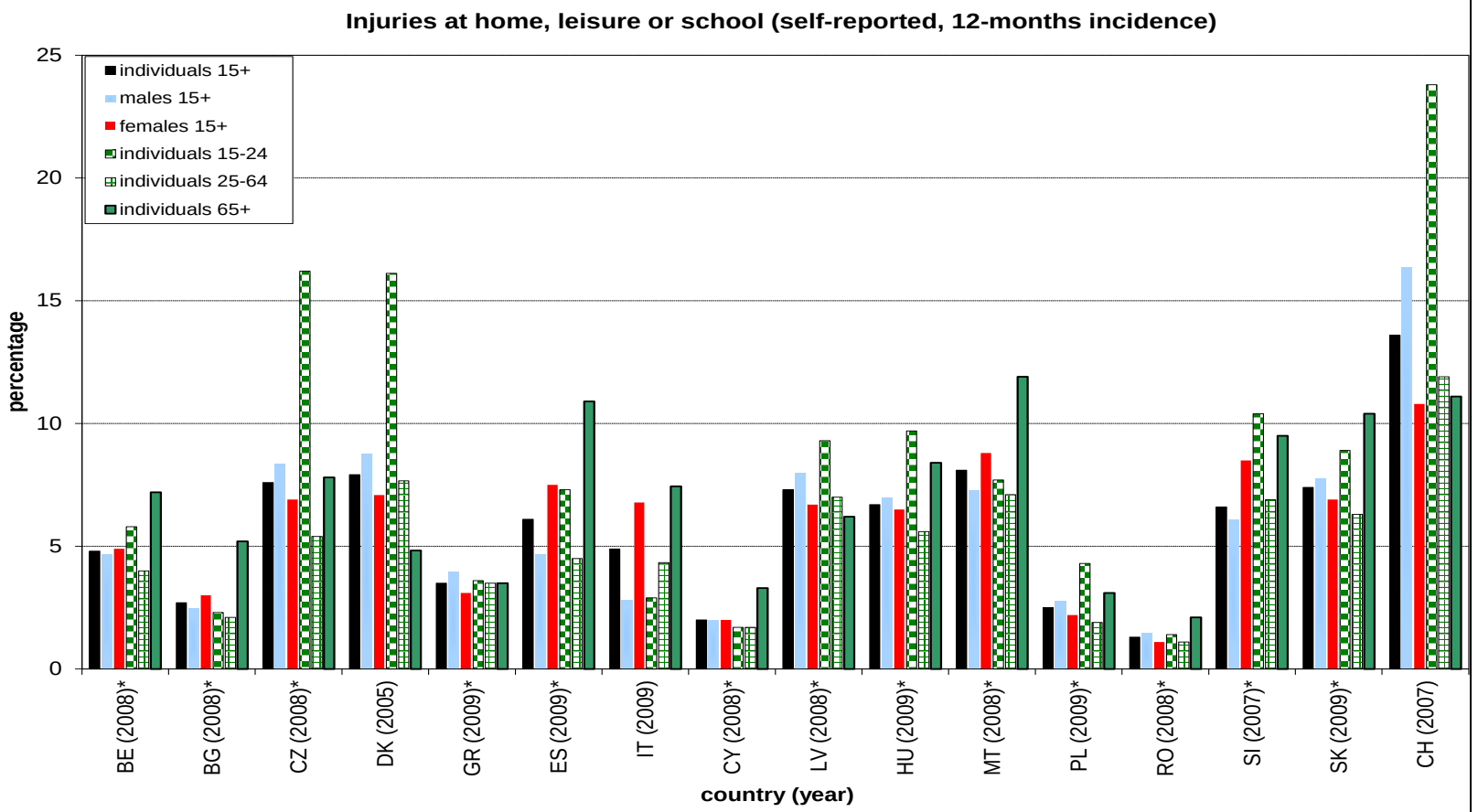
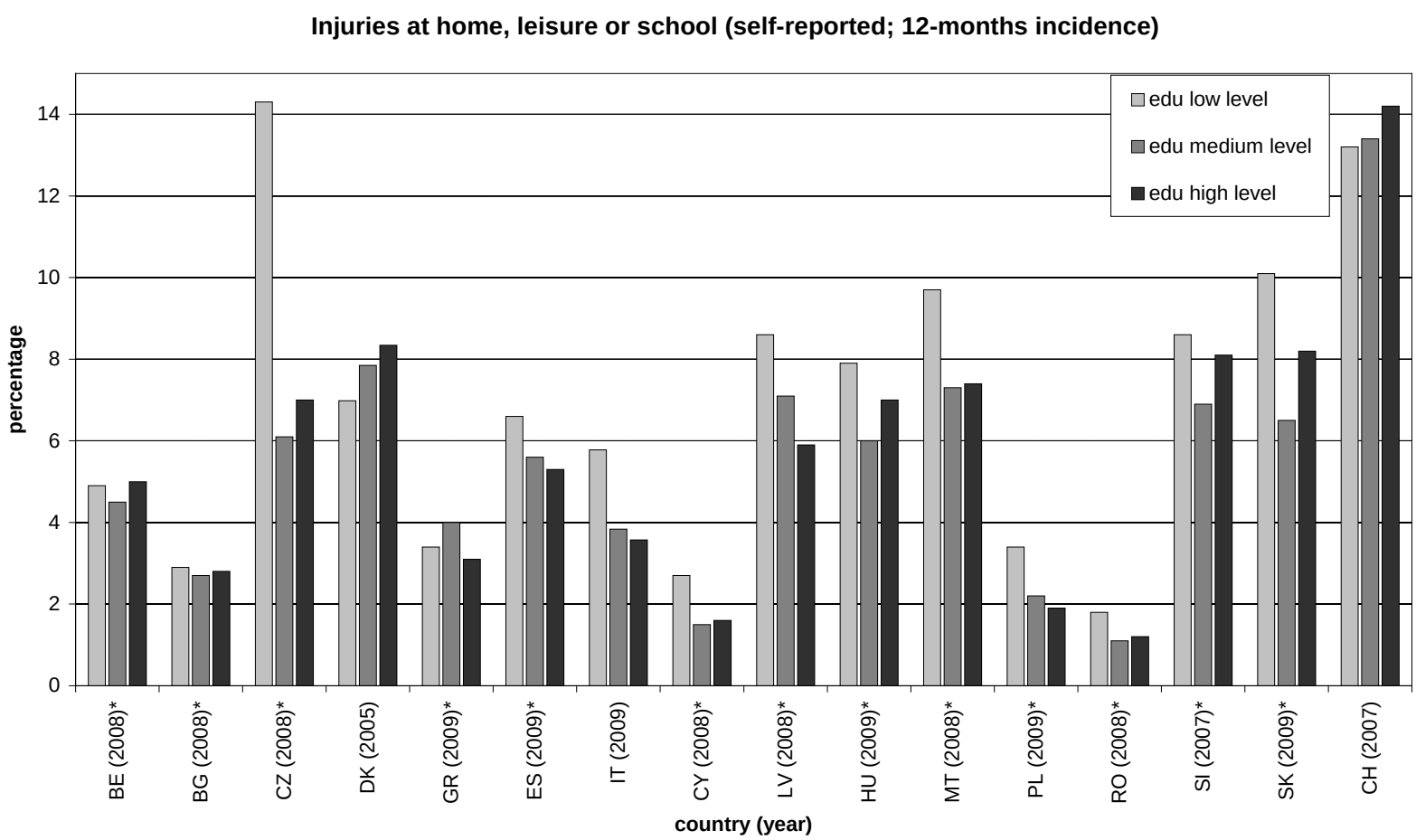


Fig. 1.3.7.2	Injuries at home, leisure or school by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011

C	DATA ANALYSIS
	The 16-country average incidence proportion (total age 15+) of accidents at home, during leisure or at school resulting in injury during the past 12 month is 5.8% with a range between 1.3% in Romania and 13.6% in Switzerland. No substantial gender differences in the estimates can be observed in most countries. The average incidence proportion amounted to 5.9% (range 1.5-16.4%) for men and 5.8% (1.1-10.8%) for women, respectively (see Figure 1.3.7.1). Among individuals aged 15-24 years, average incidence proportion of being injured as a cause of a home, leisure or school accident amounts to 8.2% (range 1.4-23.8%). Therefore, this age group seems particular prone to accidents. The corresponding incidence proportion among the 25-64 aged is 5.1% (1.1-11.9%) which is substantially lower compared to the age group 15-24 years. In the retirement age group (65+ years) the average incidence proportion of 7.1% (2.1-11.9%) rises due to old age again. In the cross-country comparison, Romania, Cyprus, Poland, and Bulgaria report the lowest incidence proportions which are less than half as high as the 16-country average and Switzerland leads the statistic. Differences might be attributable, in part, to cultural differences (social bias, underreporting, and see Section 4. REMARKS) or methodological issues (use of different data sources or instruments, translation issues, sampling effects, etc.). When data are interpreted by three educational levels (see Figure 1.3.7.2) in ten out of sixteen countries the incidence proportion is highest in the lowest education stratum. The corresponding incidence proportions are 6.9% (range 1.8-14.3%) for the lower, 5.4% (1.1-13.4%) for the intermediate and 5.7% (1.2-14.2%) for the upper education stratum. Only exception from this general trend is reported for Denmark where the prevalence is higher in the intermediate and upper education strata compared to the lower stratum.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b].

	Compared to the EHIS, in Switzerland a different assessment strategy was applied by assessing home and sports accidents in separate categories and adding the incidences together in a next step. Since Switzerland is famous for its alpine sport activities throughout the year, the number of sport-related accidents may indeed be larger than in other countries. This may explain, in part, why the incidence proportions of Switzerland are higher compared to those of other countries. The prevention of home and leisure accidents has been a major Public Health concern in the European Union (EU) for many years. In 1981, the European Commission (EC) first published a proposal to establish a European Home and Leisure Accident Surveillance System (EHLASS). In 1986, data collection for the EHLASS started. In 1995, some Member States (MS) began to select their data for the EHLASS from selected Accident and Emergency (A&E) departments, which was financially supported by the EC until 1997 [2]. In 1999, DG Health & Consumers set up the “EU Injury Database” (IDB) as a part of the EC Injury Prevention Program in order to provide central access to the data collected in the MS under the EHLASS program [3, 4]. So far, IDB was the only data base available to develop accident prevention strategies for the EU [5]. The EHIS questions on “home, leisure, school accidents resulting in injury” allow for the first time to report cross-nationally comparable incidence proportions of accidents on an EU level based on country-wide randomly selected samples. The advantage of the EHIS data compared to hospital data is that in addition to accidents which resulted in injury for which “medical treatment was sought” also injuries are assessed for which “no medical treatment was sought” and that injury correlates can be examined linking the accident information to other items assessed in EHIS. Comparing the presented ECHIM accident information with IDB statistics, similar patterns can be observed. For instance, the cross-national average incidence proportion of “home, leisure, school accidents resulting in injury” is about three times as high as the average incidence proportion of “road traffic accidents resulting in injury”. This complies with the IDB findings published in the latest “2009 Report: Injuries in the European Union” which shows that most injuries due to accidents in the EU (2005-2007) occurred in a home or leisure time setting [6].

	Moreover, the observation that in most countries the highest incidence proportions of accidents resulting in injury can be observed among adolescents, young adults and the elderly is in accordance to findings of other studies [6, 7]. The presented finding that there is no difference between men and woman should be investigated stratified by age group more in detail in further studies, since other studies showed that in younger age groups men show a higher accident rate than women, whereas in older age groups women show a higher rate than men [8].
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Mulder S, Rogmans WHJ. The evaluation of the European home and leisure accident surveillance system. Journal of Safety Research. 1991; 22 (4):201-10. [3] European Association for Injury Prevention and Safety Promotion (EuroSafe). EU Injury Data Base. http://www.eurosafe.eu.com/csi/eurosafe2006.nsf/wwwVwContent/I2injurydata.htm. [4] European Commission: HEIDI WIKI. EU Injury Database https://webgate.ec.europa.eu/sanco/heidi/index.php/EU_Injury_Database_%28IDB%29. [5] Austrian Road Safty Board (KfV): European Injury Database. Reports available from http://www.kfv.at/department-home-leisure-sports/european-injury-database/. [6] Bauer R, Steiner M. 2009 Report: Injuries in the European Union. Statistics summary 2005-2007. Austria: Austrian Road Safety Board (KfV), EuroSafe, European Commission (DG Sanco), 2009. [7] Angermann A, Bauer R, Nossek G, Zimmermann N. Injuries in the European Union. Statistics Summary 2003-2005. Austria: Austrian Road Safty Board (KfV), EuroSafe, European Commission (DG Sanco), 2007. [8] The Information Management Unit, Department of Health and Children: EHLASS Report for Ireland 2002. **→ all source URLs lastly accessed on June 05 2012**

1.3.8. ECHI# 29 A-2 Injuries: home, leisure, school (medical care required)

ECHIM Indicator name	**B) Health status** 29 (A-2). Injuries_ home, leisure, school - medical care required (self-reported) → ECHI ID Codes: 220a10-220a18
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 29a.**
Definition	Proportion of individuals reporting to have had an accident at home, during leisure activities, and/or at school during the past 12 months, which resulted in injury for which medical treatment was sought.
Calculation	Proportion of individuals reporting to have had a home and leisure accident during the past 12 months, derived from EHIS: question HS.7 and HS.8: HS.7 In the past 12 months, have you had any of the following type of accidents resulting in injury (external or internal)? 3. Accident at school, and 4. Home and leisure accident (yes / no). Respondents answering yes to either or both of the above mentioned HS7 answering categories should be added, and from these respondents the ones answering positively to HS.8 should be extracted; HS.8: Did you visit a doctor, a nurse or an emergency department of a hospital as a result of this accident? (Yes, I visited a doctor or nurse / Yes, I went to an emergency department / No consultation or intervention was necessary). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Annually, in the EU more than 60 million people receive medical treatment for an injury, from which an estimated 7 million are admitted to hospital. Two-thirds of all injuries occur in home and leisure environments - a trend that is on the increase across Europe. Detailed injury data makes it possible to develop prevention measures.

B	DATA PRESENTATION
Table 1.3.8	See: Annex III
Fig. 1.3.8.1	**Injuries at home, leisure or school for which medical treatment was required by sex and age groups**

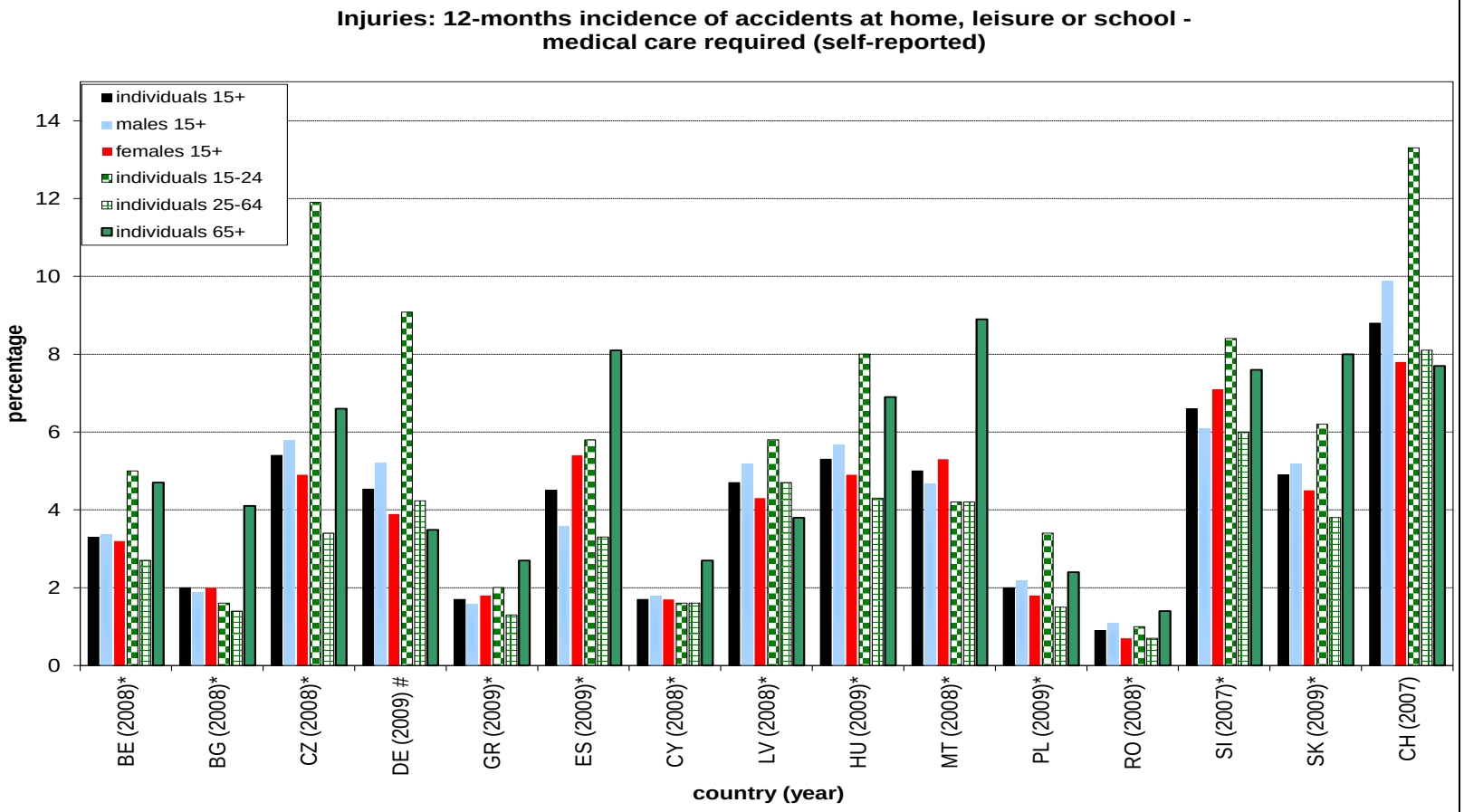
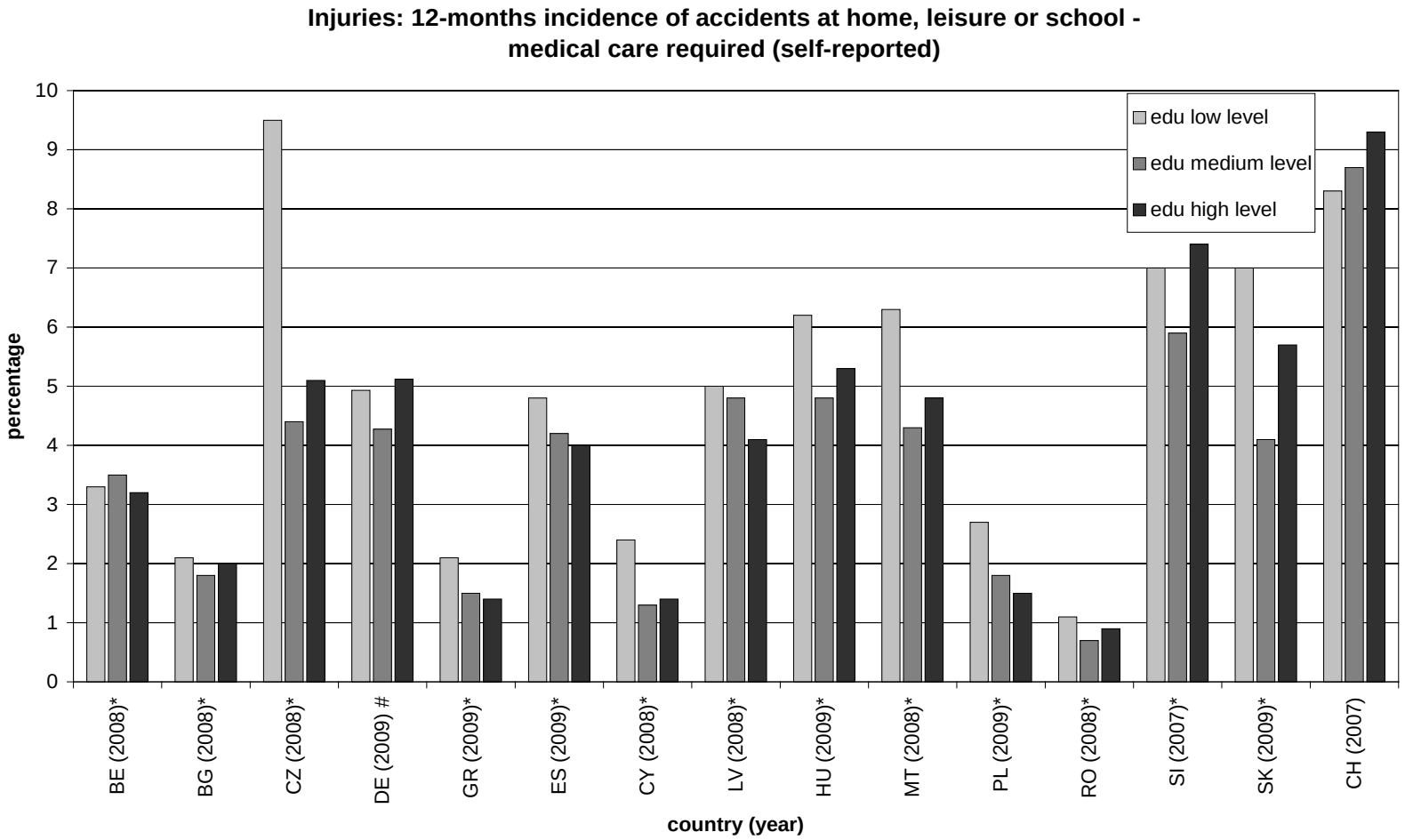


Fig. 1.3.8.2	Injuries at home, leisure or school for which medical treatment was sought by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+

C	DATA ANALYSIS
	15-country incidence proportion (total age 15+) of accidents at home, in leisure or at school during the past 12 month resulting in injury and requiring medical treatment is 4.1% with a range between 0.9% in Romania and 8.8% in Switzerland. No substantial gender differences in the estimates can be observed in most countries (see Figure 1.3.8.1). The corresponding incidence proportion amounted to 4.2% (range, 1.1-9.9%) for men and 4.0% (0.7-8.1%) for women, respectively. Among individuals aged 15-24 years, incidence proportion of seeking medical treatment as a result of a home, leisure or school accident amounts to 5.8% (range, 1.0-13.3%). The corresponding incidence proportion for the age group 25-64 years is 3.4% (0.7-8.1%) which is substantially lower compared to the age group 15-24 years. In the age group of elderly (65+ years) the incidence proportion of 5.3% (1.4-8.9%) appears to be higher again. In the cross-country comparison, Romania, Greece, Cyprus, Poland, and Bulgaria report the lowest incidence proportions and Switzerland leads the statistic. Differences might be attributable, in part, to cultural differences (social bias, underreporting, and see Section 4. REMARKS), and methodological issues (use of different data sources or instruments, translational issues, sampling effects etc.). When data are interpreted by three educational levels (see Figure 1.3.8.2), in eleven out of fifteen countries the incidence proportion is higher in the lowest education stratum compared to the incidence in the intermediated and upper education strata. The corresponding incidence proportions are 4.8% (range, 1.1-9.5%) for the low, 3.7% (0.7-8.7%) for the intermediate and 4.1% (0.9-9.3%) for the high education stratum. Only exception from this general trend is reported from Switzerland and Slovenia where the incidence proportions are higher in the upper education stratum compared to the lower stratum.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b]. Compared to the EHIS, in Switzerland a different assessment strategy was applied assessing home and sports

	accidents in separate categories and adding the incidences together in a next step. Since Switzerland is famous for its alpine sport activities throughout the year, the number of sport-related accidents may indeed be larger than in other countries. This may explain, in part, why the incidence proportions of Switzerland are higher compared to those of other countries. Detailed information on injury surveillance projects on a European level can be found in the paragraph 4 "Remarks and Further Information" of the ECHI Indicator Data Sheet # 29 A-1 (Injuries: Home, leisure, school) [2-4]. On average, for about 70% of all reported home, leisure and school accidents resulting in injury medical treatment was required. The socio-demographic patterns of injuries for which medical treatment was sought are similar to those for which no medical treatment was required (see section 4 "remarks and further information", Data Sheet # 29 A-1).
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] European Association for Injury Prevention and Safety Promotion (EuroSafe). EU Injury Data Base. http://www.eurosafe.eu.com/csi/eurosafe2006.nsf/wwwVwContent/l2injurydata.htm. [3] European Commission: HEIDI WIKI. EU Injury Database https://webgate.ec.europa.eu/sanco/heidi/index.php/EU_Injury_Database_%28IDB%29. [4] Bauer R, Steiner M. 2009 Report: Injuries in the European Union. Statistics summary 2005-2007. Austria: Austrian Road Safety Board (KfV), EuroSafe, European Commission (DG Sanco), 2007. **→ all source URLs lastly accessed on June 05 2012**

1.3.9. ECHI# 30 A-1 Injuries: road traffic

ECHIM Indicator name	**B) Health status** 30 (A-1). Injuries_ road traffic (self-reported incidence) → ECHI ID Codes: 221a01-221a09
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 23a.**
Definition	Proportion of individuals reporting to have had a road traffic accident, which resulted in injury during the past 12 months.
Calculation	Proportion of individuals reporting to have had a road traffic accident during the past 12 months, derived from EHIS question HS.7: In the past 12 months, have you had any of the following type of accidents resulting in injury (external or internal)? 1. Road traffic accident (yes / no). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	The EU IDB estimates that road injuries account for 10% of all hospital treated injuries or a total of 4.3 million victims annually. Though preventive measures have been proven effective, resulting in declining incidence rates, large health gains can still be achieved and inequalities between Member States can still be diminished.

B	DATA PRESENTATION
Table 1.3.9	See: Annex III
Fig. 1.3.9.1	**Road traffic injuries by sex and age groups**

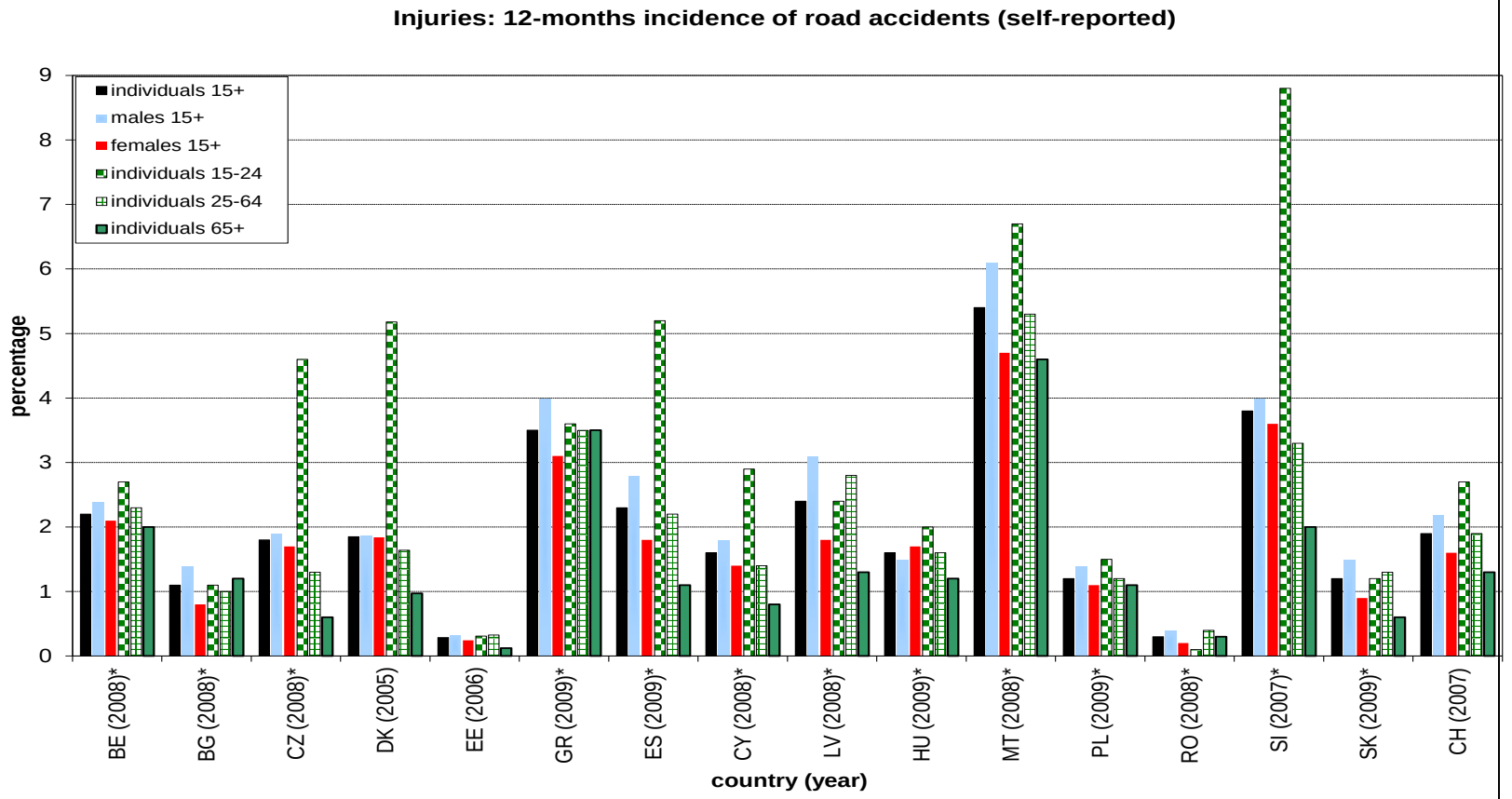
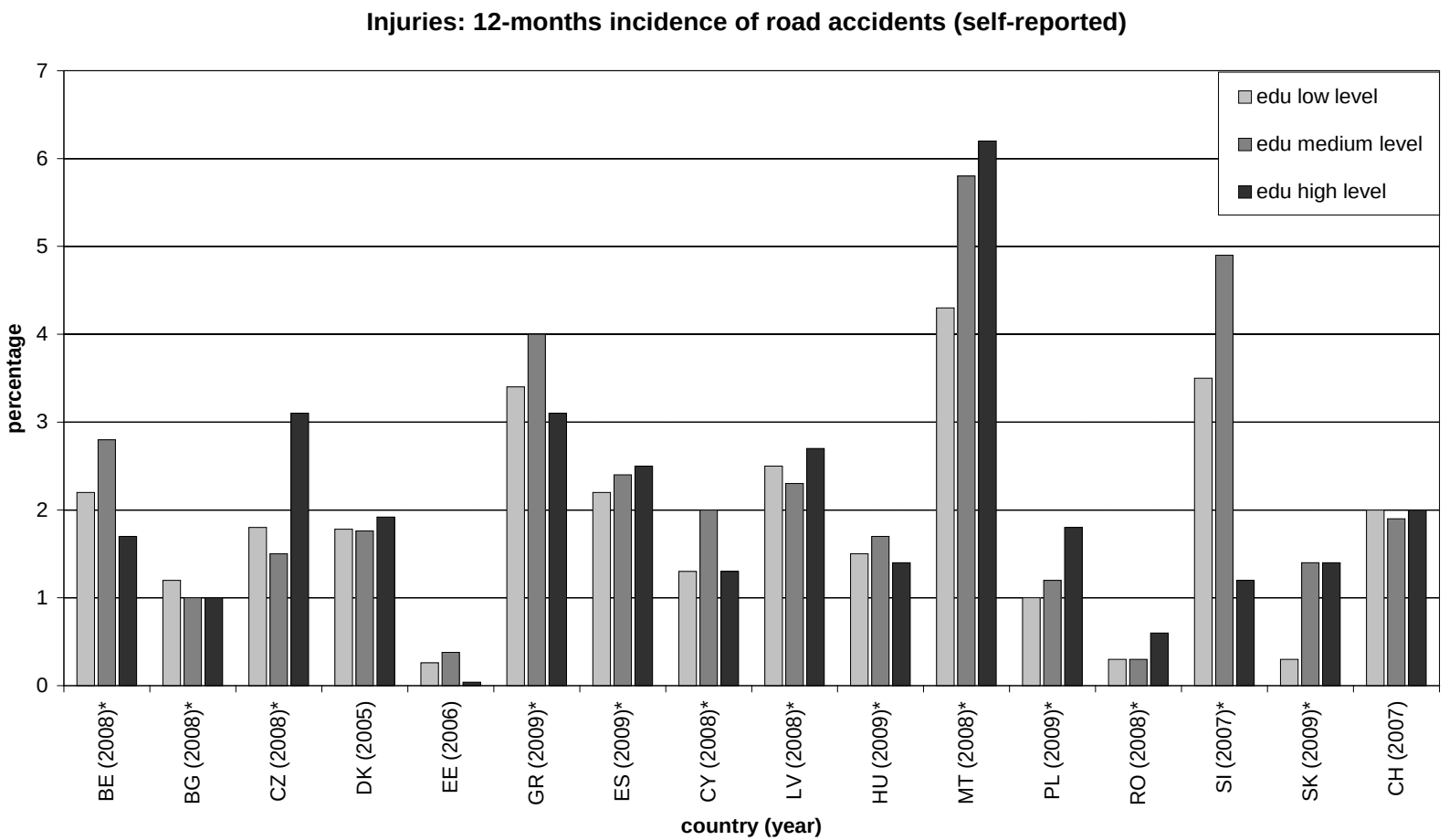


Fig. 1.3.9.2	Road traffic injuries by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011

C	DATA ANALYSIS
	The 16-country average incidence proportion (total age 15+) of road traffic accidents resulting in injury during the past 12 month is 2.0% with a range between 0.3% in Estonia and 5.4% in Malta. In most countries, the incidence is higher among men compared to women (see Figure 1.3.9.1). The 16-country average incidence proportion amounted to 2.3% (range, 0.3-6.1%) for men and 1.8% (0.2-4.7%) for women, respectively. Among individuals aged 15-24 years, the average incidence proportion of road traffic injury is 3.2% (range, 0.1-8.8%). The corresponding incidence proportion among the 25-64 aged is 2.0% (0.3-5.8%) which is substantially lower compared to the youngest age group. In the elderly age group (65+ years) the average incidence proportion of 1.4% (0.1-4.6%) is the lowest of the three age strata. In the cross-country comparison, Romania, Bulgaria, Slovakia, and Poland report the lowest incidence proportions which are about half as high as the 16-country incidence average and Malta leads the statistic. Differences might be attributable, in part, to cultural differences (social bias, underreporting, and see Section 4. REMARKS) or methodological problems (use of different data sources or instruments, translation issues, sampling effects etc.). When data are interpreted by three educational levels (see Figure 1.3.9.2), no clear trend can be revealed. The corresponding incidence proportions are 1.8% (range, 0.3-4.3) for the lower, 2.2% (0.3-5.8) for the intermediate and 2.0% (0.0-6.2) for the upper education stratum. Whereas in Malta there is a clear positive education gradient on road traffic injury incidence, this trend is reversed in Slovenia.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] Detailed information on injury surveillance projects on a European level can be found in the section “remarks and further information” of the ECHI Indicator Data Sheet # 29 A-1 (Injuries: Home, leisure, school). Fatal road traffic injuries are in Europe and in the world the leading cause of death among individuals 15-29 years [2]. Therefore, a focus group of strategies for preventing road traffic accidents are adolescents and young adults.

	Successful interventions have contributed to a declining road-traffic fatality rate in the EU region in recent years. However, interventions have mainly focused on benefits of vehicle occupants and less attention has been directed to vulnerable road users such as less-protected non-motorized road users [3]. In the EU, according to hospital statistics, road traffic injury is the leading domain of fatal injuries contributing to 48% of all fatal injuries in the age group 15-24 years, whereby the rate is particularly high among young men. Thus, road traffic injuries seem to lead more often to death, compared to other injury domains such as home, leisure or sports accidents. However, sports and home and leisure accidents lead the non-fatal injury statistic in the EU followed by road traffic injuries [4, 5]. According to the ECHI road traffic injury data, the incidence proportion of non-fatal injuries is lower for road traffic accidents than it is for home, leisure and school accidents, men are more affected than women and the most vulnerable age group are individuals 15-24 years. Similar patterns have also been reported based on the statistics of the “EU Injury Database” (IDB) and WHO injury data [2, 4-5]. The EHIS questions on “road traffic accidents resulting in injury” allow for the first time to report cross-nationally comparable incidence proportions of accidents on an EU level based on country-wide randomly selected samples. The advantage of the EHIS data compared to hospital data is that in addition to road accidents which resulted in injury for which “medical treatment was sought” also injuries are assessed for which “no medical treatment was sought” and that injury correlates can be examined linking the accident information to other items assessed in EHIS.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] World Health Organization, Department of Violence & Injury Prevention & Disability (VIP). Global Status Report on Road Safety. Time for Action 2009. [3] Ameratunga S, Hijar M, Norton R. Road-traffic injuries: confronting disparities to address a global-health problem. The Lancet. 2006; 367(9521):1533-40. [4] Bauer R, Steiner M. 2009 Report: Injuries in the European Union. Statistics summary 2005-2007. Austria: Austrian Road Safety Board (KfV), EuroSafe, European Commission (DG Sanco), 2009. [5] Angermann A, Bauer R, Nossek G, Zimmermann N. Injuries in the European Union. Statistics Summary 2003-2005. Austria: Austrian Road Safty Board (KfV), EuroSafe, European Commission (DG Sanco), 2007.

1.3.10. ECHI# 30 A-2 Injuries: road traffic (medical care required)

ECHIM Indicator name	**B) Health status** 30 (A-2). Injuries_ road traffic - medical care required (self-reported) → ECHI ID Codes: 221a10-221a18
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 30a.**
Definition	Proportion of individuals reporting to have had a road traffic accident, which resulted in injury for which medical treatment was sought during the past 12 months.
Calculation	Proportion of individuals reporting to have had a road traffic accident during the past 12 months, derived from EHIS: question HS.7 and HS.8: HS.7 In the past 12 months, have you had any of the following type of accidents resulting in injury (external or internal)? 1. Road traffic accident (yes / no). If yes, select respondents who answered positively to HS.8; HS.8: Did you visit a doctor, a nurse or an emergency department of a hospital as a result of this accident? (Yes, I visited a doctor or nurse / Yes, I went to an emergency department / No consultation or intervention was necessary). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	The EU IDB estimates that road injuries account for 10% of all hospital treated injuries or a total of 4.3 million victims annually. Though preventive measures have been proven effective, resulting in declining incidence rates, large health gains can still be achieved and inequalities between Member States can still be diminished.

B	DATA PRESENTATION
Table 1.3.10	See: Annex III
Fig. 1.3.10.1	**Road traffic injuries for which medical treatment was sought by sex and age groups**

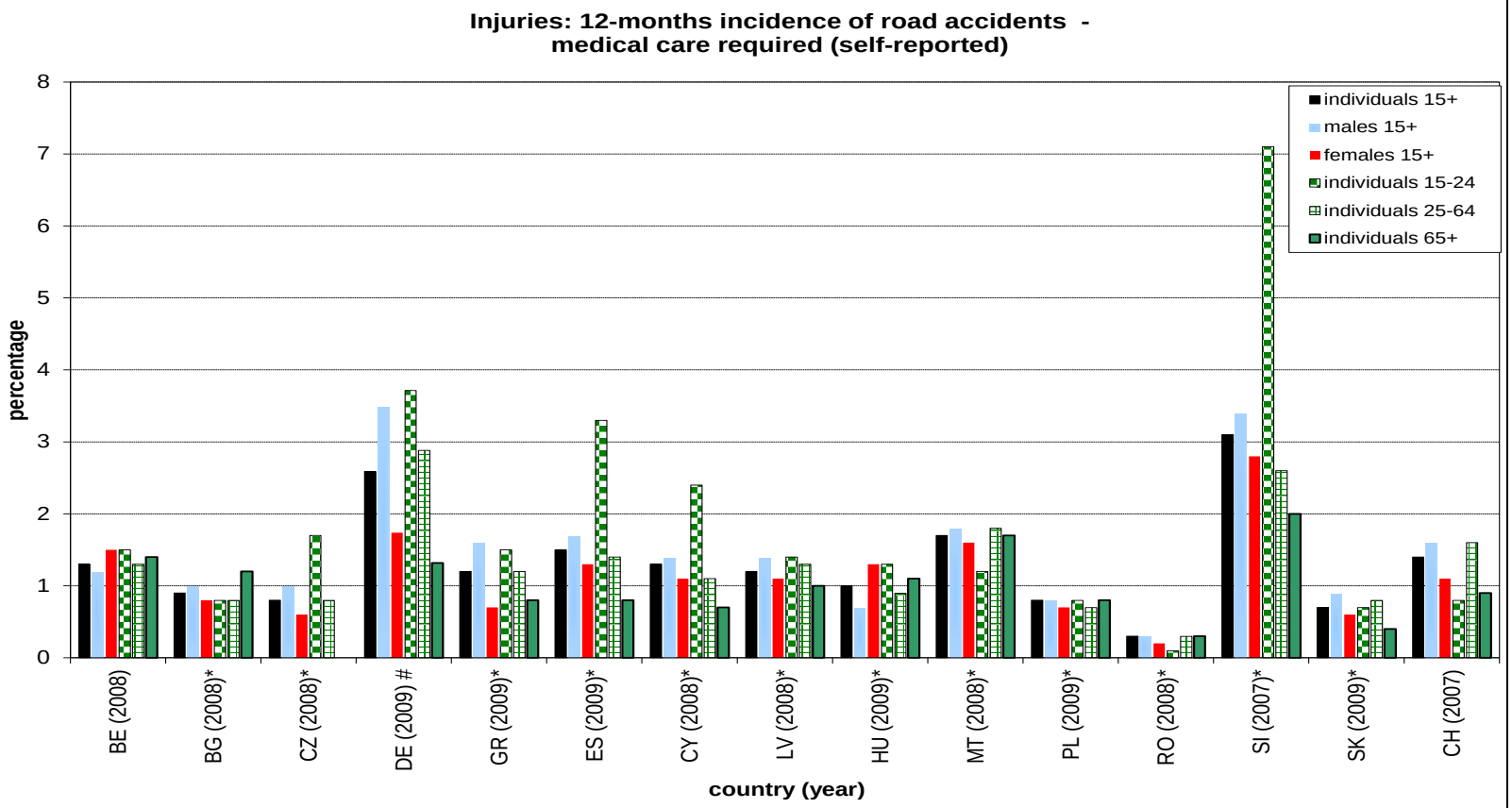
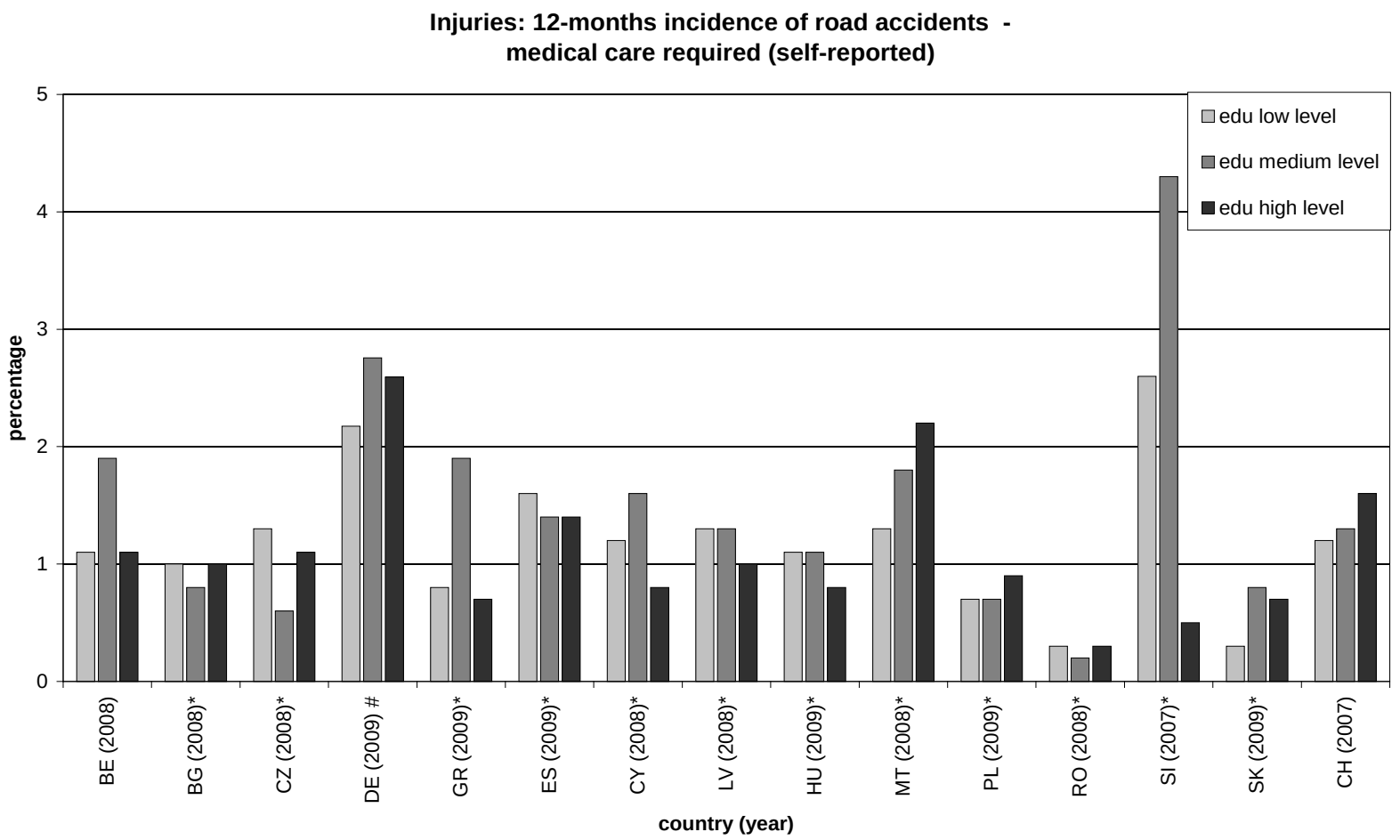


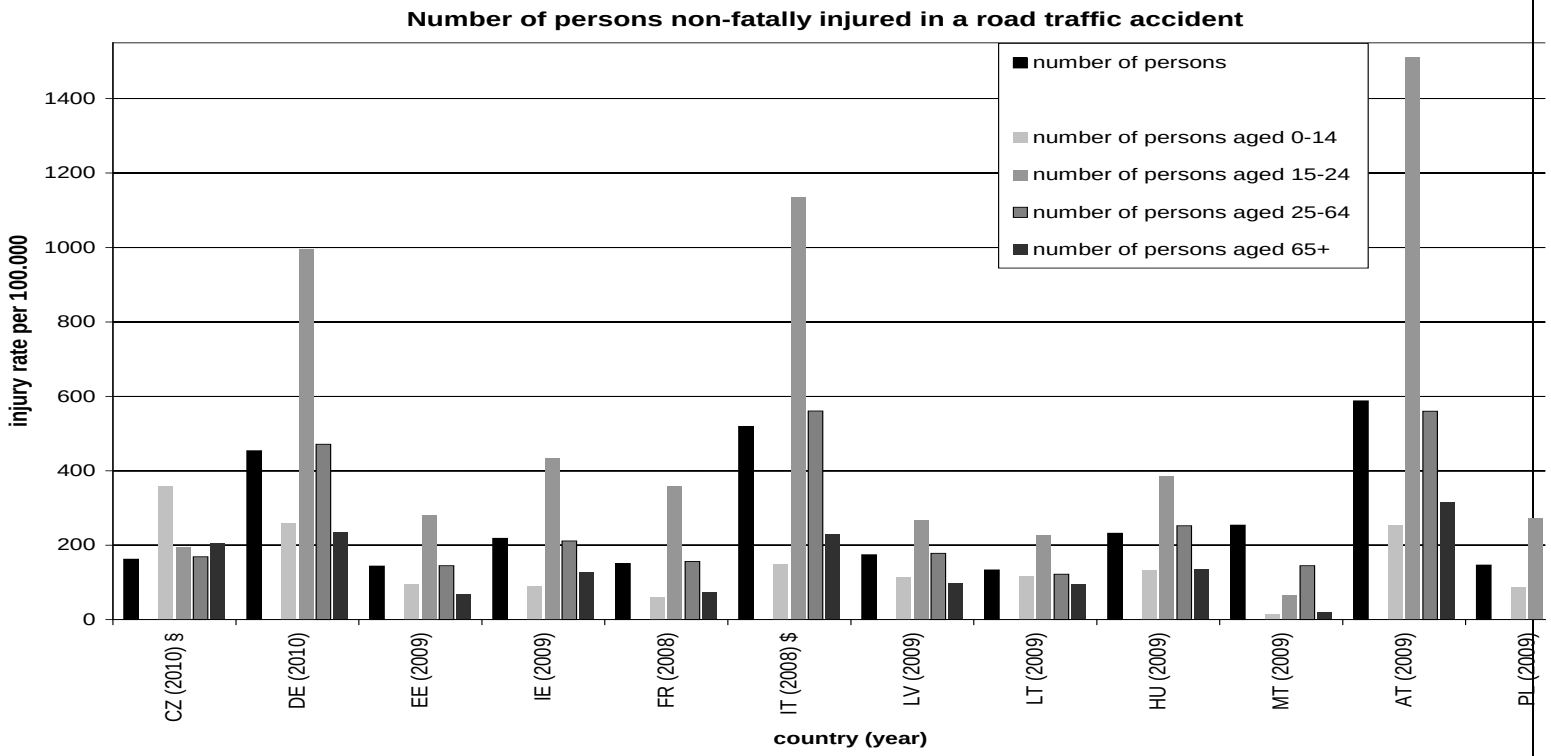
Fig. 1.3.10.2	Road traffic injuries for which medical treatment was sought by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+

C	DATA ANALYSIS
	The 15-country incidence proportion (total age 15+) of road traffic injuries for which medical treatment was sought during the past 12 month is 1.3% with a range between 0.3% in Romania and 3.1% in Slovenia. There is a trend that the incidence is higher among men as compared to women (see Figure 1.3.10.1). The corresponding incidence proportion is for men 1.5% (range 0.3-3.5%) and for women 1.1% (0.2-2.0%), respectively. Among individuals aged 15-24 years, the incidence proportion of road traffic injuries for which medical treatment was sought is 1.9% (range 0.1-7.1%). The corresponding incidence proportion among the 25-64 aged is 1.3% (0.3-2.9%) and 1.0% (0.3-2.0%) among the elderly (65+ years). Thus, the incidence proportion decreases with increasing age. In the cross-country comparison, Romania, Slovakia, Poland, Czech Republic and Bulgaria report the lowest incidence proportions and Slovenia and Germany lead the statistic. Differences might be attributable, in part, to cultural differences (social bias, underreporting, and see Section 4. REMARKS), and methodological problems (use of different data sources or instruments, translation issues, sampling effects etc.). When data are interpreted by three educational levels (see Figure 1.3.10.2), the highest incidence proportion can be observed in the intermediate education group followed by the lowest and highest group. The corresponding incidence proportion is 1.2% (range 0.2-4.3%) for the low, 1.5% (0.2-4.3%) for the intermediate and 1.1% (0.3-2.6%) for the high education stratum.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] The socio-demographic patterns of injuries for which medical treatment was required are similar to those for which no medical treatment was required (see section “Remarks and Further Information”, Data Sheet # 30 A-1). Those patterns comply with observations reported based on statistics of the “EU Injury Database” (IDB) and WHO injury data [2, 3]. On average, for about 65% of all reported road traffic accidents resulting in injury medical treatment was sought.

	The EHIS questions on “road traffic accidents resulting in injury” allow for the first time to report cross-nationally comparable incidence proportions of accidents on an EU level based on country-wide randomly selected samples. The advantage of the EHIS data compared to hospital data is that in addition to accidents which resulted in injury for which “medical treatment was sought” also injuries are assessed for which “no medical treatment was sought” and that injury correlates can be examined linking the accident information to other items assessed in EHIS.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Bauer R, Steiner M. 2009 Report: Injuries in the European Union. Statistics summary 2005-2007. Austria: Austrian Road Safety Board (KfV), EuroSafe, European Commission (DG Sanco), 2009. [3] World Health Organization, Department of Violence & Injury Prevention & Disability (VIP). Global Status Report on Road Safety. Time for Action 2009.

1.3.11. ECHI# 30 B Injuries: road traffic (register-based)

ECHIM Indicator name	**B) Health status** 30 (B). Injuries_ road traffic (register-based incidence) → ECHI ID Codes: 221b01-221b05
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 30b.**
Definition	Number of non-fatal injuries caused by a road traffic accident, per 100,000 inhabitants.
Calculation	According to UNECE methodology (see preferred source), 'injured' is defined as any person, who was not killed, but sustained one or more serious or slight injuries as a result of the accident.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (0-14, 15-24, 25-64, 65+) - Socio-economic status (if available)
Preferred data type and source	Preferred data type: Administrative sources (hospital records, police files, insurance records) Preferred source: United Nations Economic Commission for Europe (UNECE) road traffic database
Rationale	The EU IDB estimates that road injuries account for 10% of all hospital treated injuries or a total of 4.3 million victims annually. Though preventive measures have been proven effective, resulting in declining incidence rates, large health gains can still be achieved and inequalities between Member States can still be diminished.

B	DATA PRESENTATION
Table 1.3.11	See: Annex III
Fig. 1.3.11.1	**Road traffic injuries (register-based) by sex and age groups**
	
	Legend: § = Data from the registry of hospitalised persons, non-fatal cases (ICD-10: V00-V99); $ = Total number of persons injured in road accidents contains also persons with unknown age.

C	DATA ANALYSIS
	The 12-country average number of persons non-fatally injured in a road traffic accident (injury rate) is 265 per 100,000 inhabitants, with a range between 133 in Latvia and 588 in Austria. The 12-country average injury rate is 145 per 100,000 inhabitants in the age group 0-14 years, 511 in the age group 15-24 years, 270 in the age group 25-64 years and 146 per 100,000 in the age group 65+ years. Hence, in most countries the injury rate is highest among adolescents and young adults and lowest in early and late life episodes (see Figure 1.3.11.1). In the cross-country comparison, Latvia, Estonia, Poland and France report the lowest injury rates and Austria leads the statistic. Differences might be attributable, in part, to national differences (vehicle density, road conditions, speed limits, etc., and see Section 4. REMARKS) or methodological issues (use of different data sources, quality and coverage of register data, etc.).
D	**REMARKS AND FURTHER INFORMATION**
	Countries delivered their data as contribution to the ECHIM Pilot Collection. In the ECHIM pilot data collection, each EU Member State itself decided which is (are) the best data source(s) for calculating the register based estimates. Given the fact that not in all MS the health information system is well aligned with the health care system, there must be limitations to the intra- and inter-comparability of national estimates. Observed patterns related to (register-based) non-fatal road traffic injuries from the ECHIM Pilot Collection comply with observations of other studies. According to the Report on Road Safety of the World Health Organization (WHO), road traffic injuries are under the top three causes of death in the age groups 5-14 (2^{nd} rank), 15-29 (1^{st} rank), and 30-44 (3^{rd} rank) years [1]. Also the ECHIM Pilot Collection shows that the injury rate peaks in the age group 15-24 years and decreases with increasing age, which is also in accordance with the statistics of the “EU Injury Database” (IDB) [1, 2]. Comparing the “register-based” injury data with the “self-reported” injury estimates (EHIS first wave) with respect to age patterns, the age group 15-24 years shows consistently the highest accident rate compared to other age groups across the two indicator sources.

	The non-fatal injury statistic of this ECHI register-based indicator has the advantage, in contrast to the fatal injury statistics, that it provides a complete picture of the injury burden of road traffic accidents and can, for example, guide hospital staffing, doctor and nurse training, and allocation of funds for hospital admission and rehabilitation [3].
	[1] Bauer R, Steiner M. 2009 Report: Injuries in the European Union. Statistics summary 2005-2007. Austria: Austrian Road Safety Board (KfV), EuroSafe, European Commission (DG Sanco), 2009. [2] Angermann A, Bauer R, Nossek G, Zimmermann N. Injuries in the European Union. Statistics Summary 2003-2005. Austria: Austrian Road Safty Board (KfV), EuroSafe, European Commission (DG Sanco), 2007. [3] World Health Organization, Department of Violence & Injury Prevention & Disability (VIP). Global Status Report on Road Safety. Time for Action 2009.

1.3.12. ECHI# 42 Body mass index (BMI)

ECHIM Indicator name	**B) Health status** 42. Body mass index –BMI– (self-reported) → ECHI ID Codes 30101 - 30108
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 42.**
Definition	Proportion of adult persons (18+) who are obese, i.e. whose body mass index (BMI) is ≥ 30 kg/m².
Calculation	Body mass index (BMI), or Quetelet index, is defined as the individual's body weight (in kilograms) divided by the square of their height (in metres). Weight and height are derived from European Health Interview Survey (EHIS) questions BMI 01: How tall are you? (cm), and BMI 02: How much do you weight without clothes and shoes? (kg). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (18-64, 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b].
Rationale	Excessive body weight predisposes to various diseases, particularly cardiovascular diseases, diabetes mellitus type 2, sleep apnoea and osteoarthritis. Obesity is a steadily growing public health problem. Effective interventions exist to prevent and treat obesity. Many of the health risks diminish with weight loss.

B	DATA PRESENTATION
Table 1.3.12	See: Annex III
Fig. 1.3.12.1	**Proportion of adult persons whose body mass index (BMI) is ≥30 by sex and age groups.**

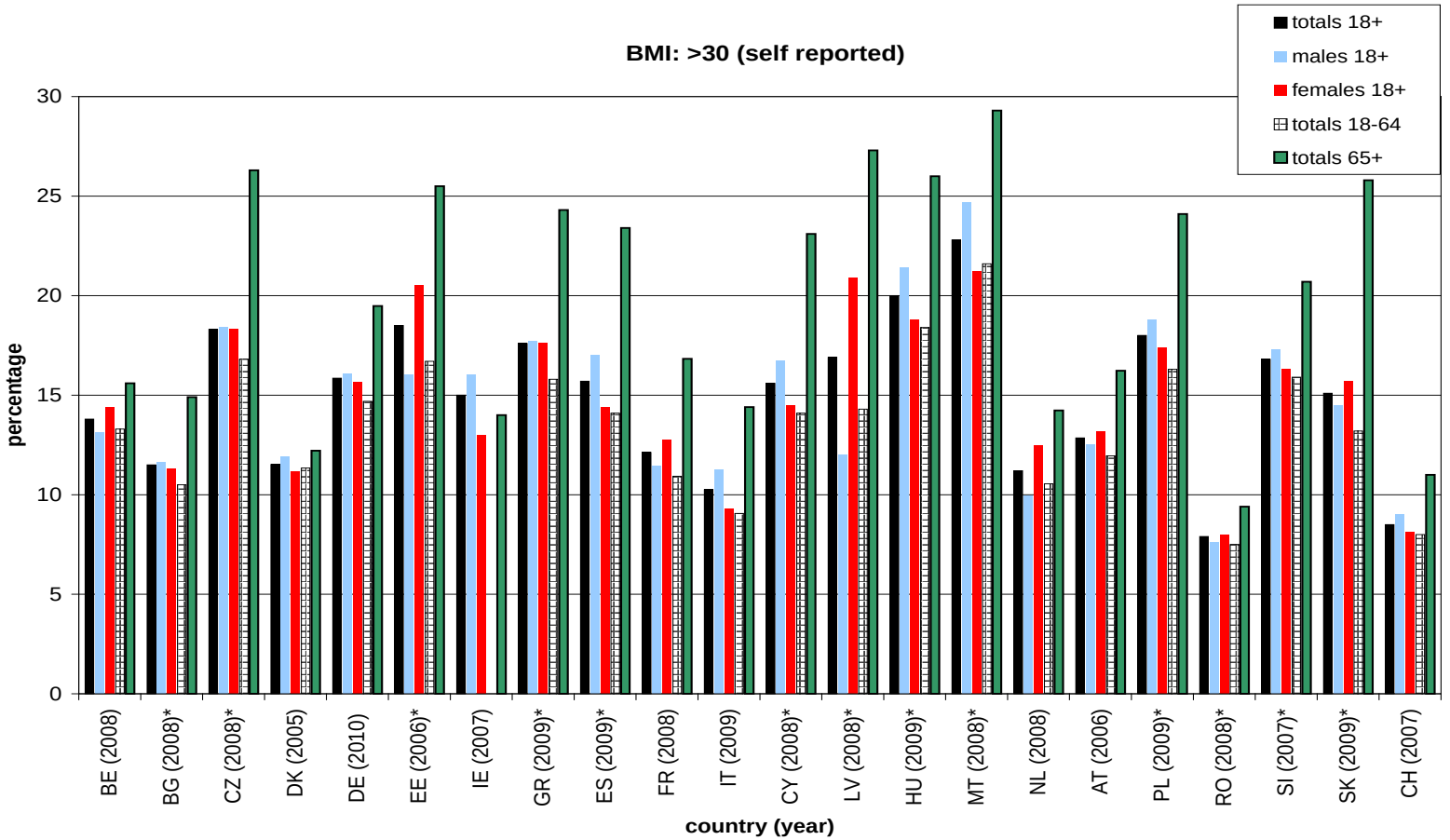
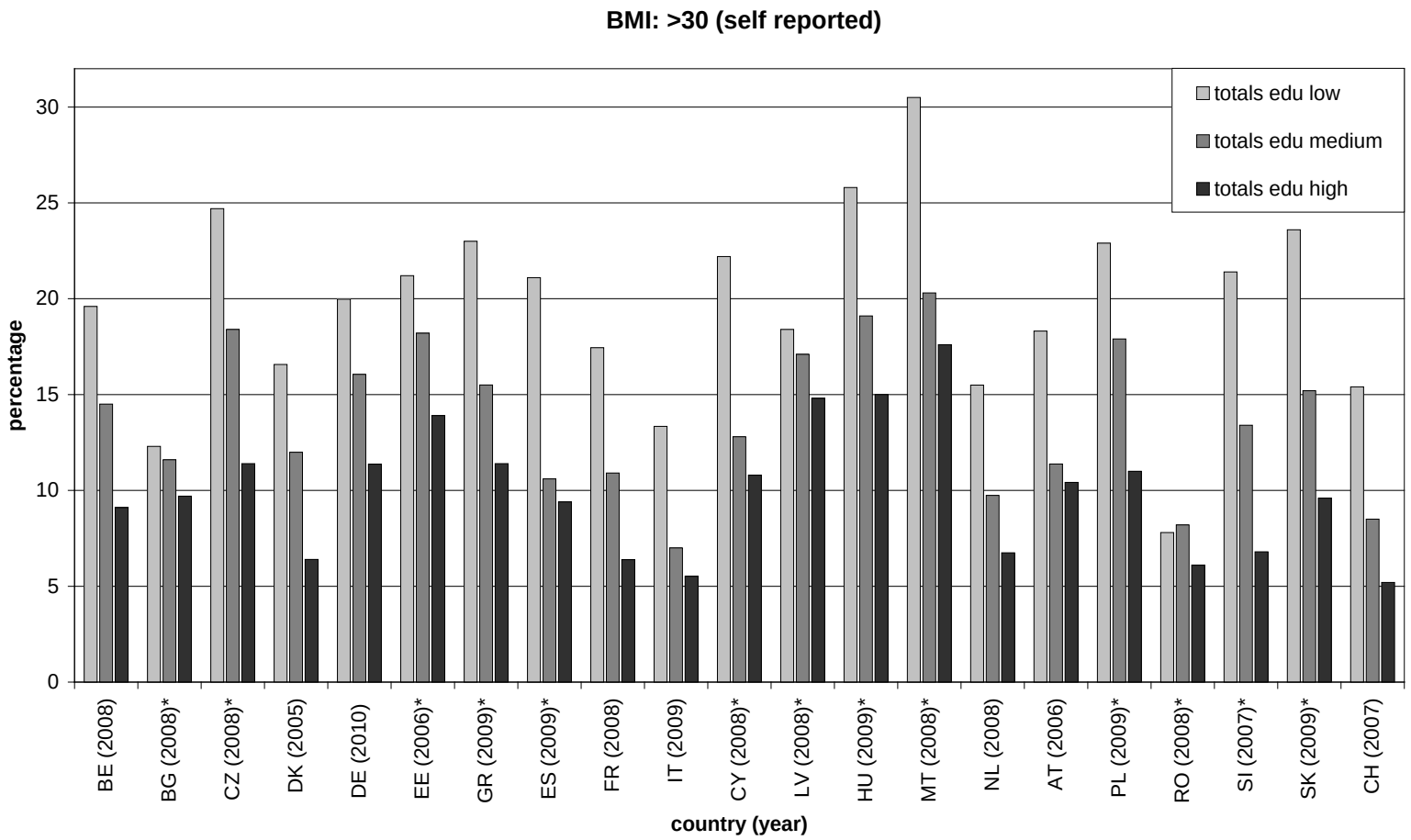


Fig. 1.3.12.2	Proportion of adult persons whose body mass index (BMI) is ≥30 by educational level.
	
	Legend: * = data extracted from Eurostat calculations of June 2011

C	DATA ANALYSIS
	In the adult population (age 18+), the percentage of obese persons ranges from 8% (7.9% in Romania and 8.50% in Switzerland) to 20.0% in Hungary and 22.8% in Malta. The non-weighted average is 14.8% for the 22 European countries for which data are available (see Figure 1.3.12.1). There is no clear-cut difference between men and women in the prevalence percentages of obese persons, in some countries men (-) are more often overweight, and in some women (+). The difference between men and women is small in most countries or negligible (in 8 countries difference is ±1.0 percentage point or less), only for Latvia (+8.9), Estonia (+4.5), Ireland (-3.0) and Malta (-3.5) it is larger than 2.6 percentage points. When comparing the two age-groups of 18-64 and 65+ year olds, in all countries the elderly take the lead in being obese. Smallest differences of prevalence percentages between the age-groups of 18-64 and 65+ year old are reported from Denmark (0.9 percentage point) and Belgium (2.3 percentage points). The largest difference is over 10 percentage units, for Latvia (14.3% vs. 27.3%) and Slovakia (13.2% vs. 25.8%). When analysing the educational strata (see Figure 1.3.12.2), it can be seen in all countries that the prevalence percentages of obese persons decreases with educational attainment. The higher educated individuals are less often obese compared to those with lower education, and the group of medium education is constantly between these two groups (only exception from this trend is reported from Romania). The smallest interval between the lowly and highly educated groups is visible in Bulgaria (2.6 percentage points) and Latvia (3.6 percentage points). In all other countries the difference is more pronounced, e.g. 7.3% in Estonia and 14.3% in Slovakia. Note, however, because these data are not standardized for age and sex, the discussed differences may at least partly reflect differences among age and sex rather than among the level of education.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the European Health Interview Survey (EHIS) wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their national HIS data as a contribution to the ECHIM Pilot Collection. More information about the EHIS wave 1 can be found here [1a + 1b].

	Data on BMI derived from HIS are clear subject to some biases; generally (very) slim people tend to overestimate their weight, while (very) overweight people tend to underestimate their weight. Another related reporting bias is gender specific: men tend to overestimate their height while women tend to underestimate their weight. Therefore, data derived from examinations will be more accurate than from interviews and therefore preferable. However, comparable examination data at European level are currently lacking. The European Health Examination Survey (EHES) Pilot Study was conducted in 2010-2012, covering 12 countries (see http://www.ehes.info/). When EHES will be fully implemented in a majority of EU Member States, ECHIM will switch to using EHES as the preferred data source for the BMI indicator. Obesity is an important risk factor for cardiovascular disease, type 2 diabetes mellitus, certain cancers and osteoarthritis. Other conditions associated with obesity are infertility among women, mental problems such as depression and low self-esteem and sleep apnoea. More information on overweight and obesity is available in EUPHIX, the EU Public Health Information and Knowledge System (see www.euphix.org).
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. **→ all source URLs lastly accessed on June 05 2012**

1.3.13. ECHI# 43 Blood pressure

ECHIM Indicator name	**B) Health status** 43. Blood pressure (diagnosed and self-reported) → ECHI ID Codes 30201 - 30208
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 43.**
Definition	Proportion of individuals reporting to have been diagnosed with high blood pressure which occurred during the past 12 months.
Calculation	Proportion of individuals reporting to have been diagnosed with high blood pressure (hypertension) which occurred during the past 12 months, derived from European Health Interview Survey (EHIS) questions HS.4/5/6: HS.4: Do you have or have you ever had any of the following diseases or conditions? High blood pressure (hypertension) (yes / no). If yes: HS.5: Was this disease/condition diagnosed by a medical doctor? (yes / no). HS.6: Have you had this disease/condition in the past 12 months? (yes / no). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (25-64, 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	High blood pressure is a major risk factor for vascular diseases, such as ischaemic heart disease and stroke. High blood pressure can be lowered by lifestyle changes and medical treatment. Small changes in the average blood pressure values of a population may be of considerable importance to public health.

B	DATA PRESENTATION
Table 1.3.13	See: Annex III
Fig. 1.3.13.1	**Prevalence of high blood pressure by sex and age groups.**

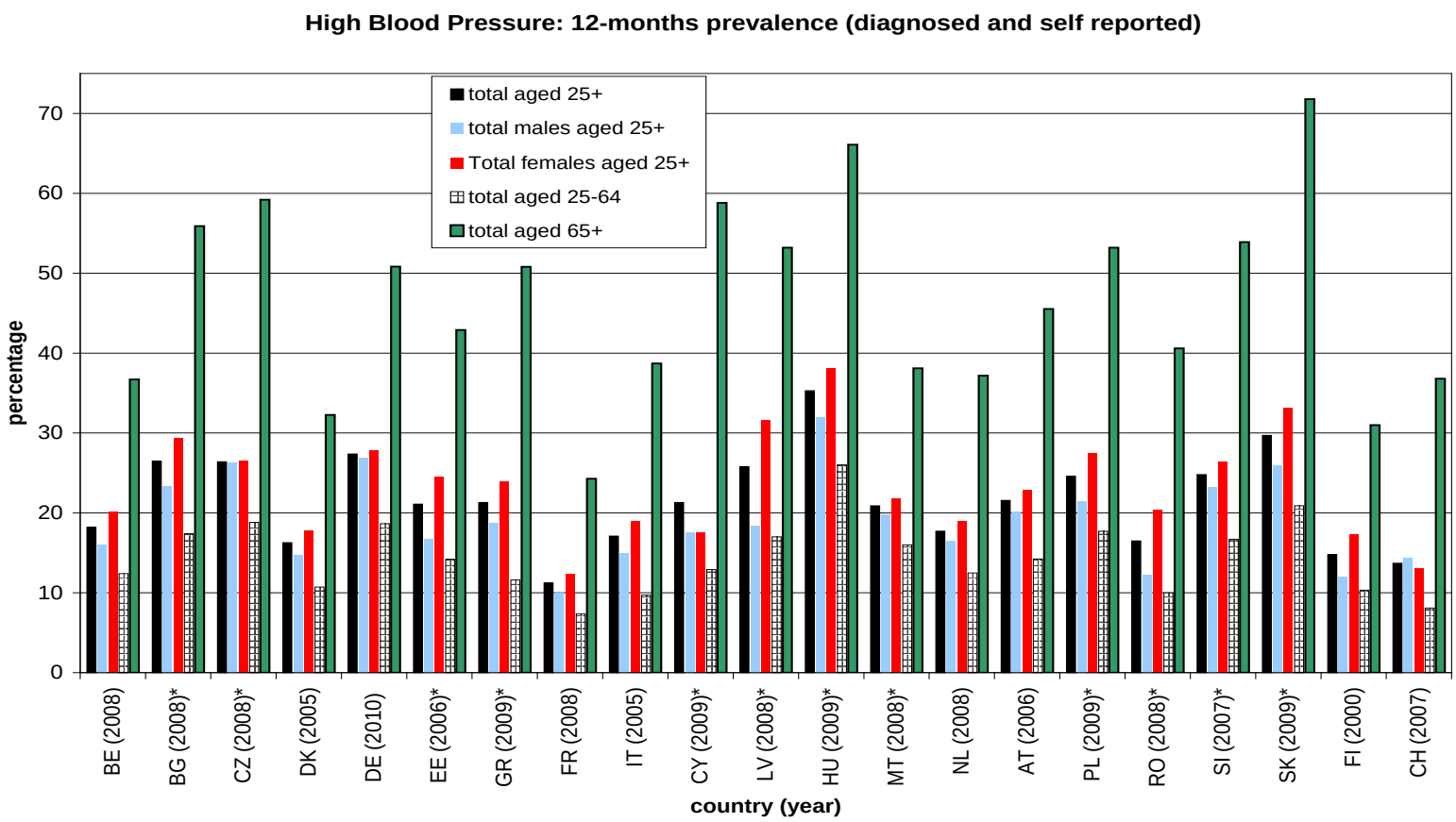
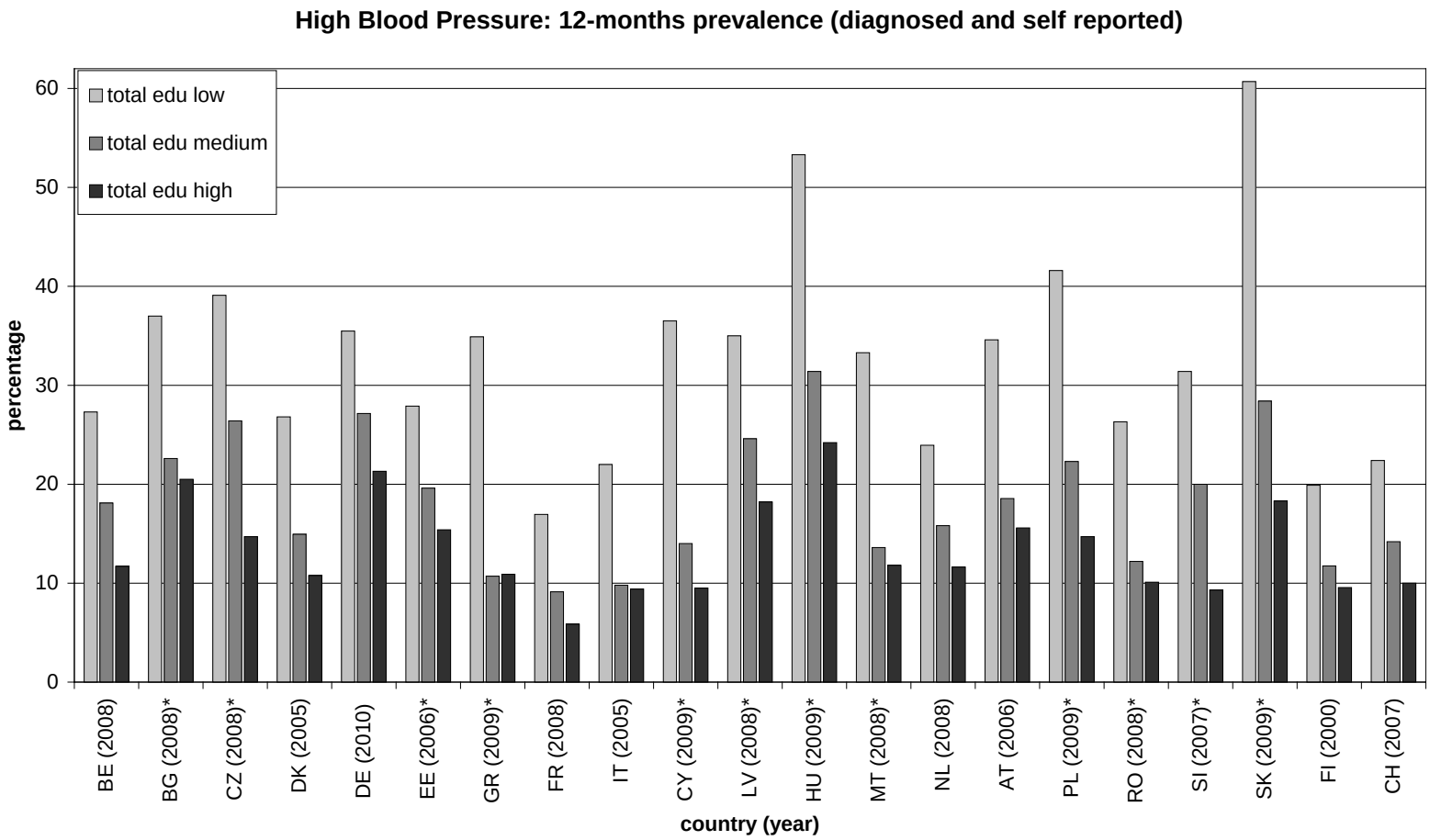


Fig. 1.3.13.2	Prevalence of high blood pressure by educational level.
	
	Legend: * = data extracted from Eurostat calculations of June 2011 (EHIS derived data from Spain not available at Eurostat)

C	DATA ANALYSIS
	In the adult population (age 25+), the prevalence percentages of persons with high blood pressure ranges from 11.2% in France to 35.3% in Hungary. The non-weighted average is 21.5% for 21 European countries for which data are available. When focusing on the elderly of 65 years and above, the range is, of course, much wider from 24.3% in France to 66.1% in Hungary and 71.8% in Slovakia. The non-weighted average for the age-group 65+ is accordingly 46.6% (see Figure 1.3.13.1). In all countries a larger percentage of women (age 25+) than men have high blood pressure, except in the Czech Republic, Germany and Cyprus where nearly no gender difference is visible. Only Switzerland reports a reversed gender trend whereby the interval is relatively small (men 14.4% vs. women 13.0%). The observed gender difference is largest in Latvia (13.2%), Romania (8.0%), Estonia (7.8%) and Slovakia (7.2%). The non-weighted average difference between women and men is 4.2 percentage points. When comparing the two age-groups of 25-64 and 65+ years old, in all countries the prevalence percentages of the elderly is much higher. The non-weighted average difference is 32.1 percentage points. The smaller age-group differences are reported from France (16.9%), Finland (20.7%), Denmark (21.6%) and Malta (22.1%). Countries with large differences are Slovakia (50.9%), Cyprus (45.9%), the Czech Republic (40.4%), Hungary (40.1%) and Greece (39.2). When analysing the educational strata, it gets evident that in all countries a descending social gradient from lowly to highly educated persons exists (only exception is Greece). The non-weighted average difference is 19.2 percentage points between the high and low education groups (see Figure 1.3.13.2). The difference is largest in Slovakia (42.4 percentage points; low 60.7% vs. high 18.3%). Other countries where the intervals are quite large are Hungary (29.1%), Cyprus (27.0%), Poland (26.9%), the Czech Republic (24.4%) and Greece (24.0%). The smallest differences between the high and low educational groups are reported from France (11.1%), Italy (12.6%), Estonia (12.5%), Switzerland (12.4%) and The Netherlands (12.3%). Note, however, because these data are not standardized for age and sex, the discussed differences may at least partly reflect differences among age and sex rather than among the level of education.

D	REMARKS AND FURTHER INFORMATION
	All countries marked with an asterisk (*) participated in the European Health Interview Survey (EHIS) wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their national HIS data as a contribution to the ECHIM Pilot Collection. More information about the EHIS wave 1 can be found here [1a+b]. NB: The Finnish data originate from a health examination survey in 2000. Although data from an examination survey are rated superior to values derived from interviews, the Finnish data are regarded as out-dated. However, they have not been excluded from the analysis. Data on blood pressure derived from interviews are not optimal for obtaining estimates of high blood pressure prevalence. It can be regarded only as a proxy such as this indicator, or 'prevalence of antihypertensive drug treatment in the population'. Actual blood pressure measurements gained from physical examinations are clearly superior since these can capture both diagnosed and yet undiagnosed cases, as well as differentiating patients receiving treatment and persons receiving no treatment. However, comparable examination data at the European level are currently lacking. The European Health Examination Survey (EHES) Pilot Study was conducted in 2010-2012, covering 12 countries (see: http://www.ehes.info/). When EHES will be fully implemented in a majority of EU Member States, ECHIM will switch to using EHES as the preferred data source for the very indicator. High blood pressure is a strong risk factor of coronary heart diseases and stroke. More information on high blood pressure is available in Health-EU, the European Commission's Public Health Information System (see http://ec.europa.eu/health-eu/contindex_en.htm#B).
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. **→ all source URLs lastly accessed on June 05 2012**

1.3.14. ECHI# 44 Regular smokers

ECHI Indicator name	**C) Determinants of health** 44. Regular smokers (cigarettes only) → ECHI ID Codes: 30301 - 30309
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 44.**
Definition	Proportion of people reporting to smoke cigarettes daily.
Calculation	Percentage of respondents reporting to smoke cigarettes daily derived from EHIS questions SK.1 and SK.2; SK.1: Do you smoke at all nowadays? 1. Yes, daily; 2. Yes, occasionally; 3. Not at all. SK.2: What tobacco product do you smoke each day? 1. Manufactured cigarettes; 2. Hand-rolled cigarettes; 3. Cigars; 4. Pipefuls of tobacco; 5. Other. For the calculation of this indicator the answering categories “yes, daily” for EHIS question SK.1 should be combined with answering categories “manufactured cigarettes” and/or “hand-rolled cigarettes” for EHIS question SK2. EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Calendar year - Country - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Tobacco use is one of the leading preventable causes of death and diseases in our society. It is a major risk factor for diseases of the heart and blood vessels, chronic bronchitis and emphysema, lung cancer and other cancers of the respiratory system. Passive smoking is also an important public health problem. Smoking is a modifiable lifestyle risk factor; effective tobacco control measures can reduce the occurrence of smoking in the population.

B	DATA PRESENTATION
Table 1.3.14	See: Annex III
Fig. 1.3.14.1	**Regular cigarettes smokers by sex and age groups**

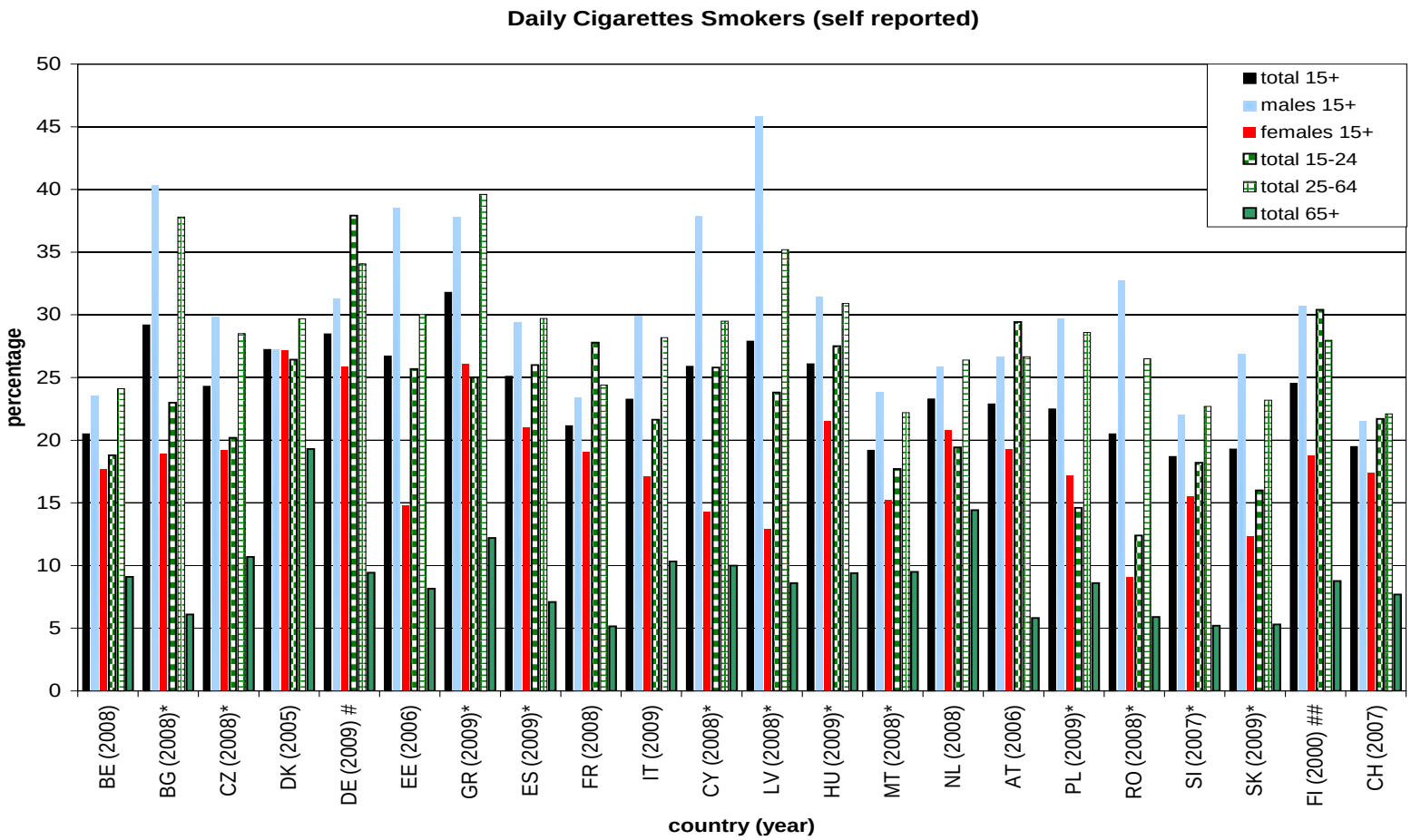
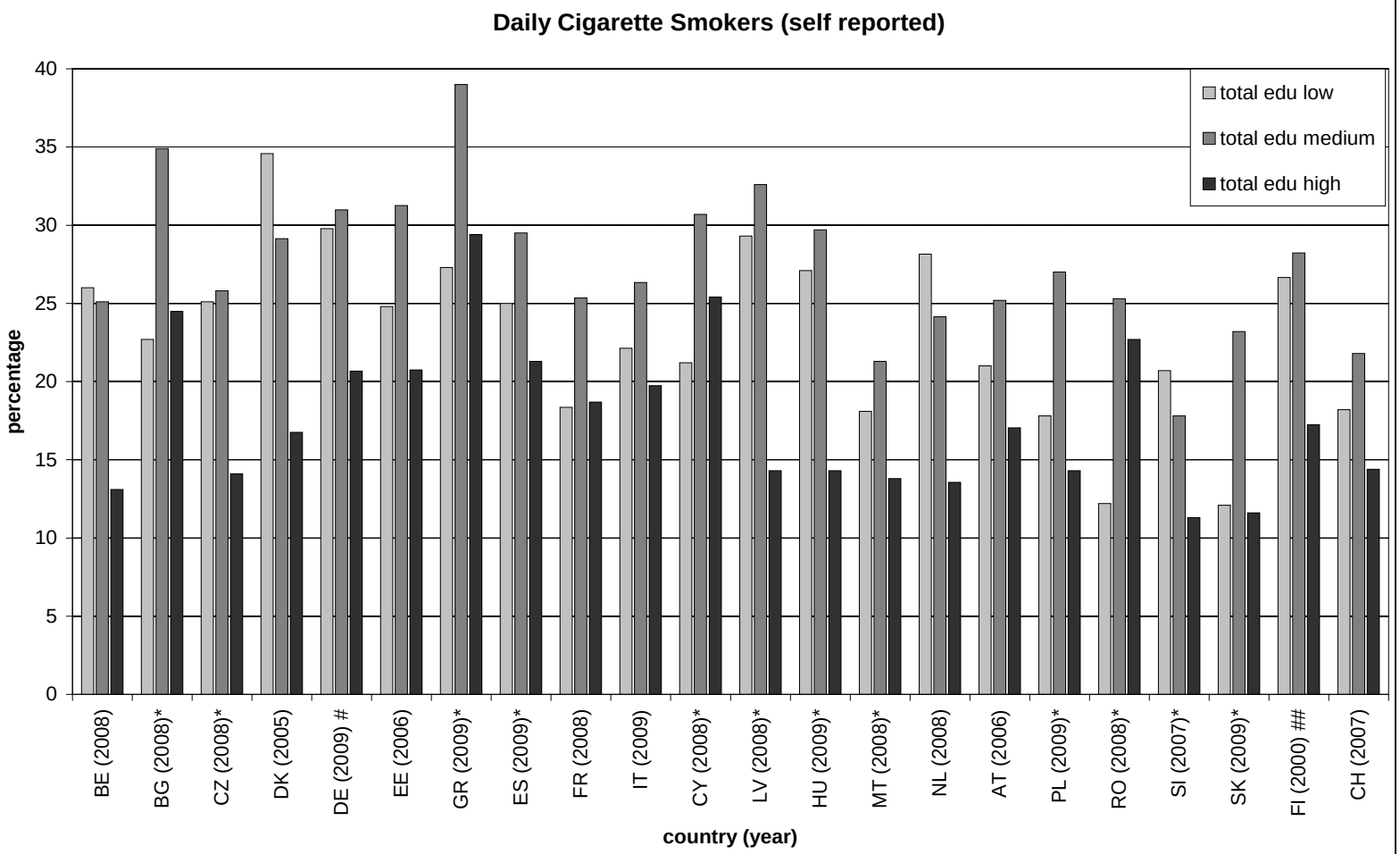


Fig. 1.3.14.2	Regular cigarettes smokers by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+, ## = all types of tobacco products

C	DATA ANALYSIS
	The percentage of regular smokers in the adult population (age 15+) is highest in Greece (31.8%) and lowest in Slovenia (18.7%). The non-weighted average of the 22 European countries, for which data are available, is 24%. Among men, the percentages of regular smokers are higher than among women (mean men 30.3% vs. women 18.2%), with large differences for example in Latvia (men 45.9% and women 12.9%) and Romania (men 32.7% and women 9.1%). The percentage of smoking adult men in Latvia mentioned above is the highest for all 22 countries. Proportionally, the most adult women smoke in Denmark (27.2%). Denmark is also the only country in which the percentages of smoking men and women are (almost) equal (see Figure 1.3.14.1). When comparing the different age groups, the general pattern is that the highest percentages of regular smokers can be found within the age group of 25-64 years with a mean value of 28.5%. Exceptions are Germany, France, Austria and Finland. In these countries smoking behaviour is most prominent among young people (15-24; mean is 23.1%). Among people aged 65+, the percentages are generally low, ranging from 5.2% in France and Slovenia to 19.3% in Denmark and showing an average of 8.9%. When comparing smoking behaviour among population groups with different educational levels, the general pattern is that the highest percentages of regular smokers are found among the group with medium level education. Usually, the lowest percentages are found among the highly educated. This does not apply to Belgium, Denmark, The Netherlands and Slovenia, where the highest percentages are found among the people with low education (see Figure 1.3.14.2). The means for low, medium and high educated individuals are 23.1%, 27.5% and 17.7%.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the European Health Interview Survey (EHIS) wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their national HIS data as a contribution to the ECHIM Pilot Collection. More information about the EHIS wave 1 can be found here [1a+b]. NB: The Finnish data originate from the year 2000, include all types of tobacco products, and appear out-dated if compared with other countries. However, the Finnish data are not excluded from data computation.

	Currently, the questionnaire for EHIS wave 2 (planned for 2014) is under revision. This will probably result in an adaptation of the questions on smoking (simplification). In turn, this change in methodology may lead to different smoking prevalence figures for the European countries. Cultural differences could explain part of the differences observed between groups and countries. For example, in some countries it may be less accepted that women smoke, thus leading to underreporting. The instruments used by the countries which reported national HIS data provide reasonable to good comparability with the EHIS instrument on tobacco use. Collection methods, however, differ between countries (e.g. computer assisted telephone interview (CATI), computer assisted personal interview (CAPI), written questionnaires), but this also applies to the countries that carried out EHIS. The data collection method used will influence the outcomes, meaning that the comparability between countries will not be ideal. Another factor which limits the comparability of the data displayed here is the fact that the year for which the most recent data were available differs between the countries. Most striking outlier in this regard is Finland, for which the most recent data on smoking prevalence percentages are from 2000. The Danish, Estonian and Austrian data are also fairly old (2005 and 2006). Most countries were able to provide data for the year 2008 or 2009. Of course having old data will not only hamper international comparability. It also means that the data are inadequate for describing the national situation, as smoking behaviour in the population may have changed during the past few years, e.g. as a consequence of smoking bans which were implemented in many European countries recently, or the taxation posed on tobacco products. Thus, to be able to measure the effects of tobacco control policies, it is important to have regular data collections on smoking behaviour (time trends). Such data are currently lacking at the European level. The Health for All database of WHO-Euro [2] does contain data on smoking behaviour. However, only a selection of EU Member States provides these data regularly to the WHO. Moreover, the underlying methodologies are not harmonised, which hampers comparability. The EHIS is therefore a very welcome development. However, its envisaged frequency of once every five years is too low for adequate monitoring of changes in smoking behaviour. Measurements at least once every 2-3 years would be a better option. Certain tobacco control measures have proven to be effective in reducing the occurrence of smoking in the

	population. Information on effectiveness of tobacco control measures, the intra- and supranational policy framework and good practice examples of national policies have been summarized in a document [3], which was produced by the Dutch Public Health Institute (RIVM) to support the national implementation of ECHI indicators.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] WHO Health-for-all database WHO-HFA; © World Health Organization 2010 [3] International Policy overview: smoking, Marieke Verschuuren, March 2011, RIVM **→ all source URLs lastly accessed on June 05 2012**

1.3.15. ECHI# 49 Consumption of fruit

ECHIM Indicator name	**B) Health status** 49. Consumption of fruit (self- reported) → ECHI ID Codes 30801 - 30809
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 49.**
Definition	Proportion of people reporting to eat fruit (excluding juice) at least once a day.
Calculation	Percentage of people reporting to eat fruit (excluding juice) at least once a day, derived from EHIS question FV.1. How often do you eat fruit (excluding juice)? 1. Twice or more a day / 2. Once a day / 3. Less than once a day but at least 4 times a week / 4. Less than 4 times a week, but at least once a week / 5. Less than once a week / 6. Never (answering categories 1 and 2 should be added for the calculation of this indicator). EHIS data will not be age standardized
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	The consumption of fruit and vegetables is an important health promoting item and is a good proxy for a general healthy diet. Fruit and vegetables are dietary protective factors for several cancers as well as for cardiovascular diseases. Its consumption seems to decline in many countries but is amenable to interventions.

B	DATA PRESENTATION
Table 1.3.15	See: Annex III
Fig. 1.3.15.1	**Daily consumption of fruit by sex and age groups.**

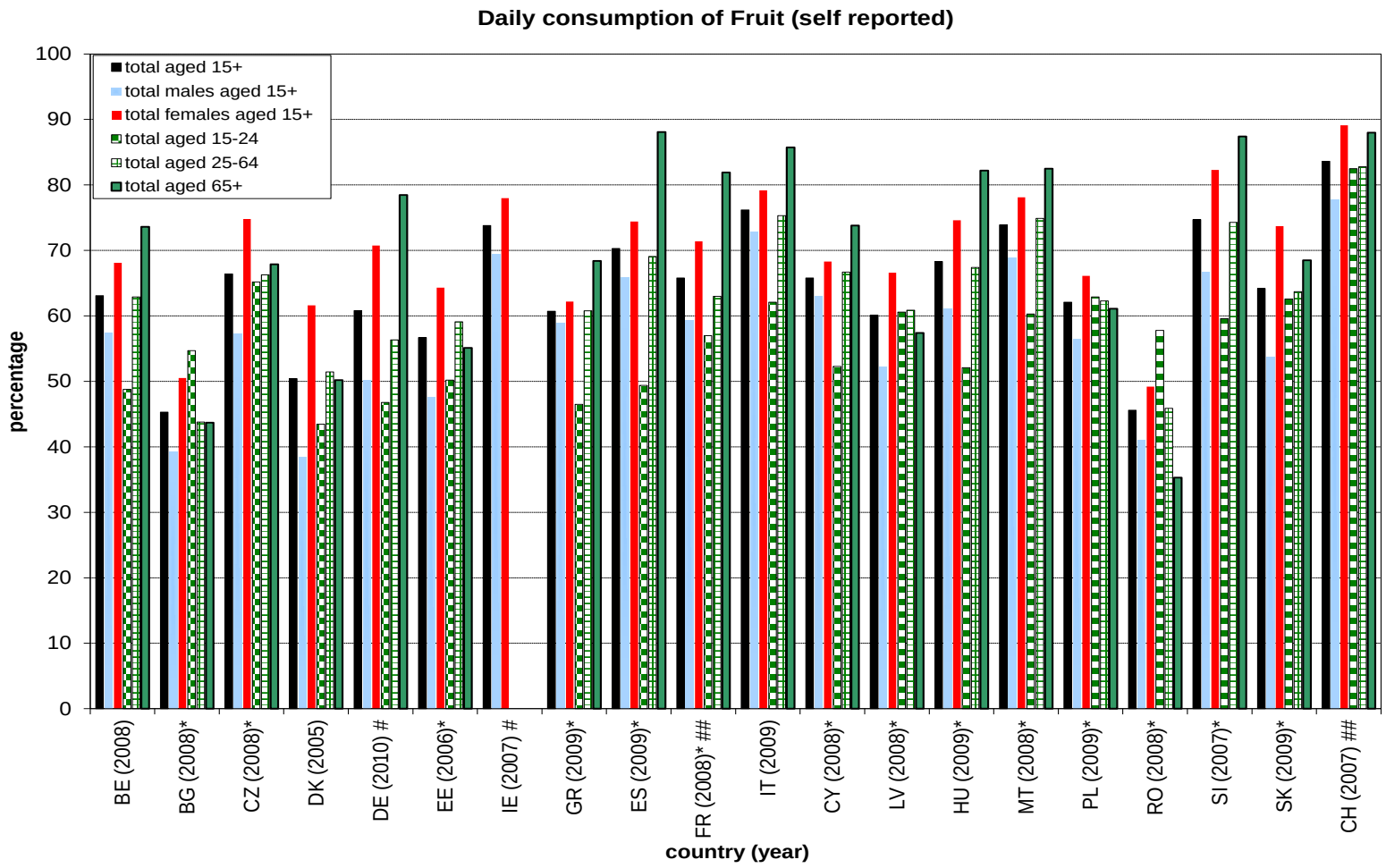
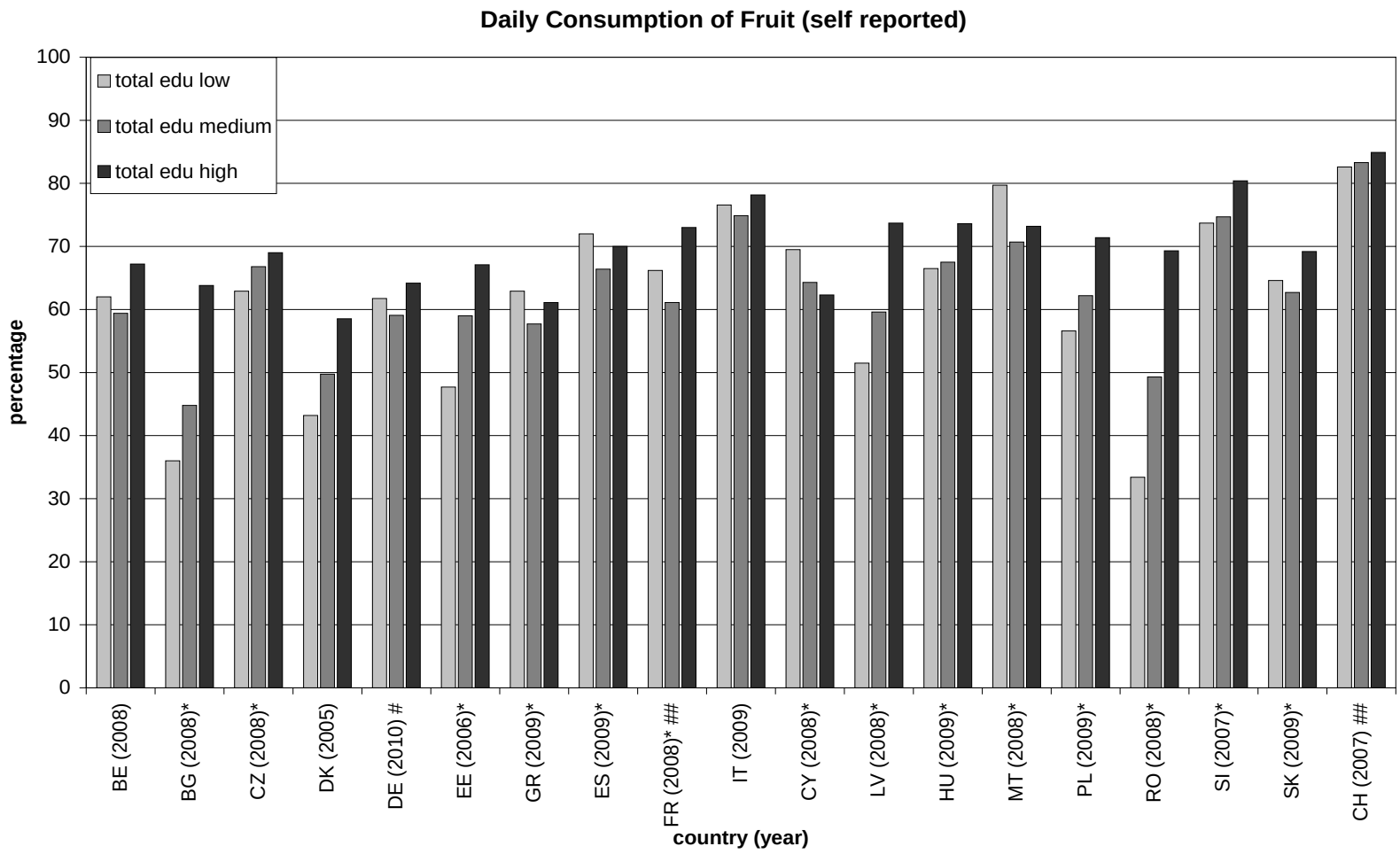


Fig. 1.3.15.2	Daily consumption of fruit by educational level.
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+; ## = incl. juices, soups and potatoes.

C	DATA ANALYSIS
	In the adult population of 20 European countries for which data are available, the percentage of those who consume fruit daily ranges between 45.3% in Bulgaria and 45.6% in Romania to 83.5% in Switzerland, while the latter reporting includes juices, soups and potatoes that might explain the lead. The non-weighted average of prevalence percentages is 64.4% (see Figure 1.3.15.1). Throughout Europe women eat fruit daily more often than men, the largest gender differences of 20 percentage points or more are reported from Denmark (men 38.5% and women 61.6%), Germany (men 50.3% and women 70.7%) and Slovakia (men 53.8% and women 73.7%). However, in many countries the gender difference is less than 10% (e.g. in Ireland, Greece, Spain, Italy, Cyprus, Malta, Poland and Romania), the smallest difference is reported from Greece (59.0% vs. 62.2%). When comparing the three age-groups, a general pattern reveals that the percentage of those who consume fruit daily is highest among the elderly (aged 65+) and lowest in the youngest age-group (aged 15-24). However, in two countries (Bulgaria and Romania) this trend is reversed and the daily fruit consumption is highest among the youngest age-group and lowest among the elderly. Furthermore, in the Czech Republic, Latvia and Poland, there are marginal differences between the age-groups regarding the daily fruit intake. When analysing the educational strata, it gets evident that in most countries the high educated stratum takes the lead in fruit consumption (see Figure 1.3.15.2). Exceptions are reported from Greece, Spain, Cyprus and Malta where daily fruit consumption is largest among those with low educational level. The medium educational stratum does never spearhead in any country. In addition, there are no significant differences between the educational groups in Germany, Greece, Italy and Switzerland. Note, however, because these data are not standardized for age and sex, the discussed differences may at least partly reflect differences among age and sex rather than among the level of education.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the European Health Interview Survey (EHIS) wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their national HIS data as a contribution to the ECHIM Pilot Collection. More information about the EHIS wave 1 can be found here [1a, 1b].

	Cultural variation could explain part of the differences observed between groups and countries. While the Mediterranean cuisine is well known for its diversified use of vegetables and fruit, the central and eastern European diet is often based on milk and meat products, supplemented by potato consumption. This could explain that eastern European countries mainly report lower fruit consumption prevalence percentages compared to core EU countries. The reversed age pattern in Romania and Bulgaria may reflect a nowadays more diversified supply and demand of (also non- indigenous) fruit which may not so affordable for the predominantly poorer elderly. Since a healthy diet is commonly considered to include fruit, this may also lead to a social desirability bias, and the rate of over-reporting can differ by country and sex. Considering the widely accepted “five-a-day” recommendation (two times fruit and three times vegetables a day), all European countries are (far) below this goal [2]. The efficiency of fruit and vegetables promoting strategies may be enhanced if fruit and vegetables are addressed separately.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Naska A et al. “Fruit and vegetable availability among ten European countries: how does it compare with the 'five-a-day' recommendation? DAFNE I and II projects of the European Commission.”, Br J Nutr. 2000 Oct; 84(4):549-56; http://www.ncbi.nlm.nih.gov/pubmed/11103226 **→ all source URLs lastly accessed on June 05 2012**

1.3.16. ECHI# 50 Consumption of vegetables

ECHIM Indicator name	**B) Health status** 50. Consumption of vegetables (self reported) → ECHI ID Codes: 30901 - 30909
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 50.**
Definition	Proportion of people reporting to eat vegetables (excluding potatoes and juice) at least once a day.
Calculation	Percentage of people reporting to eat vegetables (excluding potatoes and juice) at least once a day, derived from EHIS question FV.2. How often do you eat vegetables or salad (excluding juice and potatoes)? 1. Twice or more a day / 2. Once a day / 3. Less than once a day but at least 4 times a week / 4. Less than 4 times a week, but at least once a week / 5. Less than once a week / 6. Never (answering categories 1 and 2 should be added for the calculation of this indicator). EHIS data will not be age standardized
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-24; 25-64; 65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	The consumption of fruit and vegetables is an important life style and health behaviour and serves as a good proxy for a healthy diet. Fruit and vegetables are dietary protective factors for several cancers as well as for cardiovascular diseases. Their consumption is declining in many countries. Dietary habits are amenable to interventions.

B	DATA PRESENTATION
Table 1.3.16	See: Annex III
Fig. 1.3.16.1	Daily consumption of vegetables by sex and age groups

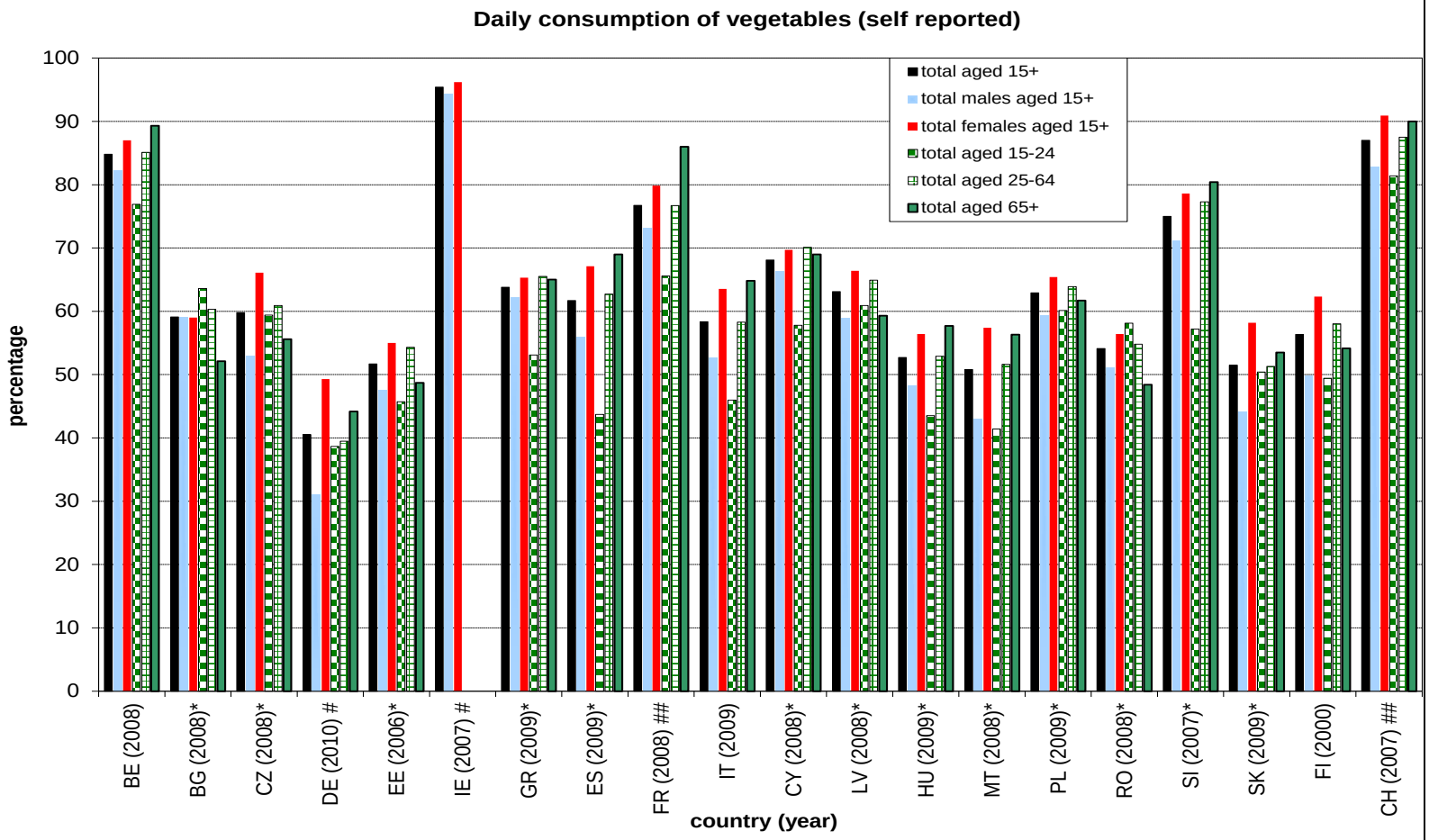
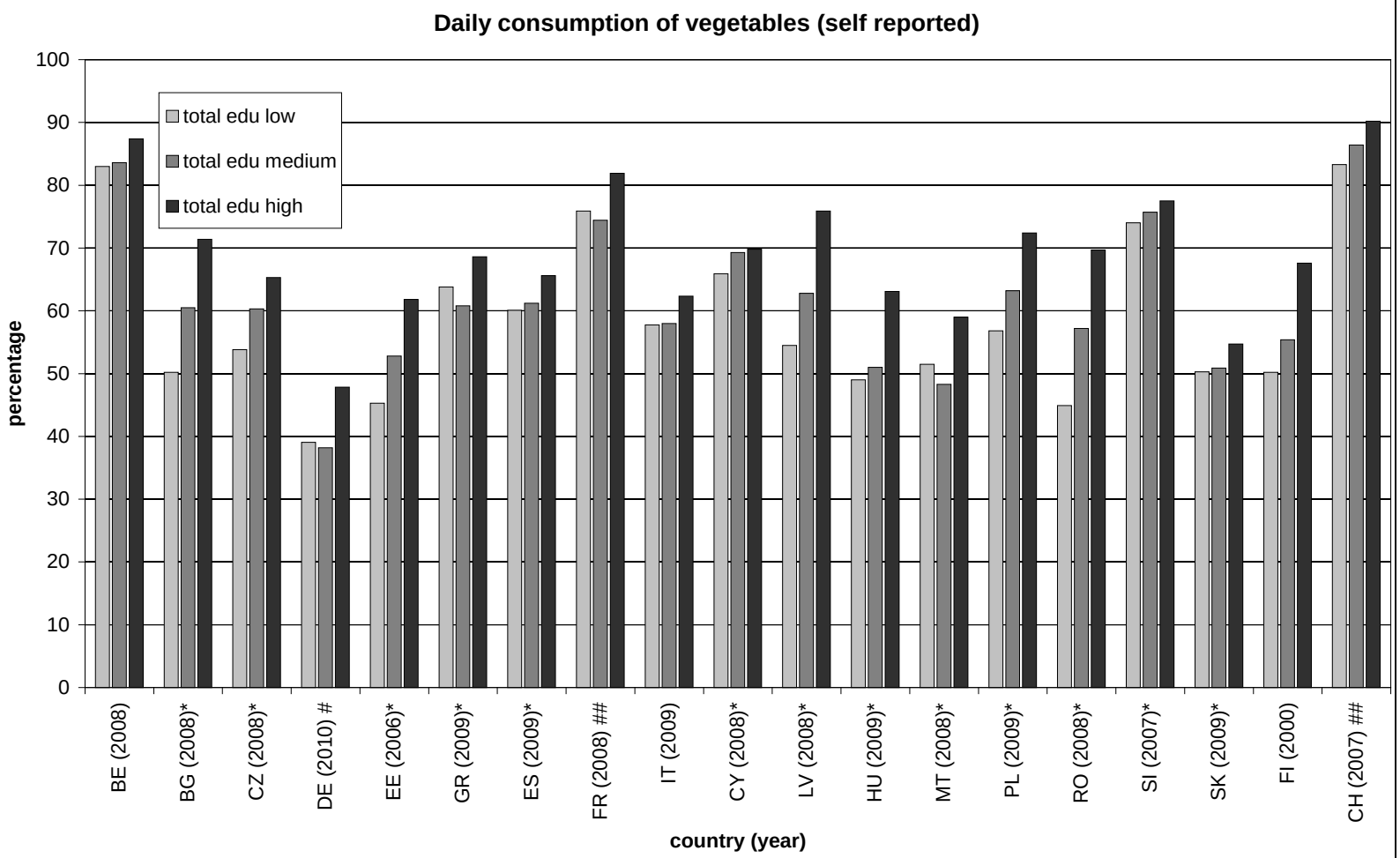


Fig. 1.3.16.2	Daily consumption of vegetables by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; # = age is 18+; ## = incl. juices, soups and potatoes

C	DATA ANALYSIS
	In the adult population, the percentage of those who consume vegetables daily ranges between 40.5% in Germany and 94.5% in Ireland (see Figure 1.3.16.1). The non-weighted average is 63.7% for the 20 European countries for which data are available. In all countries women do daily eat vegetables more often than men, except for Bulgaria where both sexes show an equal share (59%). Furthermore, in Ireland (difference 1.7%), Greece (3.0%) and Cyprus (3.3%), the gender difference is negligible. The largest gender difference (18.1%) was reported from Germany, and in further six countries (Czech Republic, Spain, Italy, Malta, Slovakia and Finland) the difference is over 10%. When comparing the three age-groups, the general pattern is that the percentage of those who consume vegetables daily is highest among the workforce aged 25-64 and the elderly aged 65+ but lowest in the youngest age-group aged 15-24. However, the reverse is reported from Bulgaria and Romania. Furthermore, differences between age-groups are marginal in the Czech Republic, Latvia, Poland and Slovakia. When analysing the educational strata, it is obvious that in all countries the percentage of those who consume daily vegetables is largest among those with high education level, compared to those with low and middle educational level (see Figure 1.3.16.2). With regards to the interval of the differences, two groups of countries can be classified: “South-western Europe” (Belgium, Greece, Spain, France, Italy, Cyprus, Slovenia, Slovakia and Switzerland), where the differences between low and high education groups are small (3.5% - 6.9%), and “Eastern Europe” (Bulgaria, Estonia, Latvia, Hungary, Poland, Romania and Finland), where the intervals are significantly larger (14.1% - 24.8%).
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the European Health Interview Survey (EHIS) wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their national HIS data as a contribution to the ECHIM Pilot Collection. More information about the EHIS wave 1 can be found here [1a+b]. NB: The Finnish data originate from the year 2000, and appear out-dated if compared with other countries. However, the Finnish data are not excluded from data computation.

	The Irish data were extracted from a specific food frequency questionnaire (FFQ) which was much more detailed than the EHIS source. The data for each food type from the FFQ was then calculated into daily servings which were aggregated per respondent to give a daily serving of all vegetables excluding potatoes. Those with a daily serving of vegetables of one or higher were reported to ECHIM. The Irish data are therefore regarded as more valid than the (E)HIS derived figures of other countries but hampers cross-country comparability due to the methodological differences. Generally, cultural habits could explain part of the differences observed between groups and countries. While the Mediterranean cuisine is well known for its diversified use of vegetables and salads, the central and eastern European diet is often higher caloric and based on meat and potato products. Since potatoes are excluded for this indicator, it may explain the lower consumption prevalence percentages in central and eastern Europe. The low figures for Germany are drastic anyhow. On the other side, a healthy diet is commonly considered to include fruits and vegetables, what may also lead to a social desirability bias, and the rate of over-reporting may differ by country and sex. Considering the widely accepted “five-a-day” recommendation (two times fruit and three times vegetables a day), several European countries are far below this goal [2]. Particularly the consumption patterns in Germany, Estonia, Malta, Hungary, Romania, Slovakia and Finland are about 50% below this recommended daily vegetable consumption. The efficiency of fruit and vegetables promoting strategies may be enhanced if fruit and vegetables are addressed separately; furthermore, interventions that would specially focus on vegetables are probably needed.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Naska A et al. “Fruit and vegetable availability among ten European countries: how does it compare with the 'five-a-day' recommendation? DAFNE I and II projects of the European Commission.”, Br J Nutr. 2000 Oct; 84(4):549-56; http://www.ncbi.nlm.nih.gov/pubmed/11103226 **→ all source URLs lastly accessed on June 05 2012**

1.3.17. ECHI# 57 Influenza vaccination rate in elderly

ECHIM Indicator name	**D) Health interventions: health services** 57. **Influenza vaccination rate in elderly** (self-reported and covering the preceding influenza / winter period) → ECHI ID Codes 40201 - 40206
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 57.**
Definition	Proportion of elderly individuals reporting to have received one shot of influenza vaccine during the last 12 months.
Calculation	Percentage of persons aged 65 and older reporting to have been vaccinated against influenza (*brand name of vaccine to be verified in each country*) during the last 12 months, derived from EHIS questions PA.1, PA.2 and PA.3. PA.1: Have you ever been vaccinated against flu? 1. Yes / 2. No; PA.2: When were you last time vaccinated against flu? 1. Since the beginning of this year / 2. Last year / 3. Before last year PA.3: Can I just check, what month was that? Month (01-12). EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (65+) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Influenza vaccination in elderly is important for reducing the disease burden of influenza, including mortality. A recall period of 12 months is used to cover the previous influenza season and the definition applied here only refers to those elderly who actually received a vaccination.

B	DATA PRESENTATION
Table 1.3.17	See: Annex III
Fig. 1.3.17.1	**Influenza vaccination rates in individuals aged 65+ by sex**

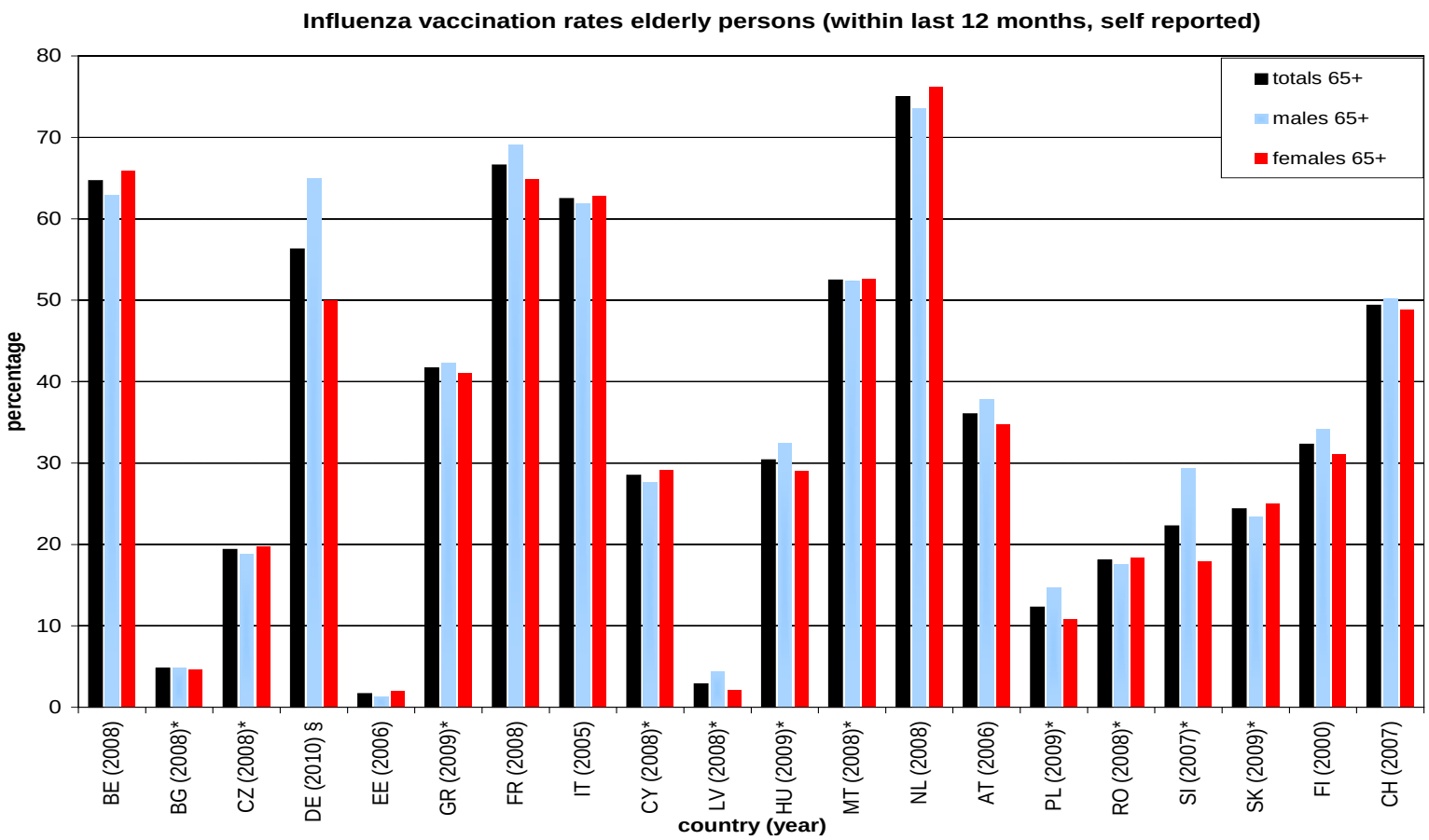
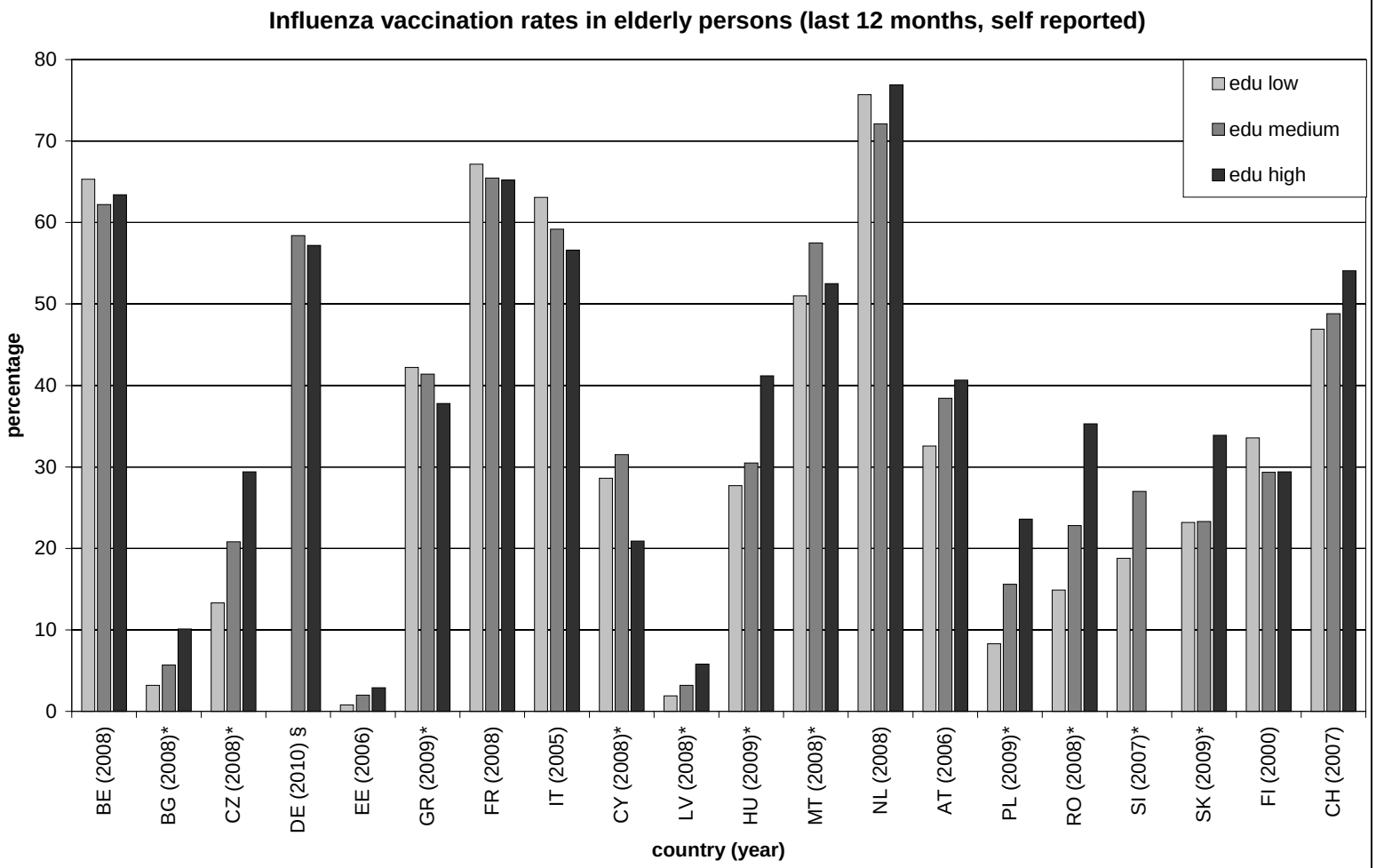


Fig. 1.3.17.2	Influenza vaccination rates in individuals by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample, N = 3.100

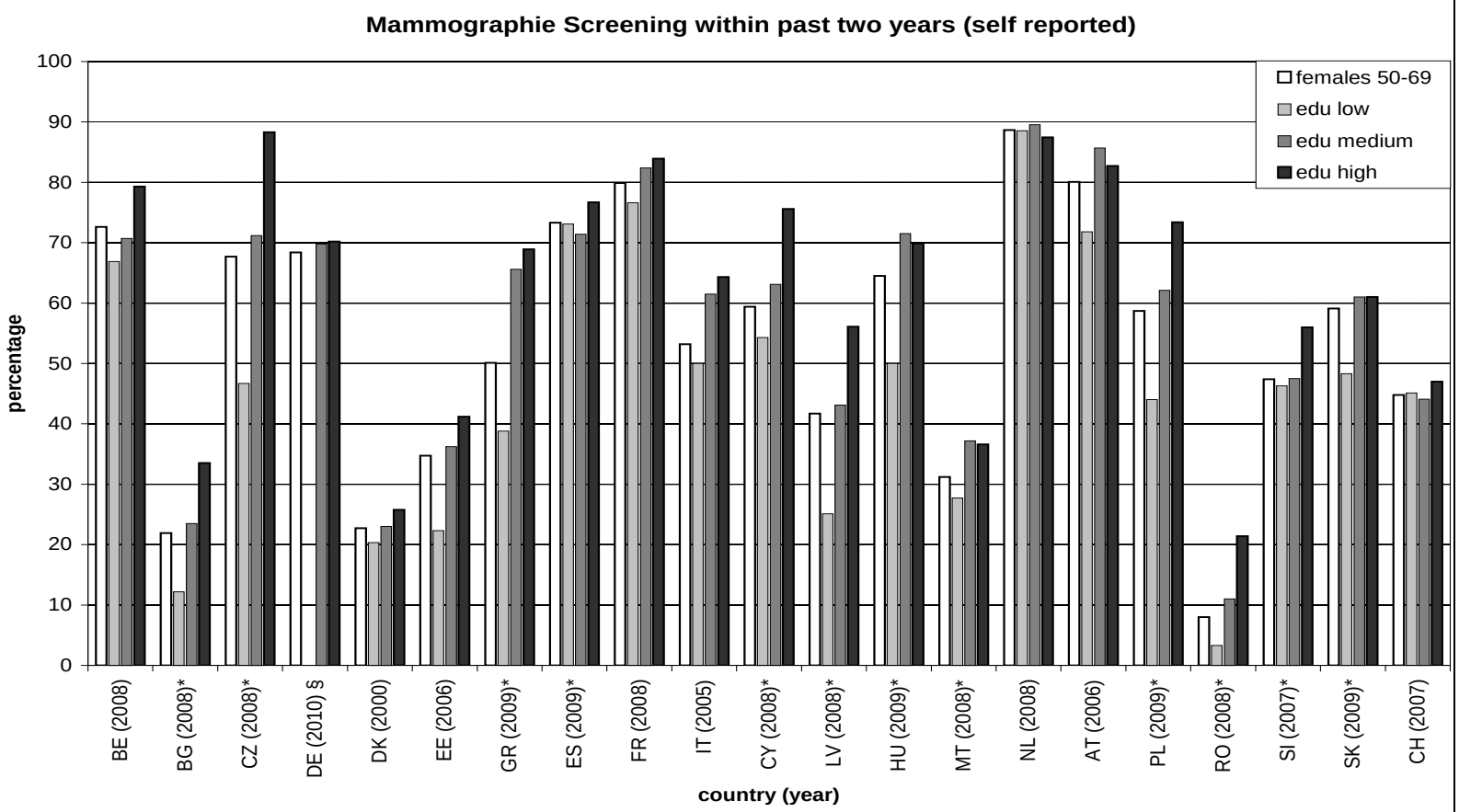
C	DATA ANALYSIS
	Overall influenza utilisation among people aged 65+ depicts a wide range of vaccination percentages (see Figure 1.3.17.1). It is obvious that most of the new EU Member States such as Bulgaria, the Czech Republic, Estonia, Latvia and Romania report vaccination rates below 20% of the concerned population. The highest rates of more than 75% were reported from core EU countries like The Netherlands, followed by Belgium, France and Italy where rates are still above 60%. Germany, Malta and Switzerland are above or close to 50%. The lowest rates can be found in Estonia, where only 1.7% of the total 65+ age group appear to be vaccinated (non-weighted average in the 20 countries comparison is 35.1%). There is a small difference in vaccination utilisation among the sexes which is revealed by a mean of 36.3% for men and 34.3% for women. When data are interpreted by the three educational levels (see Figure 1.3.17.2), an educational gradient becomes evident. In 11 of the 20 countries, the higher educated elderly take the lead in vaccination utilisation. In general it can be observed, that the lower the overall vaccination rate is, the steeper the observed gradient for educational classes becomes. The Netherlands offer the highest immunization rates of all three educational categories, while Estonia brings up the rear. In about ten core EU countries the gaps between lower, medium and higher educated people make up only a few percentages, whereas such gaps are larger in "new" EU Member States and depict a social gradient that is rising much stronger (inter alia Bulgaria, Czech Republic, Estonia, Latvia, Poland, etc). This observation might be due to various reasons (see under: REMARKS). This total picture is reflected by about 3% differences among the averaged values from low educated persons (32.5%) to medium educated (35.8%) and to the high educated individuals (38.8%). Without the data from the "new" EU States these differences would be much smaller. This indicator is a good example that health prevention campaigns - besides possible monetary aspects - show a steady to rising demand and real utilisation within most educational strata of the elderly population in most "old" EU countries (exception: Austria). Such a positive trend can also be observed with health determinants indicators (e.g. smoking, nutritional behaviour), where educated elderly show a reduction of risk factors compared to less educated and younger age groups.

D	REMARKS AND FURTHER INFORMATION
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as a contribution to the ECHIM Pilot Collection. More reading and meta-information about the first EHIS wave can be found here [1a+b]. NB: The Finnish data originate from the year 2000 and appear out- dated if compared with other countries. So one might assume that an increase in vaccination utilisation has taken place in Finland in the last decade. However, the Finnish data are not excluded from data computation. The German data are not as valid as for other ECHI indicators due to the small sub- sample size which results in the lack of data for certain strata. The low figures reported from eastern EU Member States raise concerns although the exact reasons for these are not known. There are several options to consider: it could be a result from eastern European health care systems being under fundamental transitions, the lack of actively promoted vaccination campaigns, a general shortage of the (expensive) vaccines, a primary focus on vaccinating medical staff and health workers, and - last not least – the fact that vaccinations may be out-of-pocket expenditures [2], which deters the predominantly needy seniors from utilising influenza protection measures. In addition, several studies revealed that unofficial payments are particularly prevalent in the transition countries of Central and Eastern Europe (Gaal & McKee, 2005; Ensor, 2004) [3] and might explain the above mentioned under-utilisation even if demanded by patients and promoted by health authorities alike. A publication of 2009 of Blank et al. [4] compared the vaccination rates in 11 EU countries during two consecutive winter seasons 2006-2008 and presented equally low rates for the Czech Republic and Poland. Since Blank et al. compared the two seasons they even found descending vaccination rates of the elderly in several countries, inter alia in the Czech Republic and Poland. So it seems likely that the low rates reported from the "new" Member States depict the real situation. On the other hand they presented vaccination rates for Spain, Italy, France, Germany and Austria which come very close to the ECHIM results. Eurosurveillance analysed already in 2008 [5] the influenza vaccination coverage in elderly in 21 EU countries and found a similar wide range of vaccination rates and nearly the same order as presented by ECHIM. It is stated, that at the 56th World Health Assembly (WHA) in 2003, influenza vaccination was recommended

	for all people at high risk defined as the elderly and persons with underlying diseases [6]. The WHA countries, including all EU Member States, also committed to the goal of attaining vaccination coverage of the elderly population of at least 50% by 2006 and 75% by 2010 and to having mechanisms for monitoring the uptake [5]. Until 2008, there has been no published survey on how successful European countries have been in implementing this WHA resolution. According to the Statistical Office of the European Communities (Eurostat) [7] in 2008, about 84.6 million EU citizens, 17.1% of the EU population, were aged 65 years or older. It was estimated that by 2010 as many as 86.7 million people would be in this age group. If EU countries are to achieve the 75% vaccination coverage rate, this will correspond to vaccinating approximately 65 million people. In the light of these recommendations and the associated EU commitment, this (E)HIS survey revealed that only the Netherlands have achieved this goal, while quite a number of countries - in particular the "new" EU Members – still have a long way to go in order to achieve at least a 50% vaccination coverage.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] OECD, Health at a Glance: Europe 2010, OECD 2010: http://ec.europa.eu/health/reports/docs/health_glance_en.pdf, in particular Figures 4.5.2 and 4.5.3, page 113 [3] The State of Men's Health in Europe: http://ec.europa.eu/health/population_groups/docs/men_health_extended_en.pdf,EU 2011 [4] Patricia R. Blank et al.; Vaccination coverage rates in eleven European countries during two consecutive influenza seasons, Journal of Infection (2009) 58, 441-453; http://www.eswi.org/userfiles/files/EU%2011.pdf [5] Eurosurveillance, Volume 13, Issue 41, 09 October 2008; "Low coverage of seasonal influenza vaccination in the elderly in many European countries"; http://www.eurosurveillance.org/images/dynamic/EE/V13N41/V13N41.pdf [6] World Health Organisation, Resolution of the World Health Assembly (WHA 56.19). Prevention and control of influenza pandemics and annual epidemics. WHA 10th plenary meeting. 28-05-2003. Ref Type: Bill/Resolution [7] Statistical Office of the European Communities (Eurostat). Ageing characterises the demographic perspectives of the European societies. 26 August 2008. Eurostat. Statistics in focus. Issue 72/2008. Available from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-08-072/EN/KS-SF-08-072-EN.PDF **→ all source URLs lastly accessed on June 05 2012**

1.3.18. ECHI#58 Breast cancer screening

ECHIM Indicator name	**D) Health interventions: health services** 58. Breast cancer screening (self-reported and covering the past two years) → ECHI ID Codes: 40301 - 40304
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 58.**
Definition	Proportion of women (aged 50-69) reporting to have undergone a breast cancer screening test within the past two years.
Calculation	Percentage of women aged 50-69 reporting to have had a breast examination by X-ray (i.e. mammography) within past 2 years, derived from EHIS questions PA.10 and PA.11: PA.10: Have you ever had a mammography, which is an X-ray of one or both of your breasts? Yes / No / Don't know / Refusal; and PA.11: When was the last time you had a mammography (breast X-ray)? Within the past 12 months / More than 1 year, but not more than 2 years / More than 2 years, but not more than 3 years / Not within the past 3 years / Don't know / Refusal. EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Age group (50-69) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Breast cancer is the most frequent cancer among women; it represents 15 to 35% of all cancers diagnosed in Europe. Population-based cancer registries have consistently documented a continuing rise of incidence rates since the 1960s. Breast cancer screening programmes based on mammography and organised at the population level allow an effective decrease of breast cancer mortality by 30% among women aged 50 to 69 years. Information collected in population surveys can be directly used by the public health decision makers in order to possibly adapt the organisation of the prevention/ screening programmes. The domain of breast cancer screening is a priority in European Community public health policy [2].

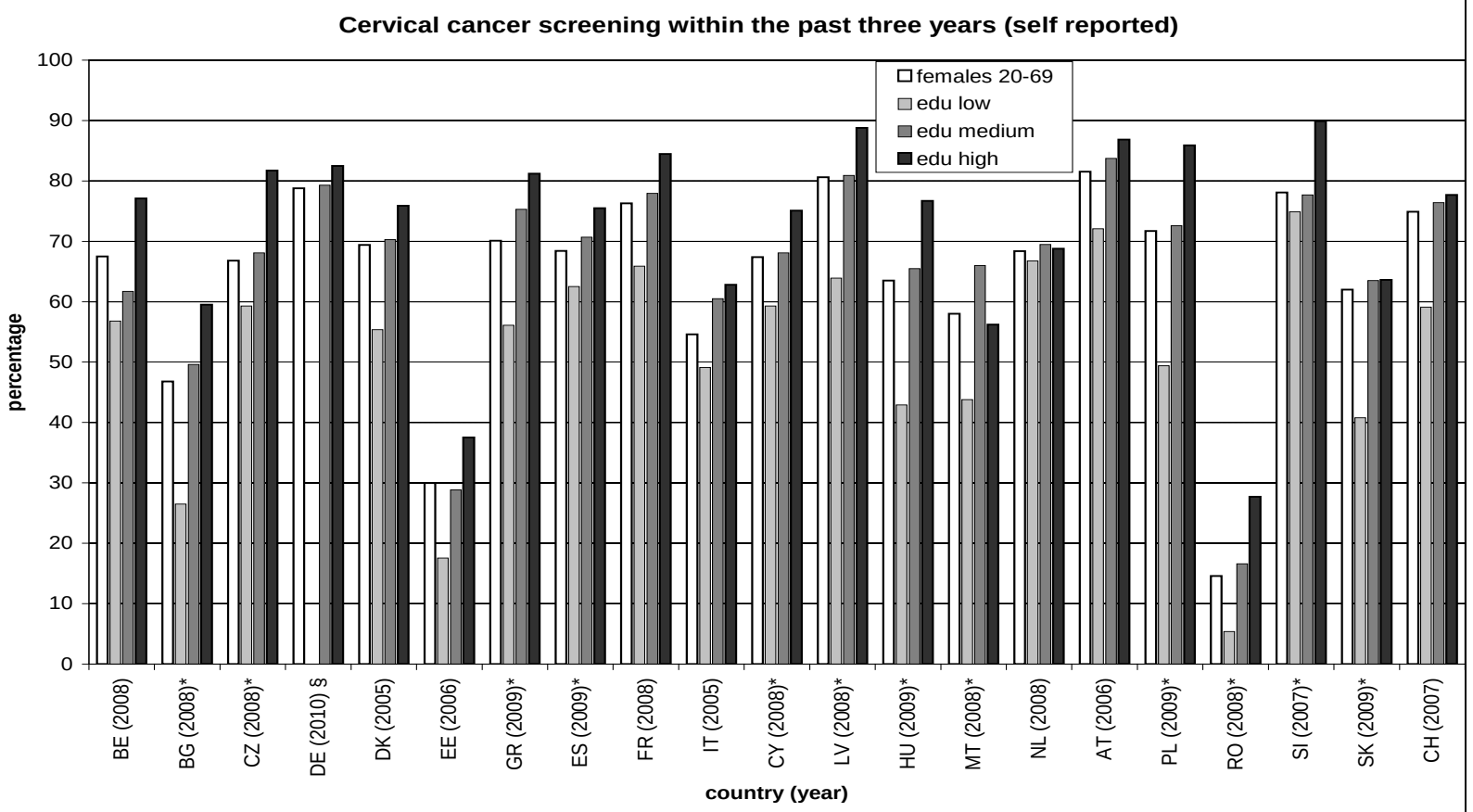
B	DATA PRESENTATION
Table 1.3.18	See: Annex III
Fig. 1.3.18.1	**Mammography screening of women (50-69 years); totals and by educational level**
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample: N = 3.100

C	DATA ANALYSIS
	Overall mammography screenings among women aged 50-69 depicts inhomogeneous utilisation rates throughout the 21 European countries where data were available (see Figure 1.3.18.1). While women in The Netherlands take the lead with nearly 90%, the same age band of women in Romania show a screening rate of 8% only (total average is 53.7%). At least four core EU Members (Belgium, Spain, France and Austria) report mammography examination rates above 70%, and 13 out of the 20 countries report rates ≥ 50%. Bulgaria and Romania bring up the rear. When data are analysed by the three educational levels, an ascending educational order of screening utilisation is evident. Marginal exceptions by a few percentages can be found in Spain, Hungary, Malta, Holland, Austria, Slovakia, and Switzerland. While in most of the "old" EU countries the gaps between lower, medium and higher educated people make up only a few percentages, the social gradient is more prominent in the "new" EU Member States such as Bulgaria, Czech Republic, Estonia, Latvia, Poland, and Romania. This total picture is reflected by the larger differences among the mean values from low educated persons (45.6%) to medium educated (56.7%) and to the highly educated group (61.9%). Without the data from that "new" EU States and Denmark these differences among the averaged values would be much closer. This indicator is a good example that breast cancer screening services are predominantly well utilised by women beyond the menopause, though there is still way for improvement in several countries.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the EHIS wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. More relevant and meta-information about the EHIS wave 1 can be found here [1a+b]]. NB: The data from Denmark originate from the year 2000 and are regarded as out-dated. However, the Danish data are not excluded from data computation. The German data are not as valid as other German ECHI indicators due to the small sub- sample size which results in the lack of data for low educated women.

	The lower figures reported from eastern EU Member States are evident. However, the exact reasons are not known from the ECHIM position. There might be several options to consider: it could be explainable by Eastern European health care systems being under fundamental transitions, such as the shift from governmental health (expenditure) systems into the private sector, like it is known from Romania. It can be assumed that the targeted age group in Eastern Europe and the Baltic states belongs predominantly to the poor (low wages and retirement pensions) and cannot afford out-of-pocket expenditures for X-ray examinations. In addition, several studies revealed that "unofficial payments are particularly prevalent in the transition countries of Central and Eastern Europe (Gaal & McKee, 2005; Ensor, 2004)" [3] and might explain the observed low utilisation rates even if requested by the women. Furthermore, these countries may lack a policy on mammography screening programmes or have a shortage of actively promoted breast cancer screening campaigns by gynaecologists or may lack radiology equipment and required expertise, respectively. On the other hand, there are controversial discussions about the real benefits [4] of large mammography screening programmes, also due to false-positive examination results and subsequent negative impacts of women being hit by such diagnoses [5].
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Cancer becomes public health priority for Europe, BMJ 1994; 308:937.1, published 9 April 1994, http://www.bmj.com/content/308/6934/937.1 [3] "The State of Men's Health in Europe"; ISBN 978-92-79-20169-1 EU 2011, http://ec.europa.eu/health/population_groups/docs/men_health_extended_en.pdf [4] "Effect of Screening Mammography on Breast-Cancer Mortality in Norway"; Mette Kalager et al., N Engl J Med 2010; 363:1203-1210; http://www.nejm.org/doi/full/10.1056/NEJMoa1000727#t=articleResults [5] "Ten-Year Risk of False Positive Screening Mammograms and Clinical Breast Examinations"; Joann G. Elmore et al., N Engl J Med 1998; 338:1089-1096 http://www.nejm.org/doi/full/10.1056/NEJM199804163381601#t=articleResults **→ all source URLs lastly accessed on June 05 2012**

1.3.19. ECHI# 59 Cervical cancer screening

ECHIM Indicator name	**D) Health interventions: health services** 59. Cervical cancer screening (self-reported and covering the past three years) → ECHI ID Codes: 40401 - 40404
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 59.**
Definition	Proportion of women (aged 20-69) reporting to have undergone a cervical cancer screening test within the past three years.
Calculation	Percentage of women aged 20-69 reporting to have had a cervical smear test (pap smear) within the last 3 years, derived from EHIS questions PA.13 and PA.14. PA.13: Have you ever had a cervical smear test? Yes / No; PA.14: When was the last time you had a cervical smear test? Within the past 12 months / More than 1 year, but not more than 2 years / More than 2 years, but not more than 3 years / Not within the past 3 years. EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Age group (20-69) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS = interim source, see section 4 REMARKS) [1b]
Rationale	Among all malignant tumours, cervical cancer is the one that can be most effectively controlled by screening. Detection of cytological abnormalities by microscopic examination of pap smears and subsequent treatment of women with high-grade cytological abnormalities avoids the development of cancer. Information collected in population surveys can be directly used by the public health decision makers in order to possibly adapt the organization of the prevention (vaccination) / screening programmes. The domain of cervical cancer screening is a priority in the European Community public health policy [2].

B	DATA PRESENTATION
Table 1.3.19	See: Annex III
Fig. 1.3.19.1	**Cervical cancer screening of women (20-69 years); totals and by educational level**
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample: N = 3.100

C	DATA ANALYSIS
	Overall, cervical cancer screening among women aged 20-69 is utilised by over 60% of the women in 16 out of the 21 European countries where respective data were available (see Figure 1.3.19.1). The lead is taken by Austrian women with 81.5%, closely followed by Latvians with 80.6% (the average being 64.3%), while the lowest screening rates – also regarding the three educational levels – are reported from Romania with 14.6%. Second lowest total screening rates are found in Estonia with 30%. When screening data are analysed by the three educational categories, the often observed ascending gradient by educational order of health service utilisation percentages is evident in all countries, except The Netherlands. Mean values are 51.4%, 65.8% and 72.2%. Since the ECHI age band is rather broad and the recall period is three years, there might be two relevant biases. Firstly, the utilisation of cervical screening might differ between women in reproductive age and women beyond the menopause. Secondly, since the ECHI indicator aggregates screenings "within the last three years", the analysed indicator delivers larger figures which do not reflect shorter and in fact recommendable screening intervals. In the Eurostat database [3] it can be seen that the majority of women had a screening test ("less than 1 year") during their annual check-up with their gynaecologist. The percentages for screenings "from 1 to 2 years" and "from 2 to 3 years" and "more than 3 years" are then constantly decreasing. The substantial percentage of women in the category "never" complements the entire women's population 20-69 years, and therefore the focus of screenings programmes should be on this group for policy programmes.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the EHIS wave 1 and their data were obtained from Eurostat calculations. Remaining countries delivered their data as a contribution to the ECHIM Pilot Collection. More relevant and meta-information about the EHIS wave 1 can be found here [1a+b]. NB: The German data are the most recent but not as valid as for other German ECHI indicators due to the small sub- sample size which results in the lack of data for low educated women.

	General remark on the preferred data type and data source: Ideally, the recall period used in the definition for this indicator should coincide with the screening intervals actually applied in national screening programmes. However, the periods applied in national cancer screening programmes differ. As a common methodology needs to be applied in EHIS for all countries, a flexible approach with country specific questions is not possible. Therefore the recall period used in the definition for this indicator represents an average and hence it will not be aligned with the programme methodologies for all countries. Administrative sources based on screening programme data would be preferable over (E)HIS based data, as the latter are influenced by recall and sampling biases. But currently there is no adequate international coverage of programme based data. Therefore, the EHIS is presently the best source available for this indicator. In the future, however, when the situation with programme based data has improved, ECHIM prefers to use those data instead of survey results. Yet, a disadvantage of programme based data is that they rarely allow for socio-economic breakdowns, in terms of ECHIM according to the educational levels. Some information on the occurrence and aetiology of cervical cancer: Worldwide, cervical cancer is the fifth most deadly cancer in women [4], though less developed counties are affected much more. Major precondition for the development of cervical carcinoma is the long-term persisting infection with certain strains of human papilloma viruses (HPV). These usually symptomless infections are relatively widespread and are acquired through sexual intercourse. Meanwhile, two vaccines against two perilous types of HPV are available which significantly reduce the risk of cervical cancer. Public health officials in Australia, Canada, Europe, and the United States recommend vaccination of young women against HPV to prevent cervical cancer and to reduce the number of painful and costly treatments for cervical intraepithelial neoplasia, which is also caused by HPV. The US CDC [5], in compliance with other international public health and research institutions, recommend HPV vaccination with either vaccine for 11 to 17 year-old girls; if possible before they become sexually active. Females who are already sexually active may also benefit from the vaccine, but they may get less benefit from it because they may have already gotten one or more of HPV types targeted by the vaccines. However, few sexually active young women are infected with all HPV types prevented by the vaccines, so most young women

	{up to the age of 26} could still get protection by getting vaccinated. Vaccines should be given in 3 shots over 6 months. There is currently no information available about the duration of protection and recommended booster shots. Vaccine implementation in national health care systems have been taken up in most western countries and the EU, inter alia in France, Germany, Greece, Italy, Romania, Sweden, and the UK. However; since the vaccine only covers some high-risk types of HPV, experts still recommend regular pap smear cancer screenings even after a vaccination [6].
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Cancer becomes public health priority for Europe, BMJ 1994; 308:937.1, published 9 April 1994, http://www.bmj.com/content/308/6934/937.1 [3] Eurostat database, public health, EHIS, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_hc3&lang=en [4] WHO (February 2006). "Fact sheet No. 297: Cancer"; http://www.who.int/mediacentre/factsheets/fs297/en/index.html. [5] "HPV Vaccine Information For Young Women - Fact Sheet"; http://www.cdc.gov/std/hpv/stdfact-hpv-vaccine-young-women.htm, Page last updated: September 15, 2011 [6] National Cancer Institute, "Fact sheet HPV", http://www.cancer.gov/cancertopics/factsheet/prevention/HPV-vaccine, reviewed: December 29, 2011 **→ all source URLs lastly accessed on June 05 2012**

1.3.20. ECHI Indicator Data Sheet # 60 (Colon cancer screening)

ECHIM Indicator name	**D) Health interventions: health services** 60. Colon cancer screening (self-reported and covering the past two years) → ECHI ID Codes: 40501 - 40506
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 60.**
Definition	Proportion of persons (aged 50-74) reporting to have undergone a colorectal cancer screening test in the past 2 years.
Calculation	Percentage of persons (aged 50-74) that have undergone a colorectal cancer screening test (faecal occult blood test) in the last 2 years, derived from EHIS questions PA.16 and PA.17. PA.16: Have you ever had a faecal occult blood test? 1. Yes / 2. No; PA.17: When was the last time you had a faecal occult blood test? Within the past 12 months / More than 1 year, but not more than 2 years / More than 2 years, but not more than 3 years / Not within the past 3 years. EHIS data will not be age standardized.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age group (50-74) - Socio-economic status (educational level. ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS = interim source, see REMARKS) [1b].
Rationale	Colorectal cancer is the third most frequent cancer among males and the second among women. Colorectal cancer mortality can be reduced through periodical screenings from the age of 50. Information collected in population surveys can be directly used by the public health decision makers in order to possibly adapt the organisation of the prevention / screening programmes. The domain of colon cancer screening is a priority in European Community public health policy [2].

B	DATA PRESENTATION
Table 1.3.20	See: Annex III
Fig. 1.3.20.1	**Colon cancer screening of individuals aged 20-69 years by totals and sex**

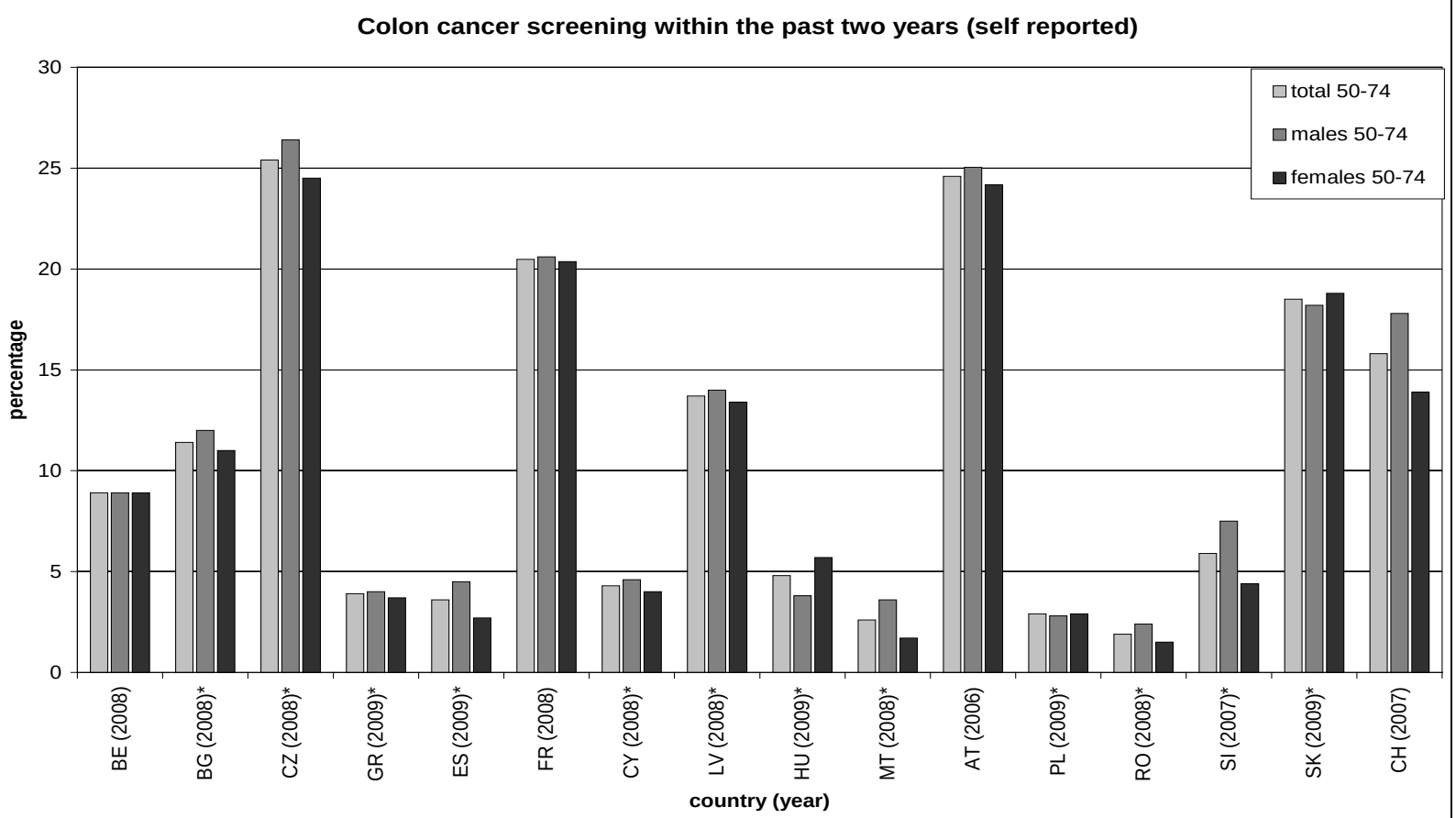
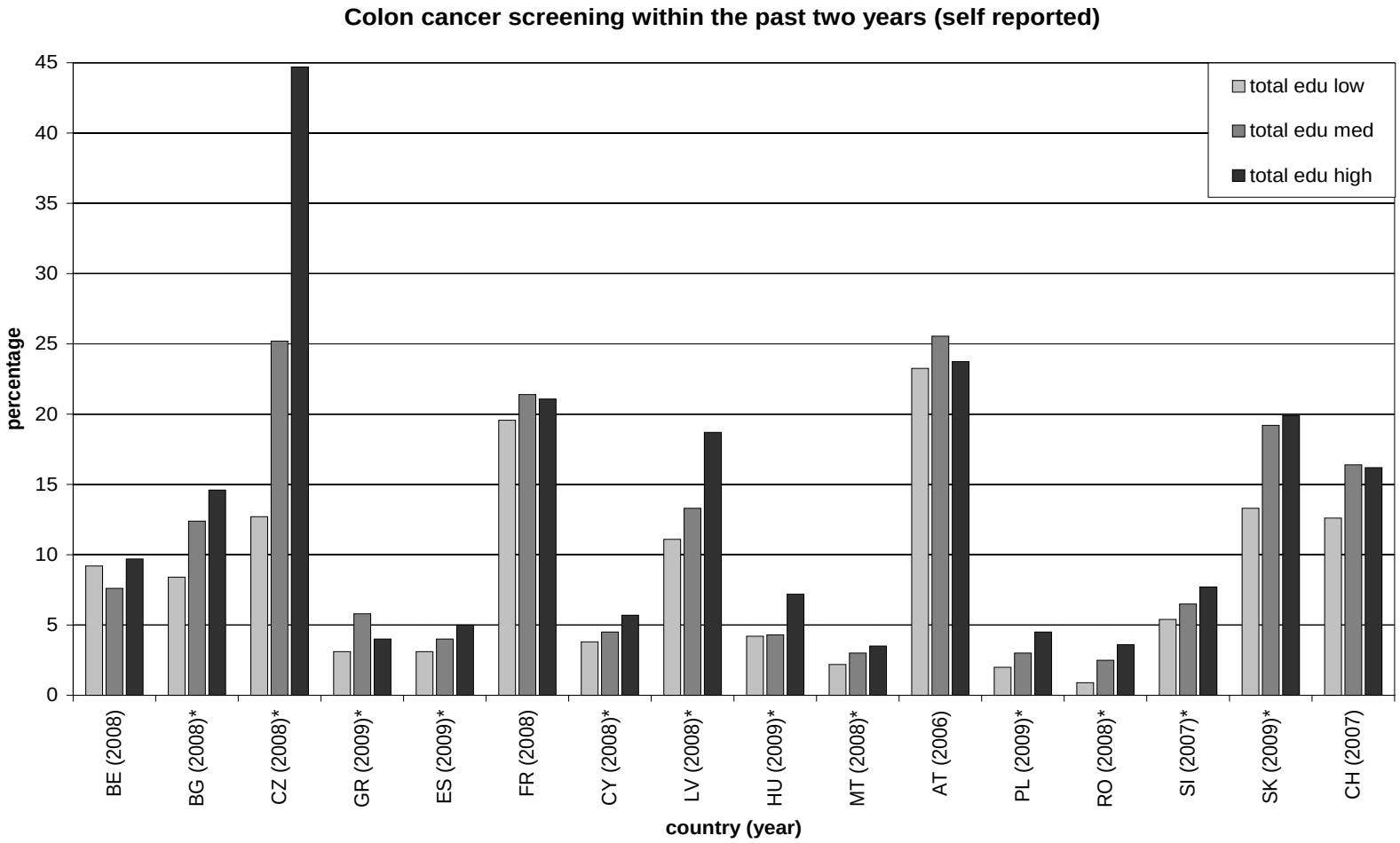


Fig. 1.3.20.2	Colon cancer screening of individuals aged 20-69 years by educational levels
	
	Legend: * = data extracted from Eurostat calculations of June 2011

C	DATA ANALYSIS
	Of the 16 countries which delivered data, the averaged colon cancer screenings rate by means of a faecal occult blood test of individuals aged 50-74 is 10.5%. The average rate for men is with 11% nearly the same than for women with 10.1%. In a cross-country comparison, the highest utilisation rates of around 25% are reported from the Czech Republic and Austria, followed by France with about 20%. Low rates below 5% are reported from seven countries (Greece, Spain, Cyprus, Hungary, Malta, Poland, and Romania (totals 1.9%, men 2.4% and women 1.5%) at the bottom of the table (see Figure 1.3.20.1). When screening data are analysed by the three educational categories, the often observed ascending educational order of health service utilisation percentages is evident in the majority of countries (see Figure 1.3.20.2). The steepest gradient is visible in the Czech Republic, while Austria and France show nearly no educational impact on utilisation rates with about 25% and 20%, respectively. Overall, the differences among mean rates of the educational categories are slightly larger as for the totals, the men and the women described above (education low 8.4%, medium 10.9% and high 13.1%). These colorectal cancer screening utilisation percentages seem low at first glance, if taken into account that the ECHI recall period is two years and the indicator therefore aggregates the EHIS answer categories "less than 1 year" and "from 1 to 2 years". But from the Eurostat database [3]) it can be extracted that between about 71% (France and Slovakia) and more than 90% (e.g. Spain, Greece, Malta, and Poland) of the concerned population strata never had a colorectal cancer screening test in form of a faecal occult blood test. One possible explanation for such low rates reported: A recall bias of elderly responders who left a stool sample but were not aware what kind of test was performed and did not understand the survey question, respectively. A more likely explanation: The modern and sophisticated colonoscopy is regarded a more efficient screening tool which allows for detection of early stages / in-situ carcinoma. But EHIS did not ask for the utilisation of endoscopic techniques. Nowadays, colonoscopy is part of several national policy cancer screening programmes.

D	REMARKS AND FURTHER INFORMATION
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. Relevant information about the EHIS wave 1 can be found here [1a+b]. General remark on the preferred data type and data source: Ideally, the recall period used in the definition for this indicator coincides with the intervals actually applied in national screening programmes. However, the periods applied in national cancer screening programmes differ. As a common methodology needs to be applied in EHIS for all countries, a flexible approach with country specific questions is not possible. The recall period used in the definition for this indicator therefore represents an average and hence it will not be aligned with the programme methodologies for all countries. Administrative sources based on screening programme data would be preferable over survey-based data, as the latter are influenced by recall and sampling biases. Currently however, there is no adequate international coverage of programme-based data. Therefore, for the moment, EHIS is the best source available for this indicator. In the future however, when the situation with programme-based data has improved, ECHIM prefers to use those data instead of EHIS. A common disadvantage of administrative-based data however is that they rarely allow for socio-economic breakdowns, in case of EHIS according to educational levels. Some information on colonoscopy, sometimes also named proctoscopy [4]: The Advisory Committee on Cancer Prevention and the European Cancer Observatory (ECO) [5] which scientifically contributed to the EU 'Council Recommendation of 2 December 2003 on cancer screening (2003/878/EC)' [6] still recommends the faecal occult blood test for colorectal cancer screening in men and women aged 50 to 74. However, the faecal occult blood test is not an optimal tool for colon cancer screening in terms of sensitivity and reproducibility. Furthermore, if the test is truly positive, the cancer is usually fully blown and invasive measures are already needed. This does not qualify a sole faecal occult blood test for colon cancer screening programmes.

	Thus, the ECO [5] regards endoscopic technologies as "novel screening tests" and states that novel screening tests still under evaluation have been adopted in a limited number of Member States currently running or establishing colorectal cancer screening programmes. The novel screening tests consist in colonoscopy or flexible sigmoidoscopy, i.e., invasive, endoscopic procedures performed by medical personnel. The screening programme in one Member State (Poland) uses only colonoscopy as the screening test. Screening programmes currently running or being established in six other Member States (Austria, Cyprus, Germany, Greece, Italy and Slovakia) employ endoscopic screening tests (either flexible sigmoidoscopy or colonoscopy) as a supplement or a more appropriate alternative to the faecal occult blood test. Information on the implementation status of national screenings programmes by the year 2007 [7] reveals that quite a number of EU Member States had no policy on screening programmes at all or were in the state of planning and piloting. Depending on the various national health care systems and the design (organised or opportunistic) of their colorectal cancer screening programmes (target groups, access to endoscopic techniques, screening intervals, out-of-pocket payment, etc), it is actually impossible to estimate the factual endoscopic colon screening rates in Europe. However, it can be assumed that overall colon cancer screening rates are significantly higher than displayed by the survey data at hand if utilisations of both diagnostic techniques are combined. It can also explain the low rates reported (e.g. Poland, Cyprus and Greece) and that a number of countries which performed national HIS did not deliver data for this indicator (e.g. Italy and Germany), because they may ask explicitly for colonoscopy screening tests. The current draft version of the second EHIS wave takes that fact into account by asking two separate questions on both types of colon cancer screening tools (Question Codes PA5 and PA6).
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Cancer becomes public health priority for Europe, BMJ 1994; 308:937.1, published 9 April 1994, http://www.bmj.com/content/308/6934/937.1

	[3] Eurostat database, see (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_hc4&lang=en [4] Medline Plus, "Colonoscopy"; http://www.nlm.nih.gov/medlineplus/ency/article/003886.htm, Page last updated: 07 February 2012 [5] European Cancer Observatory " Cancer screening: Colon and rectum"; http://eu-cancer.iarc.fr/cancer-6-colon-and-rectum-screening.html,en, ECO web-site is administered by the International Agency for Research on Cancer. Current site from June 2010. [6] Council Recommendation (2003/878/EC); http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:327:0034:0038:EN:PDF [7] Colon and rectum cancer screening programmes in the EU Member States in 2007; Source: European Commission, 2007 (DG Sanco); IARC, 2007 (ECN and EUNICE projects); http://eu-cancer.iarc.fr/cancer-6-display-text-561-567.html,en **→ all source URLs lastly accessed on June 05 2012**

1.3.21. ECHI# 71 General practitioner (GP) utilisation

ECHIM Indicator name	**D) Health interventions: health services** 71. General practitioner (GP) utilisation (self-reported visits) → ECHI ID Codes: 41601 - 41608
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 71.**
Definition	Mean number of self-reported visits to general practitioner per person per year.
Calculation	Mean number of visits to general practitioner per person per year, derived from EHIS questions HC10 and HC11. HC10: When was the last time you consulted a GP (general practitioner) or family doctor on your own behalf? (1) Less than 12 months ago (2) 12 months ago or longer (3) Never) If HC10 is 1): → HC11: During the past four weeks ending yesterday, that is since (date), how many times did you consult a GP (general practitioner) or family doctor on your own behalf? (number of times). Total number of contacts reported under HC11 is extrapolated from 4 to 52 weeks, and divided by the total number of respondents in the sample. EHIS data will not be age standardised.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-64, 65+) - Socio-economic status (educational level ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	A basic indicator for the use of medical services. The differences by sex, age and socioeconomic status provide information that can be used in assessment of the cost and (equity of) access to health services.

B	DATA PRESENTATION
Table 1.3.21	See: Annex III
Fig. 1.3.21.1	**Mean number of self-reported visits to general practitioner per person per year; by totals, sex and age**

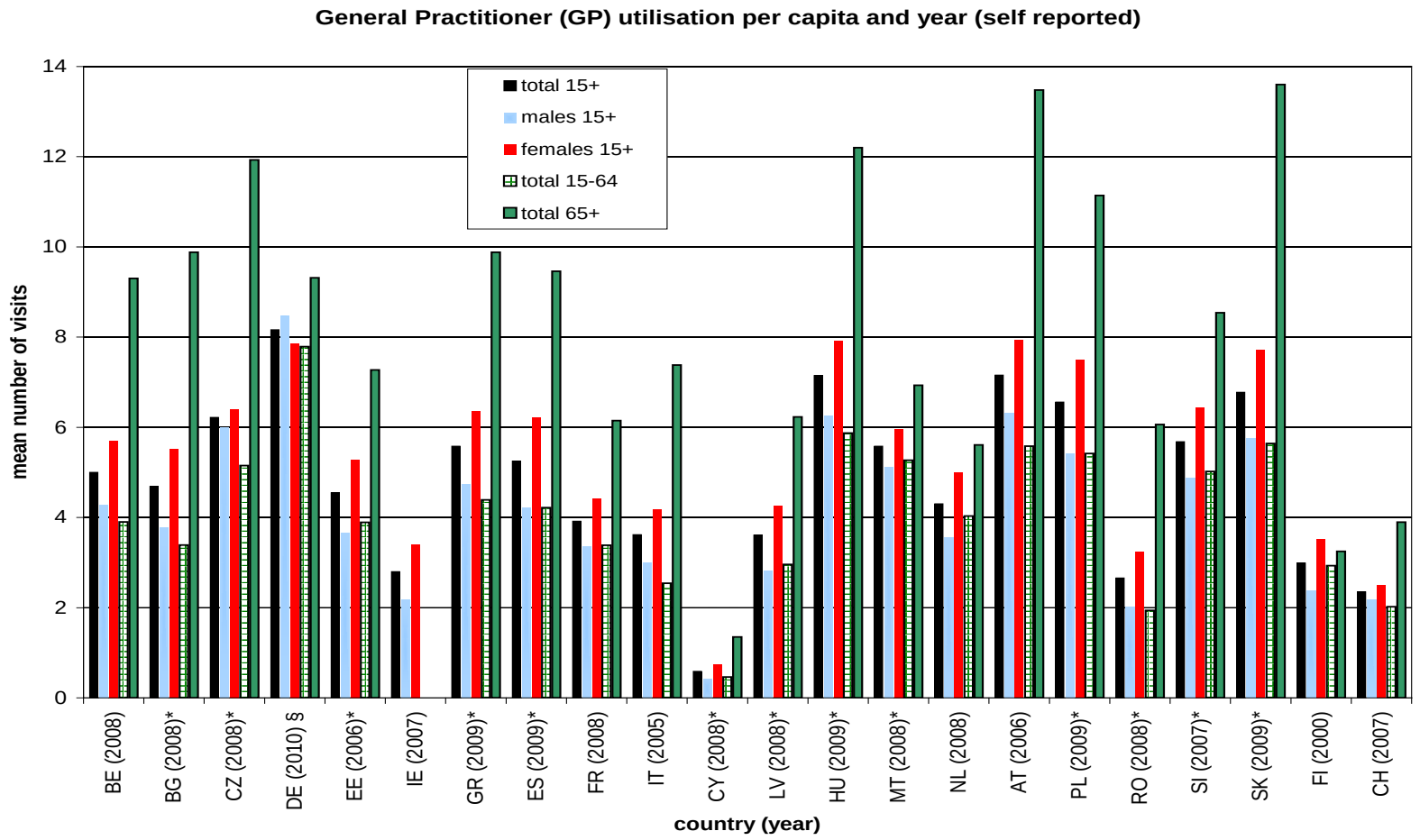
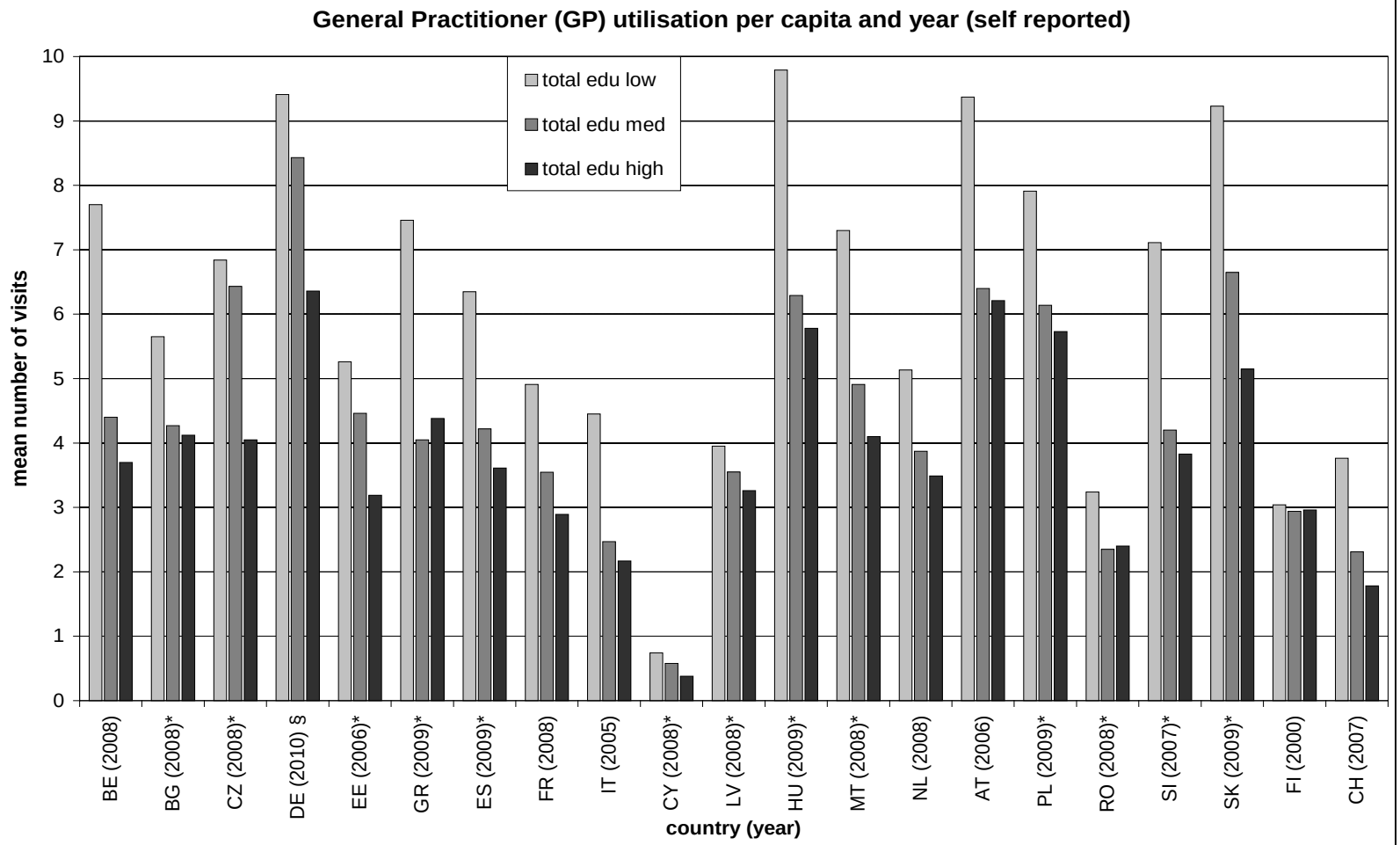


Fig. 1.3.21.2	Mean number of self-reported visits to general practitioner per person per year; by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample; N = 3100 and age 18+

C	DATA ANALYSIS
	In a cross-country comparison, Cyprus reported the lowest mean number of annual visits by far for totals (0.6), males (0.4), females (0.7) and the two age groups (0.5 and 0.7, respectively). Averaged numbers of visits for 21 countries in the same order are totals 4.8, men 4.1, women 5.4, 15-64 years 4.1 and 8.2 visits for elderly 65+ (see Figure 1.3.21.1). The lead in total annual contacts with General Physicians (GP) is taken by Germany, followed by Hungary, Austria, Slovakia and the Czech Republic. While the age band 15-64 years is mostly of the same range as the male totals in each country, the women throughout depict larger figures than men (only exception: Germany) and the elderly provide the highest number of annual visits, with Slovakia on top with 13.6 contacts. When data are scrutinized by the three educational levels, the same descending educational order of GP consultations is visible in nearly all 21 countries (see Figure 1.3.21.2). Marginal deviations can be observed only in Greece and Romania. The pattern resembles the figures on prevalence percentages for several health statuses (e.g. diabetes and COPD) and health determinants (e.g. BMI and hypertension) indicators. This seems logical: the more diseases or risk factors are prominent in the lower educated and 65+ strata, the higher the utilisation of medical services and treatments, keeping in mind that persons aged 65+ usually have lower educational degrees than younger people nowadays. Non-weighted mean values for low, medium and high educational levels are 6.1, 4.4 and 3.8 GP consultations per year.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. More relevant and meta-information about the EHIS wave 1 can be found here [1a+b]. NB: The data from Finland originate from the year 2000 and are regarded as out-dated. However, the Finnish data are not excluded from data computation. The German data are not as valid as for other ECHI indicators due to the small sub- sample size. Ireland delivered data for totals and sex; but age groups and breakdowns by educational level are missing.

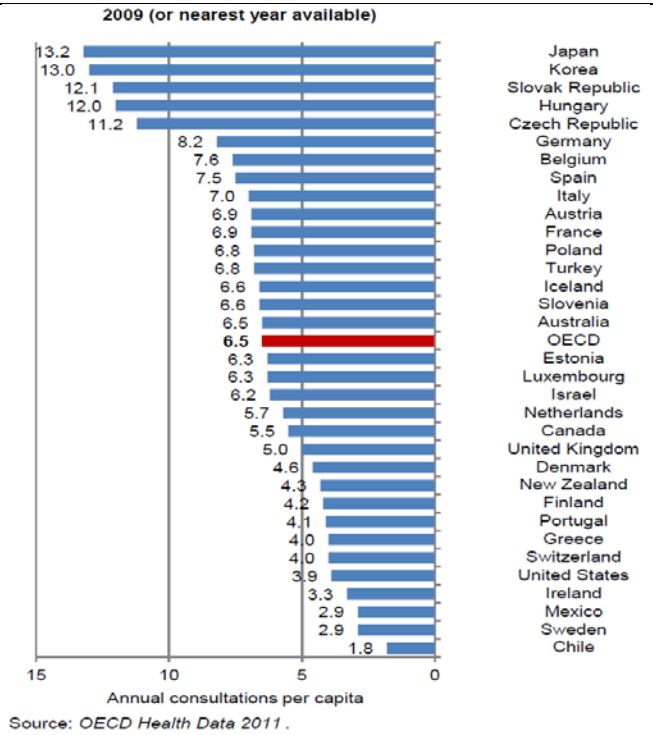
General remarks on the first EHIS wave and the computation of this indicator:
The EHIS definition of consulting a GP comprises visits to the respondents' doctor's practice, home visits as well as consultations by telephone.
EHIS asks respondents to report visits to a GP or family doctor that took place during the past four weeks, as using a relatively short time frame will prevent recall biases. The downside of using a short recall period, however, is that seasonal influences may bias the estimates. This should be taken into account in the design of the fieldwork, i.e. spreading the data collection over the entire year and performing it within the same season, respectively.
Additionally, extrapolating the estimate from 4 weeks to one year will lead to over- or underestimations by enlarging the statistical error. ECHI uses a 12-months timeframe, as well do the WHO and OECD in their reports.

(E)HIS-based estimates are influenced by reporting biases and sampling related biases. Therefore, they may not be an adequate reflection of the current situation in a country, and other estimates may be better for this purpose (e.g. administrative data of health insurances). However, as a common methodology is underlying the gathering of EHIS data, they suit well the purpose of international comparison.

Nevertheless, the concept "GP" will not be uniform across countries; either countries do not provide a primary healthcare scheme or the concept of a GP / family doctor depends on the organisation of a health care system and the division of tasks between different types of physicians within that health care system. This additionally hampers the comparability of EHIS data for this indicator.
Administratively deduced / register-based data on GP utilisations are available from Belgium, Spain and Latvia.

Breakdown/ Country (year)	Percentage BE (2009)	Percentage ES (2009)	Percentage LV (2009)
Total	2.3	5.4	2.3
Men	nd	4.6	2.8
Women	nd	6.2	2.6
Individuals aged 15-64	3.6	4.7	2.0
Individuals aged 65+	9.40	9.9	4.1

	Further data were delivered by Iceland, Lithuania, the UK and The Netherlands but did not fit for comparison with survey data. The administratively deduced data from Latvia constantly exceed the stratified survey data by 30-60%, while the Spanish data provide a very close match with the survey results. Although the Belgian register misses the breakdowns by sex, the comparison with survey data of totals are underestimated by >50%, but figures for the age groups 15-64 and 65+ come very close to the survey data. The extremely low consultations on the Hellenic part of Cyprus (mainly below 1 visit per year) can be explained by the lack of a primary healthcare system in Cyprus, so people are free to seek consultations with medical specialists according to their ailment. This explanation can be sustained by a glance at Eurostat's database [2] that reveals that 96.7% of the total Cypriot population never had any contact with a general physician within the last 4 weeks. 2.6% of the total Cypriot population had one contact, 0.4% had two contacts and only 0.3% had three to five visits within the last four weeks. In all those categories, Cyprus brings up the rear in comparison to all other countries participating in first EHIS wave. So it seems likely that the extrapolation to 12 months and the ECHI breakdowns deliver a correctly computed but nevertheless biased number of annual consultations. In general, a recall period of only four weeks must lead to some distortion by extrapolation, but a longer recall period, e.g. three months, the most recent quarter, should still be manageable for the survey responders and thus reflecting the "real" annual visits more appropriately. The same applies to other ambulatory services like dentist or medical specialist consultations (ECHI #72). The current revision of the questionnaire for the second EHIS wave planned in 2014 likely keeps the 4 weeks recall period for ambulatory services, but in contrast applies a 12 months recall for "use of inpatient and day care". The OECD Health at a Glance 2011 [3] report presented higher figures because they combined GPs and other medical specialists, whereby they utilised mainly administrative sources and stated that "estimates from administrative sources tend to be higher than those from surveys because of incorrect recall and non-response rates". However, if roughly combined with #72-2 medical/surgical specialists the ranking resembles the ECHIM figures, inter alia for Hungary, Slovakia, the Czech Republic, Germany, Austria, Poland and The Netherlands.

	
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Eurostat database, public health, EHIS. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_hc5&lang=en [3] Health at a Glance 2011, OECD, ISBN 978-92-64-11153-0 (print) or ISBN 978-92-64-12610-7 (HTML), http://www.oecd.org/dataoecd/6/28/49105858.pdf , particular Chapter 4.1. “Consultations with doctors”, http://dx.doi.org/10.1787/888932524431 **→ all source URLs lastly accessed on June 05 2012**

1.3.22. ECHI# 72-1 Selected outpatient visits: dentist/orthodontist

ECHIM Indicator name	**D) Health interventions: health services** 72-1. Selected outpatient visits: dentist or orthodontist (self-reported visits) → ECHI ID Codes: 41701 - 41708
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 72**
Definition	Mean number of self-reported visits to a dentist or orthodontist per person per year.
Calculation	Mean number of self-reported visits to a dentist or orthodontist per person per year, derived from EHIS questions HC08 and HC09. HC08: When was the last time you visited a dentist or orthodontist on your own behalf (that is not while only accompanying a child, spouse etc)? (1) Less than 12 months ago (2) 12 months ago or longer (3) Never. If HC08 is 1):→ HC09: During the past four weeks ending yesterday, that is since (date), how many times did you consult a dentist or orthodontist on your own behalf? (number of times). Total number of contacts reported under HC09 is extrapolated from 4 to 52 weeks, and divided by the total number of respondents in the sample.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-64, 65+) - Socio-economic status (educational level ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Indicator used in assessment of cost and (equity of) access to ambulatory services.

B	DATA PRESENTATION
Table 1.3.22	See: Annex III
Fig. 1.3.22.1	**Mean number of self-reported visits to dentist / orthodontist per person per year; by totals, sex and age**

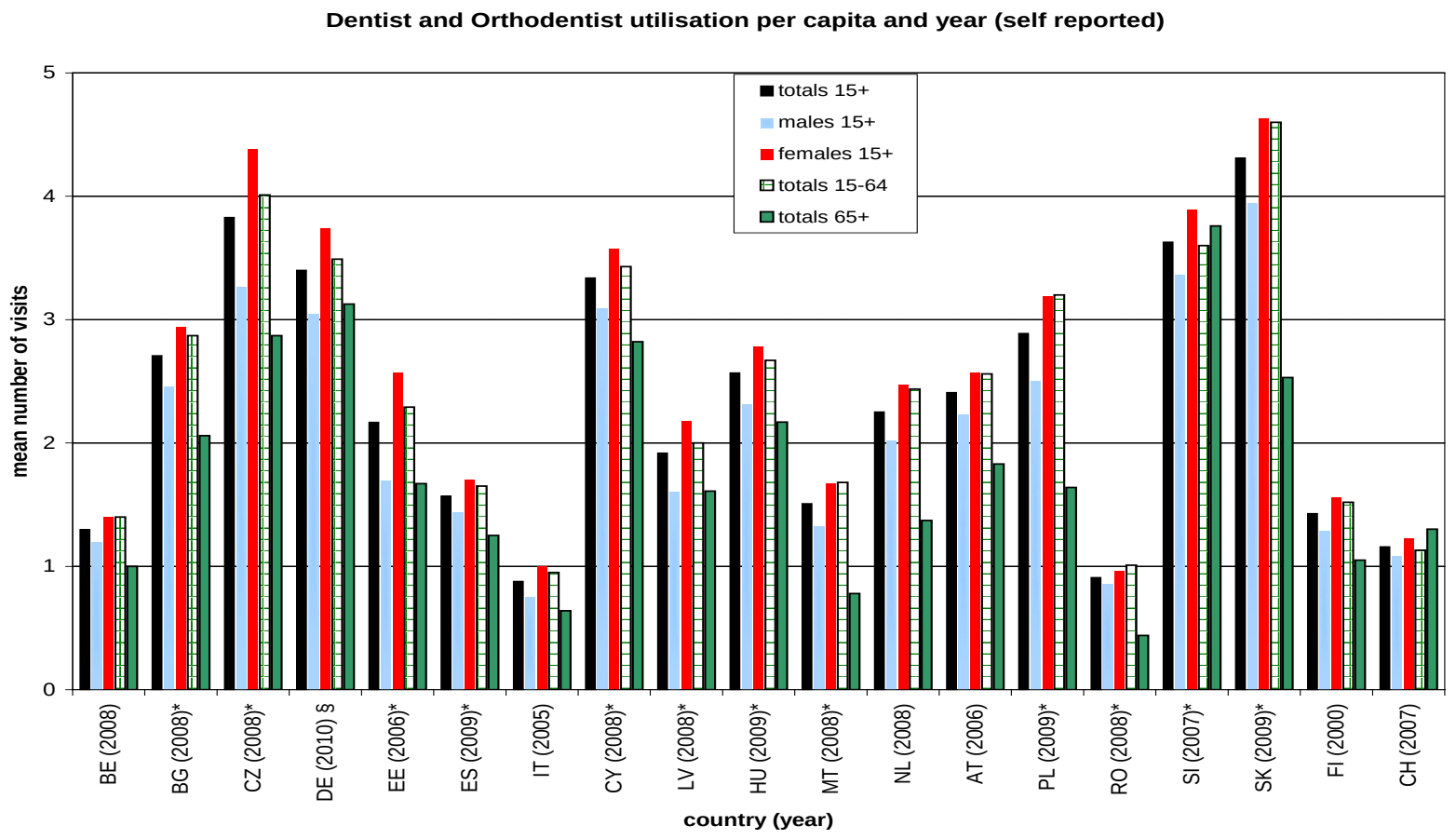
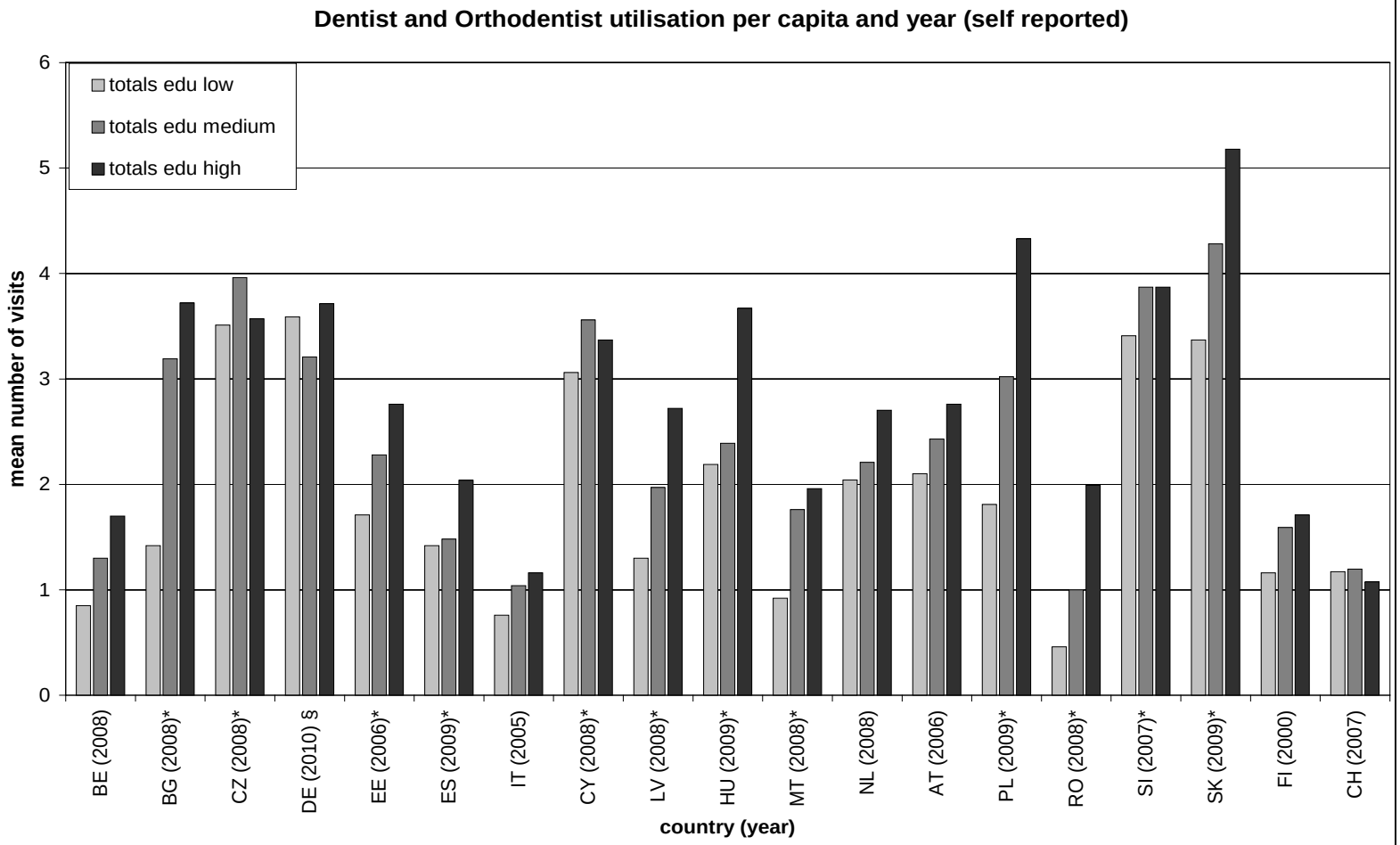
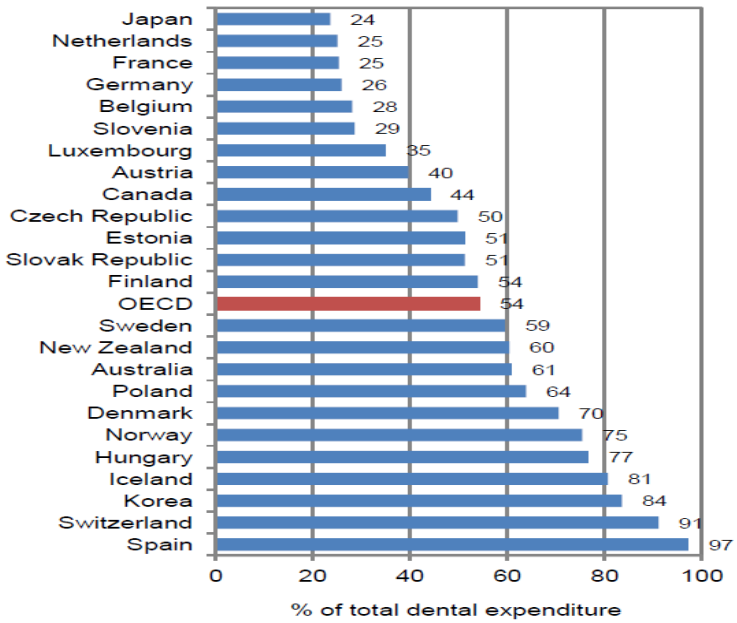
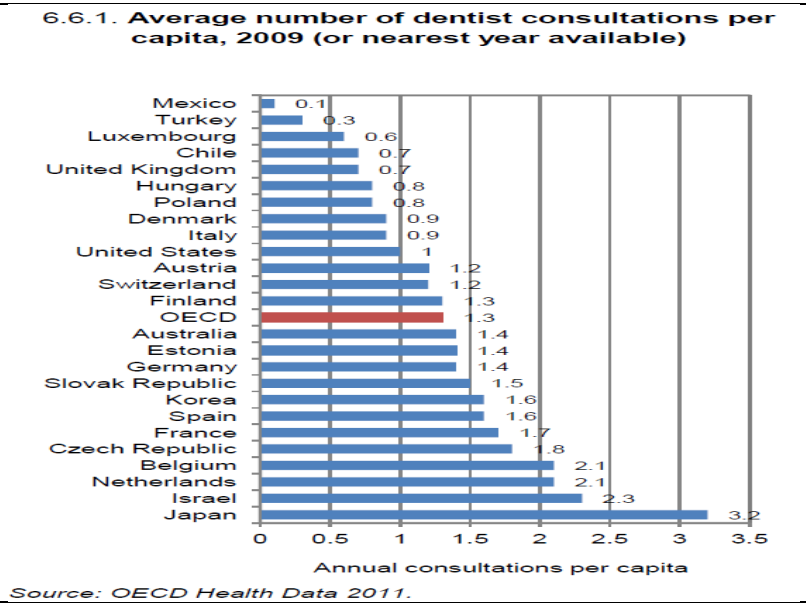


Fig. 1.3.22.2	Mean number of self-reported visits to dentist /orthodontist per person per year; by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample: N = 3100 and age 18+

C	DATA ANALYSIS
	In an cross-country comparison, Italy and Romania reported the lowest mean numbers of annual visits for all breakdowns, which are one visit or less, but it has to be noted that the Italian data originate from 2005 (see Figure 1.3.22.1). Averaged numbers of visits in 19 countries are 2.3 for totals, 2.1 for men and 2.5 for women. The age group of 15-64 years has an average of 2.4 visits, while the elderly decline to the lowest figures of 1.8 annual visits. The lead in annual visits to dentists and/or orthodontists is taken by Slovakia with 4 or more visits per year, followed by the Czech Republic, Slovenia, Germany and Cyprus with more than 3 annual contacts. Two general trends can be observed from the ECHIM Pilot Collection. Firstly, women show slightly higher dentist/orthodontist contact rates than men (2.5 vs. 2.1), and secondly, persons aged 65+ have the lowest number of annual consultations. An exception is Slovenia that reported 3.8 contacts of the elderly which is more than twice of the average number of visits in that stratum. However, the latter trend seems reasonable since people of 65 years and above predominantly have partial or full dental prostheses which both reduce the number of teeth for interventions and costly implantations. The elderly overtop the working age group in terms of contacts only in Slovenia and Switzerland but to a low extent. When data are analysed by the three educational levels, an ascending educational order of dentist/orthodontist contacts is visible in 15 out of 19 countries (see Figure 1.3.22.2). Deviations from that pattern are reported from the Czech Republic, Cyprus, Germany and Switzerland. Since the number of visits is lowest among the elderly (see Figure 1), it can be presumed that a majority of the high and medium educated individuals belong to the workforce. The Eurostat database [2] seems to sustain this assumption, though a different reporting concept ("Consultation of a medical professional during the last 4 weeks by sex, age and educational level (%)") hampers an adequate extraction for comparison. Averaged figures for low, medium and high educational levels are 1.9, 2.4 and 2.8 dentist/orthodontist consultations per capita and year.
D	**REMARKS AND FURTHER INFORMATION**
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. More relevant and meta-information about the EHIS wave 1 can be found here [1+b].

	NB: The data from Finland originate from the year 2000 and are regarded as out-dated. However, the Finnish data are not excluded from data computation. The German data are not as valid as for other ECHI indicators due to the small sub- sample size. General remarks on the first EHIS wave and computation of this indicator: Likewise with other ambulatory health care providers, EHIS asks respondents to report visits that took place during the past four weeks, as using a relatively short time frame will prevent recall biases. The downside of using a short recall period, however, is that seasonal influences may bias the estimates. This should be taken into account in the design of the fieldwork, i.e. spreading the data collection over the entire year and performing it within the same season, respectively. Additionally, extrapolating the estimate from 4 weeks to one year will lead to over- or underestimations by enlarging the statistical error. ECHI uses this 12 months time frame, as well do the WHO and OECD in their reports. The national health care systems differ widely so that it may be of utmost importance which dental services are covered by which insurance scheme. That may range from very basic services like tooth extractions or dental fillings up to expensive oral rehabilitation measures like teeth crowns or implantations. In some countries, adult dental care may not be part of the basic service packages which is included in the public care insurance. In other countries, prevention and treatments are covered, but a varying share of costs is borne by patients, thus creating access problems for low-income groups. At the OECD database [3] the "Private household out-of-pocket expenditure" is extractable. Unfortunately, the OECD does not differentiate strongly enough between the levels of medical service but aggregates "Providers of ambulatory health care". However, it becomes evident that in many EU countries both the private sector and out-of-pocket expenditures have increased over time. In the OECD Health at a Glance Report 2011 [4] (Chapter 7.5 "Financing of Health Care), it reads that the public sector remains the main source of health financing in all OECD countries, but many of those countries with a relatively high public share in the early 1990s, such as Poland and Hungary, have decreased their share, thus reflecting health system reforms and the expansion of public coverage. After public financing, the main

	financing sources for health care are households themselves through so-called out-of-pocket payments. These may be co-payments or cost-sharing arrangements with public or private schemes, where payments by the household can be made up-front or reimbursed. The report also states that some eastern European countries with traditionally high shares of public financing have seen charges shifted towards households and that in some central and eastern European countries, the practice of unofficial supplementary payments means that the level of out-of-pocket spending is probably underestimated. The following chart shows out-of-pocket dental expenditure across OECD countries in 2009 [4a]. 6.6.4. **Out-of-pocket dental expenditure, 2009 (or nearest year available)**  *Source: OECD Health Data 2011.* These figures for out-of-pocket expenditures might explain the social gradient discussed and shown in Figure 1.3.22.2.

	Administratively deduced and register-based data on dentist/orthodontist utilisations were partly delivered Belgium and Finland, and from Estonia where only total visits by persons aged 15+ are reported. No breakdowns by sex could be provided (data not shown). The Belgium figures for totals aged 15+ and age groups 15-64 and 65+ are below 0.25 contacts, while the Finnish data of 2009 are above 1 visit, the statistic is headed by the elderly with 1.8 annual contacts. Estonia reported for totals aged 15+ 1.2 contacts per year. Again, the OECD Health at a Glance Report 2011 [4b] provides lower figures on dentist consultations for several countries while it matches quite well, inter alia for Italy, The Netherlands, Finland, Switzerland and Spain. However, the report does not disclose how the data were gathered and whether or not orthodontists are included (see Figure 1.3.22.3). So it seems likely that an extrapolation to 12 months of ECHI breakdowns delivers correctly computed but in some cases overestimated numbers of annual consultations.
Fig. 1.3.22.3	**OECD data on annual number of dentist consultations**
	

	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Eurostat database, public health, EHIS http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_hc5&lang=en [3] OECD database; chapter "Health Expenditure and Financing" sub-chapter "Providers x Financing Agents" http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT [4] Health at a Glance 2011, OECD, ISBN 978-92-64-11153-0 (print) or ISBN 978-92-64-12610-7 (HTML), http://www.oecd.org/dataoecd/6/28/49105858.pdf [4a] ibid. Chapter 6.6. Inequalities in dentist consultations, http://dx.doi.org/10.1787/888932525932, page 141 [4b] ibid. Chapter 6.6. Inequalities in dentist consultations, http://dx.doi.org/10.1787/888932525875, page 141 **→ all source URLs lastly accessed on June 05 2012**

1.3.23. ECHI# 72-2 Selected outpatient visits: medical / surgical specialist

ECHIM Indicator name	**D) Health interventions: health services** 72-2. Selected outpatient visits: medical or surgical specialist (self-reported visits) → ECHI ID Codes: 41709 - 41716
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 72**
Definition	Mean number of self-reported visits to a medical or surgical specialist per person per year.
Calculation	Mean number of self-reported visits to a medical or surgical specialist per person per year, derived from EHIS questions HC12 and HC13. HC12: When was the last time you consulted a medical or surgical specialist on your own behalf? (1) Less than 12 months ago (2) 12 months ago or longer (3) Never). If HC12 is 1):→ HC13: During the past four weeks ending yesterday, that is since (date), how many times did you consult a specialist on your own behalf? (number of times). Total number of contacts reported under HC13 is extrapolated from 4 to 52 weeks, and divided by the total number of respondents in the sample.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-64, 65+) - Socio-economic status (educational level ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Indicator used in assessment of cost and (equity of) access to ambulatory services.

B	DATA PRESENTATION
Table 1.3.23	See: Annex III
Fig. 1.3.23.1	**Mean number of self-reported visits to med./surgical specialist per person + year; by totals, sex and age**

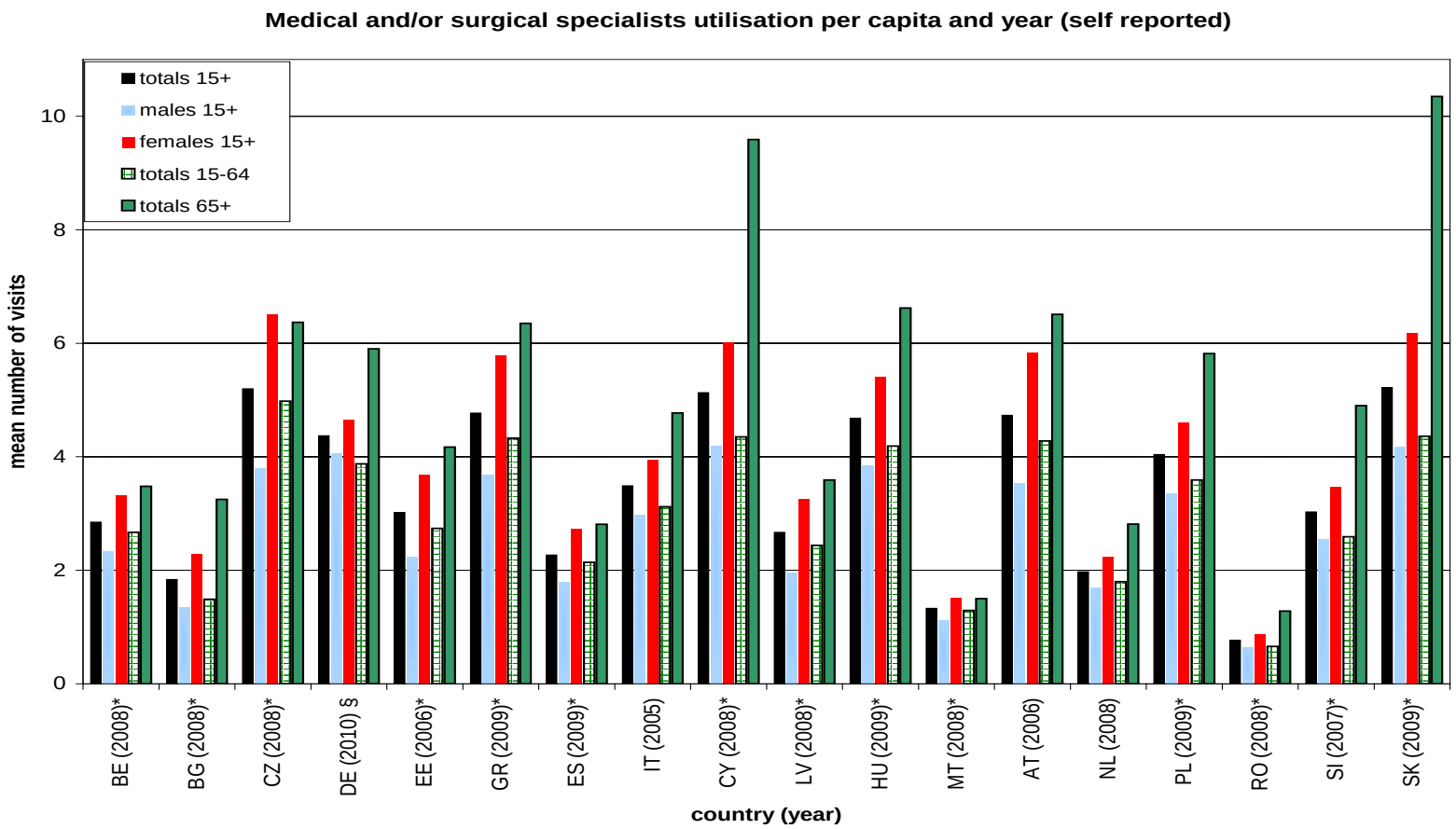
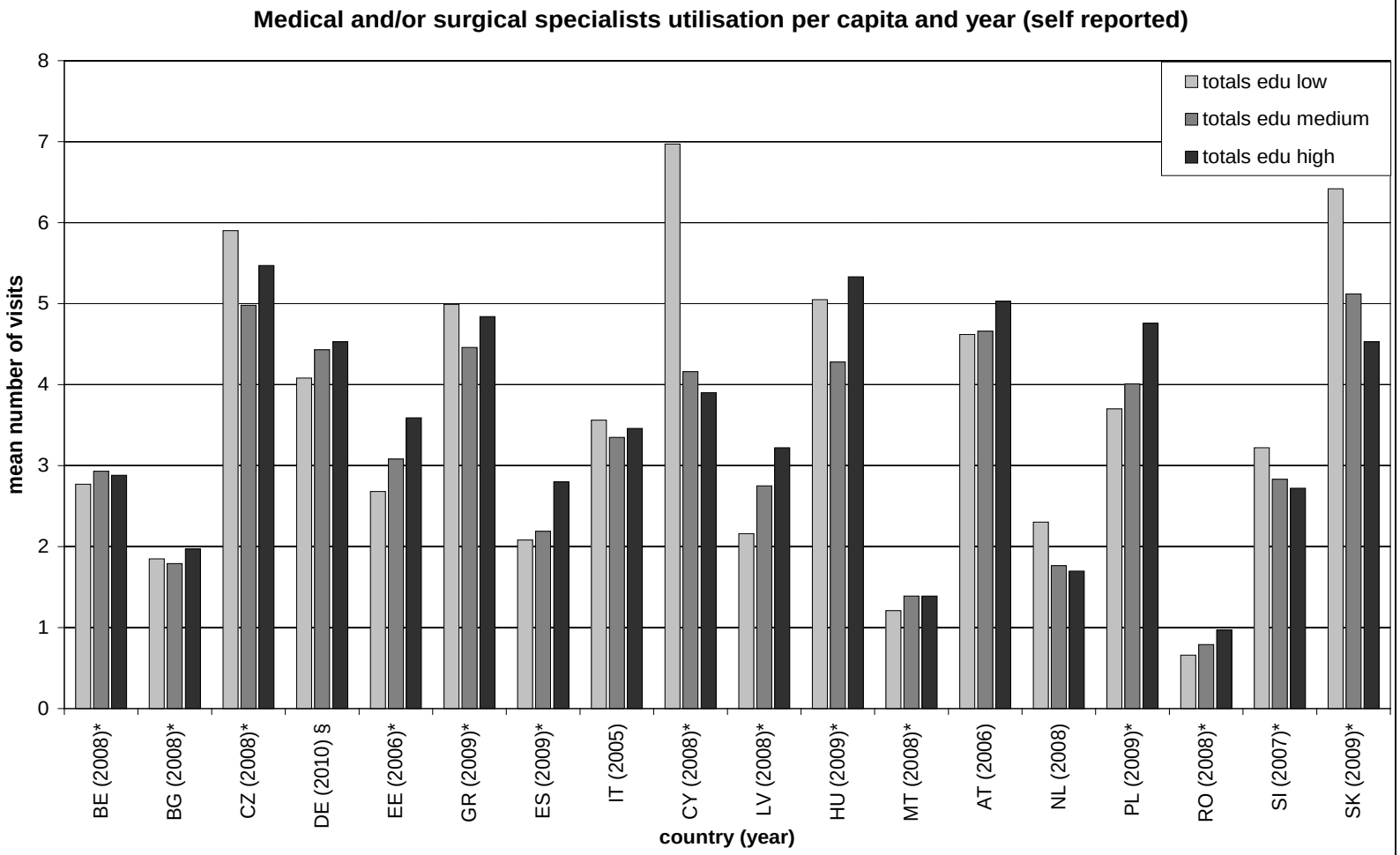


Fig. 1.3.23.2	Mean number of self-reported visits to med./surgical specialist per person and year; by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; § = subsample: N = 3100 and age 18+

C	DATA ANALYSIS
	In a cross-country comparison, Romania and Malta reported the lowest mean numbers of annual visits for all breakdowns, which are 1.5 visits or less (see Figure 1.3.23.1). Averaged numbers of visits in 18 countries are 3.4 for totals, 2.7 for men and 4 for women. The age band 15-64 years has 3 visits on average while the number for the elderly rises to 5 annual consultations. The lead in annual contacts with medical and/or surgical specialists is taken by Slovakia, the Czech Republic and Cyprus with more than 5 visits for totals aged 15+ per year. Slovakia also shows a peak of 10.4 annual visits for elderly which is more than twice of the mean consultations in that stratum. Cyprus is a special case since it does not have a primary healthcare system (lowest figures by far for the ECHI#71 GP utilisation) and thus spearheads in specialists' consultations. Two general trends can be observed from the Pilot Study. Firstly, women throughout show higher medical and/or surgical specialist contact rates than men (4 vs. 2.7), and secondly, persons aged 65+ have the largest number of annual consultations. The only exception is reported from the Czech Republic where women (totals) slightly overtop the elderly, but since woman are also included in the 65+ stratum, this is of no significance. The higher consultation rates by women might be attributable to the recommended annual check-up with a gynaecologist, and particularly in the course of pregnancy. Overall, it is the same gender trend as observed with other ambulatory service utilisations. The fact that elderly have more consultations (except with dentists) is undisputed and reflects the data for general practitioner utilisation. An analysis of data according to the three educational levels shows no clear general trend (see Figure 1.3.23.2). Though the range can vary by the magnitude of factor 10 for lower educated individuals (Romania vs. Cyprus), the mean figures are quite close to each other for low, medium and high educational levels with 3.6, 3.3 and 3.5 consultations per capita and annum.
D	REMARKS AND FURTHER INFORMATION
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. More relevant and meta-information about the EHIS wave 1 can be found here [1a+b].

NB: The German data are the most recent but not as valid as for other German ECHI indicators due to the small sub- sample size.

General remarks on the EHIS wave 1 and computation of this indicator:
Likewise with other ambulatory health care providers, EHIS asks respondents to report visits that took place during the past four weeks, as using a relatively short time frame shall prevent recall biases. This may be satisfactory for Eurostat's purposes but must lead to over- or underestimations if figures are extrapolated to one year. ECHI uses this 12 months time frame, as well do the WHO and OECD in their reports.

General comments to this indicator:
The national health care systems differ widely. In some countries the patient is obliged to consult firstly a general practitioner's office ("gate keeper") before being referred to a medical specialist. In other countries (e.g. Cyprus) and particularly in private health schemes, the patient may be free to approach a specialist according to the individual ailment. It may also be influenced by out-of-pocket expenditures, medical specialists' density and duration of waiting times.

Administratively deduced and register- based data on medical/surgical specialist utilisations are available from Belgium (no breakdowns by sex), Hungary, Latvia, and Finland (but lacks the survey data for comparison). Estonia and the Czech Republic delivered only data on totals (data not shown), the latter includes totals from year 0+.

Breakdown/ Country (year)	Percentage BE (2008)	Percentage HU (2008)	Percentage LV (2009)
Total	1.97	5.32	1.23
Men	nd	4.12	0.87
Women	nd	6.39	1.55
Individuals aged 15-64	2.06	4.88	1.15
Individuals aged 65+	3.28	7.22	1.70

Comparison has a tendency of providing lower figures when compared with the survey data (though with a difference of ± 1 year of reporting). The Belgium figures are slightly lower (maximum ~ 1 visit) than the survey

	results, while the Latvian figures are throughout about 50% lower than the survey data. On the opposite side, the Hungarian data for all strata are 10-20% above the survey results. After all, the Estonian totals aged 15+ shows a close match with 3.2 vs. 3.0 annual contacts. A chart of the OECD Health at a Glance Report (Chapter 4.1 "Consultations with Doctors") [2] has been included in the indicator data sheet #71 GP utilisation. The OECD defines that "consultations with doctors refer to the number of contacts with physicians (both generalists and specialists)", which hampers the direct comparison with the ECHI data. However, it might be reasonable to look at the ranking again when ECHI data on GP consultations are considered, too. Slovakia, Hungary, the Czech Republic and Germany head the rank list of annual consultations which matches fairly with the ECHI data. Countries like Belgium, Spain, Italy, Austria and Poland lay close to each other with around 7 annual visits, which is slightly above the OECD average of 6.5 visits. The Netherlands are below the OECD average with about 6 annual consultations, which comes close when combined with ECHI #71 GP utilisation.
	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011. [2] Health at a Glance 2011, OECD, ISBN 978-92-64-11153-0 (print) or ISBN 978-92-64-12610-7 (HTML), http://www.oecd.org/dataoecd/6/28/49105858.pdf , Chapter 4.1. “Consultations with doctors”, http://dx.doi.org/10.1787/888932524431 **→ all source URLs lastly accessed on June 05 2012**

1.3.24. ECHI# 72-3 Selected outpatient visits: psychologist / psychotherapist

ECHIM Indicator name	**D) Health interventions: health services** 72-3. Selected outpatient visits: psychologist / psychotherapist (self-reported visits) → ECHI ID Codes: 41717 - 41724
A	**DOCUMENTATION → current and entire Documentation Sheet:** **See Report II: Part II. ECHI indicator documentation, chapter 72**
Definition	Proportion of population reporting to have had a contact with a psychologist or psychotherapist during the past 12 months.
Calculation	Percentage of respondents reporting to have had a contact with a psychologist or psychotherapist during the past 12 months, derived from EHIS question HC.16 : During the past 12 months, that is since (date on year ago), have you visited on your own behalf a …? (different types of health care providers are listed among which is 'psychologist or psychotherapist'; answer categories are yes / no / don't know / refusal). Numerator = number of respondents answering yes to the question whether they visited a psychologist or psychotherapist. Denominator = total number of respondents in the sample.
Relevant dimensions and subgroups	- Country - Calendar year - Sex - Age groups (15-64, 65+) - Socio-economic status (educational level ISCED 3 aggregated groups: 0-2; 3+4; 5+6)
Preferred data type and source	Preferred data type: (E)HIS [1a] Preferred source: Eurostat (EHIS) [1b]
Rationale	Indicator used in assessment of cost and (equity of) access to ambulatory services. The questionnaire of the first EHIS wave does not allow the calculation of the mean number of visits to mental health care providers per capita per year, like it was possible for general practitioners (GP) and medical / surgical specialists. Given the rising public health impact of mental health problems, it was decided to include the 'proportion of population reporting contact during the past 12 months' as the second best proxy.

B	DATA PRESENTATION
Table 1.3.24	See: Annex III
Fig. 1.3.24.1	**Proportion of population reporting contact with psychologists /psychotherapists; by totals, sex and age**

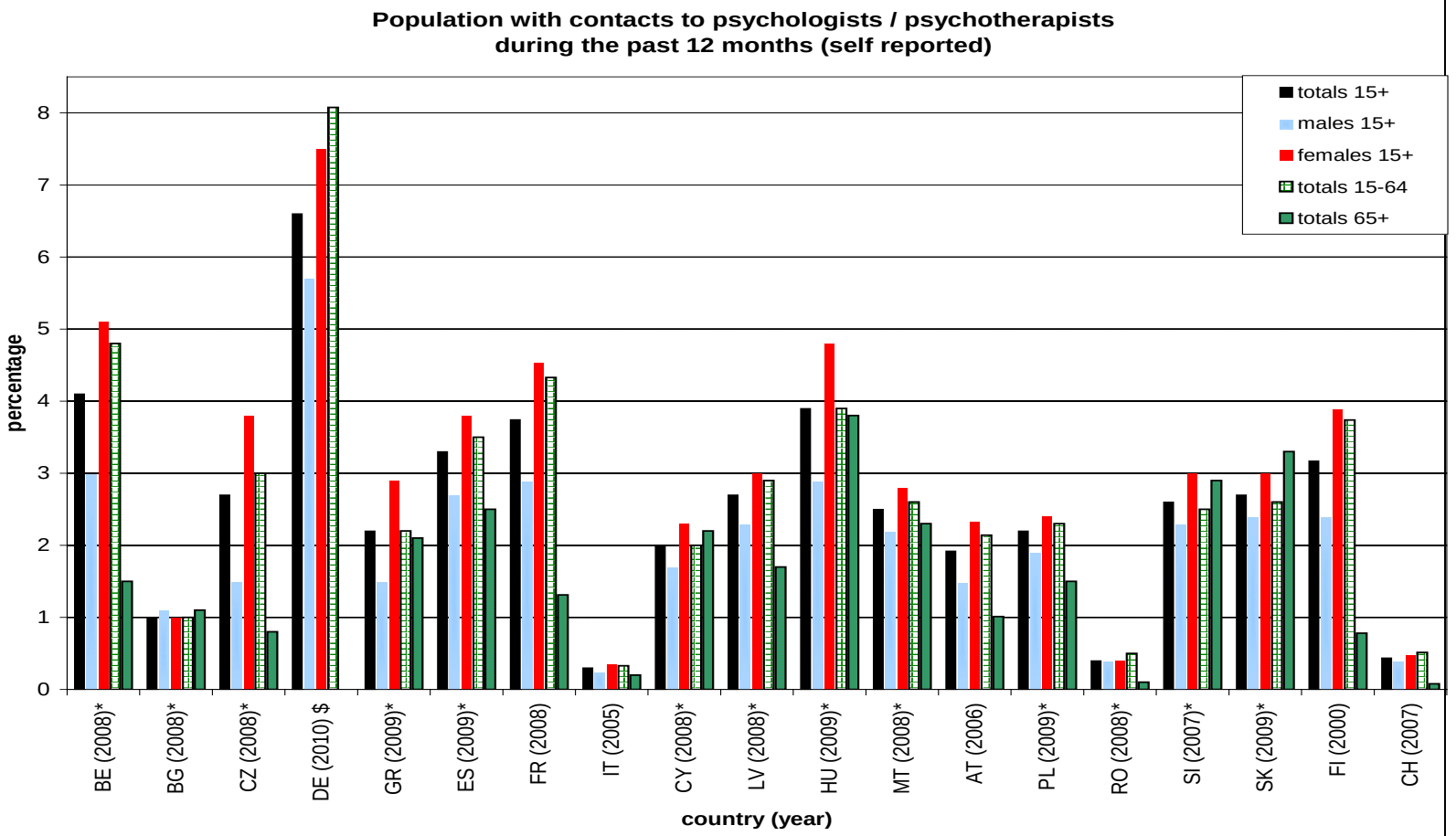
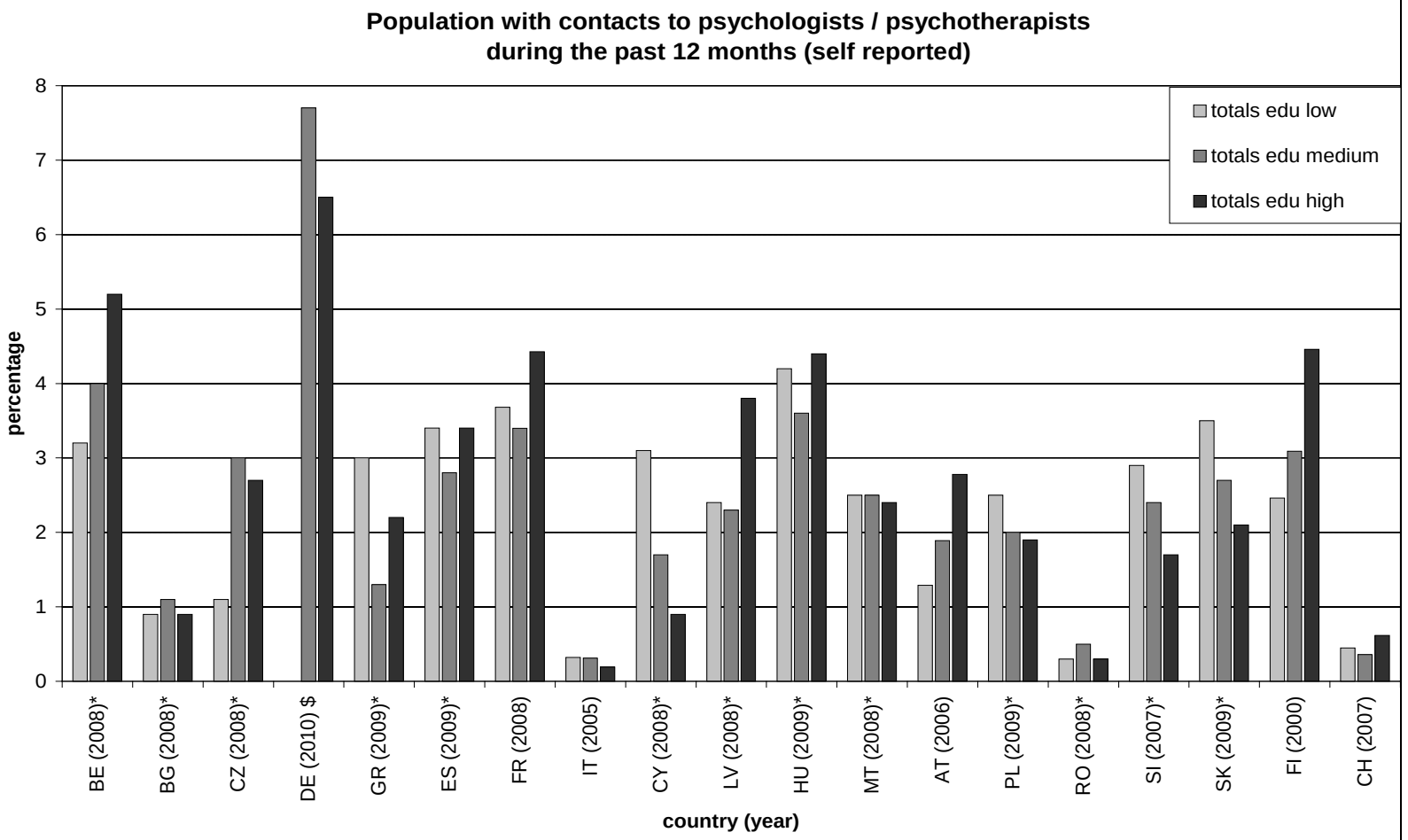


Fig. 1.3.24.2	Proportion of population reporting contact with psychologists /psychotherapists; by educational level
	
	Legend: * = data extracted from Eurostat calculations of June 2011; $ = subsample: N = 3100 and age 18+

C	DATA ANALYSIS
	In an cross-country comparison, Italy, Romania and Switzerland report the lowest proportion of the population aged 15+ (0.3% and 0.4%, respectively) which had contact(s) with psychologists / psychotherapists (see Figure 1.3.24.1). Remaining countries report that at least ≥ 1% of the totals and further strata of their populations had such contacts with mental health specialists (except of the Czech Republic for the elderly) within the past 12 months. The lead in is taken by Germany with 6.6% and followed by Belgium, Hungary and France with around 4% of the total population. Non-weighted mean percentages in these 19 countries are 2.6% for totals, 2.1% for men and 3.0% for women. The workforce age band of 15-64 years has a share of 2.8% on average, whereas from the elderly only 1.6% report consultations with psychologists / psychotherapists within the past 12 months. Two general trends can be concluded from the ECHIM Pilot Collection. Firstly, women throughout have a larger share in psychologists / psychotherapists consultations than men (3.0% vs. 2.1%) and secondly, persons belonging to the workforce mostly utilize mental health specialists more often than the elderly, with exceptions reported from Cyprus, Slovenia and Slovakia. A social reporting bias should not be underestimated with questions of that type in interview surveys. When available data are compared with ECHI #23 Depression (diagnosed), which is currently the only ECHI mental health status indicator deduced from surveys, the magnitude orders of totals and by sex match quite good for Germany and fairly for Belgium, Bulgaria, the Czech Republic, Spain, Hungary and Poland. On the other side, the prevalence percentages of depression were predominantly highest with the elderly and this trend is not reflected by psychologist / psychotherapist consultations. This may be due to the much broader spectrum of mental health disorders / stresses and strains to which the working age stratum of 15-64 years seems more prone to. Analysis of data according to the three educational levels shows no clear general trend (see Figure 1.3.24.2). While in Belgium and Austria, an ascending social gradient is prominent, the opposite is reported from Poland, Slovenia and Slovakia. Other Member States provide even different patterns. This inhomogeneous picture is reflected by the nearby mean figures for the low, medium and high educational strata with 2.3%, 2.5% and 2.7% having had consultation(s) in the past year.

D	REMARKS AND FURTHER INFORMATION
	All countries marked with an asterisk (*) participated in the first EHIS wave and their data were obtained from Eurostat calculations. Remaining countries delivered their data as contribution to the ECHIM Pilot Collection. For more and meta-information about the EHIS wave 1 please see [1a+b] NB: The data from Finland originate from the year 2000 and are regarded as out-dated. However, the Finnish data are not excluded from data computation. The German data are not as valid as for other ECHI indicators due to the small sub- sample size which results in the lack of data for certain strata. General remarks on the first EHIS wave and computation of this indicator: It would be preferable if the EHIS wave 2 questionnaire is adapted to allow the derivation of the 'mean number of visits to psychologists and/or psychotherapists', likewise for general practitioners (GP), dentists / orthodontists and medical / surgical specialist. The chosen type of question in EHIS wave 1 disables a comparison with the utilisation of other ambulatory health-care providers although the recall period of 12 months is recommendable for all types of ambulatory healthcare. From a public health view, it is equally important to address mental healthcare utilisations in order to assess the demand and service availability, respectively. This would complement the situation in combination of indicators for equity of access to health care services. General comments on this indicator: The national health care systems differ widely. In some countries, the patient is obliged to consult a general practitioner's office first ("gate keeper") before being referred on to a psychologist and/or psychotherapist. Minor mood disorders might be assessed and treated already at the GP level. In various countries and particularly in private health schemes, the patient is free to approach a psychologist on his/her own behalf. But access is also influenced by out-of-pocket expenditures, the psychologist's / psychotherapist's availability/density in the patient's vicinity and the duration of waiting times. Furthermore, mental health problems are rarely solved with a single consultation. It is more often an entire set of 5-10 sessions, in serious cases it takes months/years of frequent visits and might end up in hospitalisation (in phases).

Socio-cultural differences (stigmatisation, denial) may lead to substantial underreporting in such type of interview surveys.

From administratively deduced and register-based data on psychologist and/or psychotherapist utilisations it was impossible to obtain population- and ECHI strata-based utilisation percentages.
Only Belgium, Hungary and the Czech Republic delivered some data requested as "mean number of visits".

Breakdown/ Country (year)	Mean Number BE (2009)	Mean Number HU (2008)	Mean Number CZ (2009)
Total	0.08	0.006	0.05
Men	nd	0.004	nd
Women	nd	0.008	nd
Individuals aged 15-64	0.27	0.007	nd
Individuals aged 65+	0.19	0.002	nd

Hungary, for example, delivered extremely low figures of > 0.008 consultations per capita and year. But the Czech data of 0.05 mean visits for the entire population (0+) in 2009 allow for a rough comparison.

According to Eurostat database [2], in 2009 the Czech population was 10,467,542 and the population 15+ was 8,987,535 which equal 85% of the entire Czech Republic's population. Taking into account that young people below 15 years less often have psychotherapist / psychologist consultations, one could calculate that 93% of all consultations are persons aged 15+, which results in about 481,000 “one adult person consultations" which equals 5.3% of the Czech population aged 15+.
As mentioned above, mental health problems are rarely solved with a single consultation and therefore it will be a smaller number of people who have more than one contact per year, downsizing the population based contact percentages. From the evidence of the Czech Republic there are 3.8 contacts per 1 treated person per year, which makes the administrative based prevalence 1.4% of the population 15+. This indicates that the Czech Republic's EHIS data of 2008 with 2.7% of the population aged 15+ reporting to have had (at least one) consultation might mark the better estimate, as the administrative based data are probably underestimated due to numerous reasons.

	[1a+b] EHIS description http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewssurvey/ehis_wave_1/2007-2008_methodology&vm=detailed&sb=Title and meta-data: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm; last update 14 September 2011 [2] Eurostat database, Population on 1 January by broad age group and sex, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanbroad&lang=en **→ all source URLs lastly accessed on June 05 2012**

1.4. Export to HEIDI data tool

The requirements for a smooth data import into the HEIDI ECHI data tool were defined and tested by DG Health & Consumers IT unit (A4). According to this prior consultation, the MS© OFFICE EXCEL export/import file of each indicator should comprise five information entities as displayed exemplary for ECHI#21 Diabetes below.

Op. Ind. ID-Code	Indicator Title / followed by Breakdown as Text	Year	Country Code	Data value
	"Proportion of individuals reporting to have been diagnosed with (any type of) diabetes which occurred during the past 12 months"			
212a01	Percentage of individuals aged 15+	2008	FR	4.2
212a02	Percentage of men aged 15+	2008	FR	4.7

Such pure data sets of Pilot Collection indicators have already been submitted in March 2012 to DG Health & Consumers/A4 in order to incorporate those into the HEIDI ECHI data tool (see: http://ec.europa.eu/health/indicators/indicators/index_en.htm).
However, the submitted Pilot Collection data have not yet been taken up by the time of compiling this report. Instead, the indicator data of the EHIS first wave participating countries are displayed and the metadata links refer to the already mentioned EHIS - ESMS site maintained by DG Eurostat (see: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_ehis_esms.htm).

It is foreseen that the ECHIM Pilot Collection data will be included at a later stage. Additionally, the information provided in the IDS paragraphs C and D shall also be used as more specific metadata information within the HEIDI wiki environment to help users to compare and comprehend the displayed data.
Therefore, the 24 individual IDS documents will be submitted to DG Health & Consumers/A4, as well.
Ultimately, the information gathered should be available in the HEIDI wiki and data tool, respectively, beyond the presentation of mere indicator values. It should also enable (invited) public health experts to add and further contribute to the provided metadata of concerned indicators. This may apply in terms of time series and possible comparability breaks, respectively (e.g. EHIS wave II), or new assessments in the light of progressive knowledge and future reports in order to provide state of the art information on ECHI indicators.

Possible solutions and appropriate functionalities of DG Health & Consumers HEIDI data tool and wiki are proposed in the following chapter.

2. Data Integration for the Health in Europe Information and Data interface data tool (HEIDI data tool)

Data integration for the ECHI shortlist indicators available from international databases

One of the overarching criteria regarding the selection of ECHI indicators and their underlying data sources has been the avoidance of new reporting schemes. This requirement follows the request of the member states to make best use of the health data that is already reported to international organisations and, where necessary and appropriate, to integrate the additional data needed for the ECHI shortlist indicators in the existing European health data collection process.

Given the wide thematic range that is covered by the ECHI shortlist indicators, several European health data collections and databases have to be taken into account for the integration process. The main databases that have been used for the data integration are: Eurostat NewCronos database, WHO Health for all database and the OECD Health data. Additional data collections that are already established and that were used for filling the ECHI shortlist indicator presentation system are the collection of the European Monitoring Center for Drug Addiction (EMCDDA) concerning drug related death, the collection of the European Center for Diseases Control for infectious diseases and the database of Globocan and the International Agency for Research on Cancer regarding the data on cancer incidence. For the indicator data on work related health risks, the European Working Conditions Survey (EWCS) performed by the European Working Conditions Observatory was selected as the appropriate data source.

The HEIDI data tool itself and the data integration process were programmed by IT-staff from the DG Sanco unit A4. Together with the Sanco unit C2 this unit was also responsible for the overall implementation of the HEIDI data tool as a component of the HEIDI wiki

In the following table the data holders for the already available ECHI shortlist indicators are summarized. The table is structured according to the original conceptual model that was used to organize the ECHI indicators (s. ECHIM Report 2).

Table 2.1 Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Demography and socio-economic situation	1. Population by sex/age	10101 – 10110	Eurostat	
	2. Birth rate, crude	10201	Eurostat	
	3. Mother's age distribution	10301- 10305	Eurostat	
	4. Total fertility rate	10401	Eurostat	
	5. Population Projections	10501-10506	Eurostat	
	6. Population by education	10601–10609	Eurostat	
	7. Population by occupation	10701–10715	Eurostat	
	8. Total unemployment	10801-10807	Eurostat	
	9. Population below poverty line and income inequality	10901-10911	Eurostat	
Health Status	10. Life expectancy	20101-20106	Eurostat	
	11. Infant mortality	20201	Eurostat	
	12. Perinatal mortality	20301	WHO-HFA (Eurostat)	
	13. Disease-specific mortality	20401-20406; 20408-20470 20407	Eurostat Euro-HIV	
	14. Drug-related deaths	20501-20505	EMCDDA	
	15. Smoking-attributable deaths	20601-20605		Work in progress
	16. Alcohol-attributable deaths	20701-20706		Work in progress
	17. Excess mortality by extreme temperatures	208..		To be established
	18. Selected communicable dieseases	20901-20948	European Centre for disease control (ECDC)	
	19. HIV/AIDS	21001-21101	EURO-HIV (CISID-database)	
	20. Cancer Incidence	21101-21142	Globocan	Future: Cancer Information System, Joint Research Centre Ispra

Table 2.1 (continued) Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Health Status	21.A Diabetes (self-reported)	212a01-212a08	Eurostat (EHIS)	
	21.B Diabetes (register-based)	212b01-212b10		ECHIM Pilot data collection, no regular data collection, work in progress (Eurostat morbidity strand)
	22. Dementia	21301-21310		Work in progress (Eurostat morbidity strand)
	23A. Depression (self-reported)	214a01-214a08	Eurostat (EHIS wave1)	Changing operationalisation according to new EHIS instrument
	23B. Depression (register-based))	214b01-214b10		Work in progress (Eurostat morbidity strand)
	24. Acute Myocardical Infarction	21501-21505		Work in progress
	25. Stroke	21601-21605		Work in progress
	26A. Asthma (self-reported)	217a01-217a06	Eurostat (EHIS)	
	26B.Asthma (register-based)	217b01-217b10		ECHIM Pilot data collection, no regular data collection, work in progress (Eurostat morbidity strand)
	27 A. COPD (self-reported)	218a01-218a08	Eurostat (EHIS)	
	27 B. COPD (register-based)	218b01-218b10		ECHIM Pilot data collection, no regular data collection, work in progress (Eurostat morbidity strand)
	28. (Low) birth weight	21901		
	29 A. Injuries: home/leisure/school (self-reported)	220a01-220a18	Eurostat (EHIS)	

Table 2.1 (continued) Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Health Status	29 B. Injuries: home/leisure/school (register- or project-based)	220b01-220b07		ECHIM Pilot data collection, no regular data collection, work in progress (Eurostat morbidity strand)
	30 A. Injuries: road traffic (self-reported)	221a01-221a18	Eurostat (EHIS)	
	30 B. Injuries: road traffic (register- or project-based)	221b01-221b05		ECHIM Pilot data collection, no regular data collection, work in progress (Eurostat morbidity strand)
	31. Injuries: workplace	22201-22206	Eurostat (EHIS)	
	32. Suicide attempt	223..		Work in progress
	33. Self-perceived health	22401-22409	Eurostat (EU-SILC)	Future data source Eurostat EHIS
	34. Self-reported chronic morbidity	22501-22509	Eurostat (EU-SILC)	Future data source Eurostat EHIS
	35. Long-term activity limitations	22601-22609	Eurostat (EU-SILC)	Future data source Eurostat EHIS
	36. Physical and sensory functional limitations	227..	To be established	Future data source Eurostat EHIS
	37. General musculoskeletal pain	228..	Eurostat (EHIS wave1)	Future data source Eurostat EHIS
	38. Psychological distress	229..	Eurostat (only for EHIS wave1)	EHIS wave2: Instrument excluded, Work in progress
	39. Psychological well-being	230..	Eurostat (only for EHIS wave1)	EHIS wave2: Instrument excluded, Work in progress
	40. Health expectancy: Healthy Life Years (HLY)	23101-23106	Eurostat (EU-SILC)	Future source for health component: Eurostat, EHIS

Table 2.1 (continued) Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Health Status	41. Health expectancy, others	23201-23204	Eurostat (EU-SILC)	Future source for health component: Eurostat, EHIS
Health Determinants	42. Body mass index	30101-30108	Eurostat (EHIS)	
	43. Blood pressure	30201-30208	Eurostat (EHIS)	
	44. Regular smokers	30301 – 30309	Eurostat (EHIS)	
	45. Pregnant women smoking	304..		Work in progress
	46. Total alcohol consumption	30501	WHO (GISAH)	
	47. Hazardous alcohol consumption	306..	Eurostat (EHIS wave 1)	Following the revision of the instrument used in EHIS the EHCI indicator will be adapted (Future source: Eurostat (EHIS wave2)
	48. Use of illicit drugs	30701 - 30716	EMCDDA	
	49. Consumption of fruit	30801-30809	Eurostat (EHIS)	
	50. Consumption of vegetables	30901- 30909	Eurostat (EHIS)	
	51. Breastfeeding	31001	WHO-HFA	Work in progress
	52. Physical activity	311..	Eurostat (EHIS)	Work in progress
	53. Work-related health risks	31202-31230	EUROFOUND (EWCS)	
	54. Social support	313..	Eurostat (EHIS)	Eurostat EHIS wave 2 contains the complete OSS-2 instrument
	55. PM10 (particulate matter) exposure	31401	Eurostat (from EEA)	
Health Services	56. Vaccination coverage in children	40101-40107	WHO-HFA	
	57. Influenza vaccination rate in elderly	40201-40206	Eurostat (EHIS)	
	58. Breast cancer screening	40301- 40304	Eurostat (EHIS)	
	59. Cervical cancer screening	40401-40404	Eurostat (EHIS)	

Table 2.1. (continued) Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Health Services	60. Colon cancer screening	40501-40506	Eurostat (EHIS)	
	61. Timing of first antenatal visits among pregnant women	406..		Work in progress
	62. Hospital beds	40701-40704	Eurostat (JQNMHC)	
	63. Practising physicians	40801	Eurostat (JQNMHC)	
	64. Practising nurses	40901	Eurostat (JQNMHC)	
	65. Mobility of professionals	410..		Work in progress
	66. Medical technologies: MRI units and CT scans	41101-41106	OECD (OECD JQNMHC additional Questionnaire, Health Data)	
	67. Hospital in-patient discharges, limited diagnoses	41201-41275	Eurostat (JQNMHC; additional Eurostat questionnaire)	
	68. Hospital daycases, limited diagnoses	41301-41375	Eurostat (JQNMHC)	
	69. Hospital day cases as percentage of total patient population (in-patients & day cases), limited diagnoses	41401-41475	Eurostat (JQNMHC)	
	70. Average length of stay (ALOS), limited diagnoses	41501-41575	Eurostat (JQNMHC)	
	71. General practitioner (GP) utilisation	41601-41608	Eurostat (EHIS wave1)	Future source: EHIS wave 2, Recall period for GP utilization changed to 4 weeks
	72. Selected out-patient visits	41701-41724	Eurostat (EHIS wave2)	Future source: EHIS wave 2, Recall period for specialist consultation changed to 4 weeks
	73. Surgeries: PTCA, hip, cataract	41801-41811	Eurostat (JQNMHC)	

Table 2.1 (continued) Data sources for the ECHI shortlist indicators

Section	Indicator Name	Operational ECHI- ID	Data Source	
Health Services	74. Medicine use, selected groups	419..		Work in progress, not covered by EHIS wave 2
	75. Patient mobility	42001-42002		Work in progress
	76. Insurance coverage	42101-42102	OECD Health Data, WHO HFA	No breakdown by sex
	77. Expenditures on health care	42201-42212	Eurostat (SHA)	
	78. Survival rates cancer	42301-42342	Eurocare	Furture source: Cancer Information System (EU JRC)
	79. 30-day in-hospital case-fatality AMI and ischemic stroke	42401-42402	OECD (Data until 2009 for selected countries)	No breakdown by sex
	80. Equity of access to health care services	42501-42509	Eurostat (EU-SILC)	Future source: Eurostat EHIS
	81. Waiting times for elective surgeries	42601	To be established	OECD Data for some countries
	82. Surgical wound infections	42701	To be established	To be established
	83. Cancer treatment delay	42801	To be established	To be established
	84. Diabetes control	42901	To be established	To be established
Health Services Prevention	85. Policies on ETS exposure (Environmental Tobacco Smoke)	50101	WHO-Euro (Tobacco control database)	
	86. Policies on healthy nutrition	50102	To be established	To be established
	87. Policies and practices on healthy lifestyles	50103	To be established	To be established
	88. Integrated programmes in settings, including workplace, schools, hospital	50104	To be established	To be established

Abbreviations: ECHI-ID: Identification Number for the operational ECHI shortlist indicators according to the List of operational ECHI Indicators (http://www.healthindicators.org/object_binary/o3219_20120130_List-of-operational-ECHI-indicators_V4.xls, 30.01.2012)

2.1 Presentation of the ECHI shortlist indicators

Presentation of the ECHI shortlist indicator data with the HEIDI Data Tool

The development of a sustainable IT-solution for the presentation of the ECHI indicators was one of the objectives of the Joint Action ECHIM. In this context the task of WP5 was, to participate in the selection process aiming at the identification of a sustainable platform for the presentation of the ECHI data. For this purpose several software solutions for the interactive presentation of the ECHI indicators were tested and assessed for their functionality and usability. The following software solutions were included in the review:

1) WHO-Data Presentation System, a license free stand-alone solution developed by WHO and used in several EU countries (e.g. Italy, Lithuania, Czech Republic)

2) InstantAtlasTM, a commercial software solution by GeoWise Ltd., UK (used by WHO/Euro, UK regional health observatories and other regional health authorities)

3) ECHI@EC application, a Flash® application developed by DG SANCO A4

All of the above listed solutions provide the basic functionalities that are regarded essential for an up-to-date data presentation system. However the features provided by the different solutions vary substantially.

With regard to the overarching objective to establish a sustainable solution that could be permanently hosted by the DG SANCO of the European Commission, the selection process had to be streamlined with the ICT policy of the European Commission implemented at that time. Following this general requirement the integration of third-party software products had to be avoided and consequently the Flash application ECHI@EC was selected as the presentation tool. However, following an in-depth discussion in the working group set up for this task, it was concluded, that the ECHI@EC tool was not fit for purpose in the version available by then (March 2010). The DG SANCO unit responsible for the development of the presentation tool was therefore asked to introduce a large number of changes and adaptions of the tool resulting in a complete overhaul of the underlying Flash® application.

Due to that complete revision and the implementation of the so called HEIDI-wiki, the name of the application was changed to HEIDI data tool. HEIDI is an acronym for **H**ealth in **E**urope: **I**nformation and **D**ata **I**nterface.

While the HEIDI data tool was designed to present the available data for the ECHI indicators, the newly presented HEIDI wiki was developed to be the technical platform for the European Commission's Health Information System.
Following this fundamental decision, WP5 continued with the review of the automated data integration process. This process specifies the automated integration of data already available for the ECHI indicator from other international databases like WHO-Health for all Data base, OECD Health data and Eurostat NewCronos Database.

2.2 Content of the HEIDI data tool

By the end of the Joint Action ECHIM 38 ECHI shortlist indicators were integrated in the HEIDI data tool (see Table 2.2). For these indicators the data sources were verified and the availability of the link to the original source and the metadata and ECHIM-Documentation was checked. Because the links that refer to the metadata available at Eurostat were reorganised during that time, several broken links had to be corrected. By the official launch of the HEIDI wiki and the HEIDI data tool in May 2012 these mistakes have been corrected. For the ECHI shortlist indicators that are reported from WHO and OECD databases however, metadata according to the specified ESMS standard are not available. They are linked to the source databases only. Documentation according to the ECHIM standard is available for these indicators as well.

Table 2.2 ECHI shortlist indicators integrated in the HEIDI data tool

	Indicator	Source	Source Link	Metadata / Documentation
	Demography & Socioeconomic			
1	Crude birth rate	Estat	Yes	Yes / Yes
2	Total Fertility Rate	Estat	Yes	Yes / Yes
3	Mothers Age Distribution	Estat	Yes	Yes / Yes
4	Population below poverty line	Estat	Yes	Yes / Yes
5	Income equality	Estat	Yes	Yes / Yes
6	Population by Education	Estat	Yes	Yes / Yes
7	Population by sex/age	Estat	Yes	Yes / Yes
8	Old-Age dependecy Ratio	Estat	Yes	Yes / Yes
9	Population Projections	Estat	Yes	Yes / Yes
10	Total unemployment	Estat	Yes	Yes / Yes
	Health Status			
11	Stand. Death Rate	Estat	Yes	Yes / Yes
12	Drug-related Deaths	EMCDDA	Yes	Yes / Yes
13	HLY (before & after 2004)	EStat	Yes	Yes / Yes
14	Infant Mortality	EStat	Yes	Yes / Yes
15	Accidents at work	EStat	No	No / Yes
16	Life Expectancy	EStat	Yes	Yes / Yes
17	Activity Limitations	EStat	Yes	Yes / Yes
18	Low birth weight	WHO	Generic HFA	generic HFA / Yes
19	Selected communicable diseases	ECDC	Generic ECDC	No / Yes
20	Self-perceived Health Status	EStat (SILC)	Yes	Yes / Yes
21	Self-reported chronic Morbidity	EStat (SILC)	Yes	Yes / Yes

Table 2.2 (continued) ECHI shortlist indicators integrated in the HEIDI data tool

	Health Determinants			
22	BMI	Estat (EHIS)	Yes	Yes / Yes
23	Consumption of fruits	Estat (EHIS)	Yes	Yes / Yes
24	Consumption of vegetables	Estat (EHIS)	Yes	Yes / Yes
25	PM Exposure	Estat	Yes	No / Yes
26	Regular Smokers (EHIS)	Estat	Yes	Yes / Yes
27	Alcohol consumption per capita	WHO	Generic HFA	Generic HFA / Yes
28	Use of illicit drugs	EMCDDA	Yes	No / Yes
	Health Interventions			
29	ALOS	Estat	Yes	Yes / Yes
30	Equity of access (SILC)	Estat	Yes	Yes / Yes
31	Hospital beds	Estat	Yes	Yes / Yes
32	Hospital in-patient discharges	Estat	Yes	Yes / Yes
33	Insurance coverage	OECD	Generic OECD	Generic / Yes
34	MRI units, CT Scans	EStat	Yes	Yes / Yes
35	Nurses employed	Estat	Yes	Yes / Yes
36	Physicians employed	Estat	Yes	Yes / Yes
37	Selected Surgeries	Estat	Yes	Yes / Yes
38	Vaccination coverage Children	WHO	Generic WHO	Generic WHO / Yes

Overall the integration of the ECHI shortlist indicators in the HEIDI datat tool was successful. For several indicators however the appropriate age bands are not available directly from the data source. The relevant age groups specified by ECHIM thus would require additional calculation steps, which could be performed by Eurostat or Sanco respectively. However, as DG Sanco has no plan or intention to host and maintain the database for the ECHI shortlist indicators, it is not clear who will be responsible for that task.

3. Lessons learned, Conclusions and Recommendations

The ECHIM Pilot Data Collection was a first-time endeavour to obtain the most recent indicator data according to ECHI definitions and based on surveys from as many European countries as possible. It focussed on indicators which are not readily available from relevant databases but can be deduced from population based health surveys. Thus, it built on EHIS first wave and targeted on EU Member States and countries which did not participate in EHIS. Additionally, it was attempted to gain ECHI- conform data on morbidity and healthcare utilisations / services from national registers and / or administrative sources.

It must be stressed that this Pilot Collection Study was the first and only one under the aegis of the Joint Action for ECHIM. The mandate (which ECHIM was lacking) for further pilot studies and collections is solely with DG Eurostat now, as stated in Article 6 ("Pilot studies and cost-benefit analyses") of the Regulation on community statistics on public health[11]. Article 6 number 1 and 2 read "1. Whenever data are required in addition to those already collected and to those for which methodologies already exist, or when insufficient quality of data is identified in the domains referred to in Article 2, *the Commission (Eurostat) shall institute pilot studies to be completed on a voluntary basis by the Member States*. The purpose of such pilot studies shall be to test the concepts and methods and to assess the feasibility of the related data collections, including statistical quality, comparability and cost effectiveness, in accordance with the principles set up by the European Statistics Code of Practice." And further "2. Whenever preparation of an implementing measure is envisaged in accordance with the regulatory procedure with scrutiny referred to in Article 10(2), a cost-benefit analysis, taking into account the benefits of the availability of the data in relation to the cost of the data collection and the burden on Member States, shall be carried out."

Two facts must be regarded as major obstacle in terms of the Pilot Collection:

1. ECHIM carried no official mandate and had no means to provide additional funding or manpower to the Joint Action partner countries. Hence, the Pilot Collection was depending solely on the voluntary commitment of partner countries and their ability to devote resources.

[11] REGULATION (EC) No 1338/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on Community statistics on public health and health and safety at work, download: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:354:0070:0081:EN:PDF

2. The implementation of ECHI indicators at national level run in parallel to the Pilot Collection instead of a consecutive order. Therefore, a larger number of countries were not ready to deliver indicator data according to ECHI definitions. This is particularly true for Eastern European Member States, but also for Southern European countries which both lack resources and proper health monitoring and reporting systems.
Regarding the sustainable solution for an ECHI presentation system the HEIDI data tool will require further developmental work and maintenance. This task, which was originally planned to be taken over by a European health monitoring capacity is described in more detail in the document “A sustained future for ECHI”.
A permanent operation requires a capacity to maintain the central health indicator database and further develop the functionalities for presentation integrated in the HEIDI data tool. This requires the handling of the data with content expertise (i.e. validation of the reported data, face-validity and consistency checks, improvement of the functionalities for presentation). These tasks would require health data expertise as well as IT-expertise.

c. Supporting the continued implementation of data sources, indicators and analysis in all Member States.
This task involves the encouragement and support to the Member States in gathering appropriate data and in improving their data collection practices. Feedback on existing differences and national experiences will further improve data comparability. Some data that are currently only available at national level could increasingly be shared with international data collections. When the Eurostat regulation will become operational, this task may gradually shift to them.

4. Acknowledgement

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- National Institute for Health and Welfare (THL), Helsinki, Finland (Project Management)
- National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands
- Institute of Hygiene; Centre of Health Information (HI), Vilnius, Lithuania
- Istituto Superiore di Sanità (ISS), Rome, Italy

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The invaluable scientific contribution and continuous in-put of ECHIM collaborating partners and members of the Extended Core Group, respectively, is hereby highly appreciated.

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Last not least, we would like to thank all members of the national contact points of associated partners of the Joint Action for ECHIM. Their kind co-operation and strong commitment, in conjunction with the established national implementation teams and various national data holders built the fundament for the large success of the ECHIM Pilot Collection.

In terms of this Report we like to thank Ms Anna Lena Kratz and Mr Benjamin Mildner for proofreading and final lay-out, as well as Ms Vera Venneday for her assistance in compilation of Annex III.

Annex I Pilot Collection Overview: Response of Indicator Data per Country

ECHI#			21 (A)	21 (B)	23 (A)	23 (B)	24	25	26 (A)	26 (B)	27 (A)	27 (B)
JA Country	Questionnaire (F=Full; T= tailored = without EHIS derived Indicators)	data received	Diabetes	Diabetes (Reg)	Depression	Depression (Reg)	AMI	Stroke	Asthma	Asthma (Reg)	COPD	COPD (Reg)
Austria AT	F	√	Y	N	Y	N	N	N	Y	N	Y	N
Belgium BE	F	√	Y	Yp	Y	N	N	N	Y	N	Y	N
Bulgaria BG	T	NO										
Cyprus CY	T	√	X	N	X	N	N	N	X	N	X	N
Czech Republic CZ	T	√	X	Y	X	Y	Y	Y	X	Y	X	Y
Denmark DK	F	√	Y	N	Y	N	N	N	Y	N	Y	N
Estonia EE	F	√	Y	N	Y	Yp	Yp	N	Y	N	Y	N
Finland FI	ECHIM Partners -F-	√	Y	Y	Y	Y	Y	Y	Y	Y	Yp (only 30+)	Y
France FR	F	√	Y	Y	Y	N	N	N	Y	N	Y	N
Germany DE	ECHIM Partners -F-	√	Y	N	Y	N	Y	Y	Y	N	Y	N
Greece GR	T	NO	X		X				X		X	
Hungary HU	T	√	X	Y	X	Y	Y	Y	X	Y	X	Y
Ireland IR	F	√	Yp (no SES)	N	Yp (no SES)	N	Y	Y	Yp (no SES)	N	Yp (no SES)	N
Italy IT	ECHIM Partners -F-	√	Y	N	Y	N	Y	Yp (age <74 y)	Y	N	Y	N
Latvia LV	T	√	X	Y	X	Y	Y	Y	X	N	X	N
Lithuania LT	ECHIM Partners -F-	√	N	Y	N	Y	N	N	N	Y	N	Y
Luxembourg LU	F	NO										
Malta MT	T	√	X	N	X	N	Y	Y	X	N	X	N
Netherlands NL	ECHIM Partners -F-	√	Y	Y	Y	Y	Y	Y	N	Y	N	Y
Poland PL	T	√	X	N	X	N	Y	N	X	N	X	N
Portugal PT	F	NO										
Romania RO	T	√	X	N	X	N	N	N	X	N	X	N
Slovakia SK	T	NO	X		X				X		X	
Slovenia SI	T	NO	X		X				X		X	
Spain ES	T	√	X	N	X	N	Y	Yp	X	N	X	N
Sweden SE	F	NO										
United Kingdom UK	F	√	N	Y (only totals)	N	Y (only totals)	Y	Y	N	Y (only totals)	N	Y (only totals)
Norway NO	F	√	N	N	N	N	N	N	N	N	N	N
Liechtenstein LI	no contact person											
Switzerland CH	F	√	Y	N	Y	N	N	N	Y	N	Y	N
Iceland IS	F	√	Yp (only 15+ per sex)	N	Yp (only 15+ per sex)	N	N	N	Yp (only 15+ per sex)	N	Yp (only 15+ per sex)	N
Moldova MD	F	√	N	Yp (only totals)	N	N	N	N	N	Yp (only totals)	N	Yp (only totals)
Serbia RS	F	√	N	N	N	N	N	N	N	N	N	N
Croatia HR	F	NO										
Macedonia MK	no contact person											
Turkey TR	F (but no ALCOHOL)	NO										

Legend: X = excluded from questionnaire; Y = data delivered according to ECHI; N = no data received; Yp = data delivered but not (all) according to ECHI, e.g. missing breakdowns, SES, etc

ECHI#			29 (A)	29 (B)	30 (A)	30 (B)	42	43	44	interim 15	interim 16
JA Country	Questionnaire (F=Full; T= tailored = without EHIS derived Indicators)	data received	injuries: home/ leisure	injuries: home/ leisure (Reg)	injuries: road traffic	injuries: road traffic (Reg)	BMI	BP	regular smokers	smoking prevalence	alcohol prevalence
Austria AT	F	√	N	Y	N	Y	Y	Y	Y	Y	N
Belgium BE	F	√	Yp	N	Yp	N	Y	Y	Y	Y	N
Bulgaria BG	T	NO									
Cyprus CY	T	√	X	N	X	N	X	X	X	Y	N
Czech Republic CZ	T	√	X	Yp (only hospitalized cases)	X	Yp (only hospitalized cases)	X	X	X	Y	Y
Denmark DK	F	√	Yp	N	Yp	N	Y	Y	Y	Y	Y
Estonia EE	F	√	Yp	N	Yp (without med. treatment)	Y	Yp (only 65+)	Yp (no SES)	Y	Yp (only 35-64 y)	Y
Finland FI	ECHIM Partners -F-	√	N	N	N	N	Yp (from HES)	Y	Y	Y	Y
France FR	F	√	N	N	N	Y	Y	Y	Y	Y	N
Germany DE	ECHIM Partners -F-	√	Yp	N	Yp	N	Y	Y	Y	Y	Y
Greece GR	T	NO	X		X		X	X	X		
Hungary HU	T	√	X	N	X	Y	X	X	X	Y	Y
Ireland IR	F	√	N	N	N	Y	Yp (no SES)	N	N	N	N
Italy IT	ECHIM Partners -F-	√	Yp (without med. treatment)	N	N	Y	Y	Y	Y	Y	Y
Latvia LV	T	√	X	Y	X	Y	X	X	X	Y (no 65+)	Y (no 65+)
Lithuania LT	ECHIM Partners -F-	√	Y	N	N	Y	N	N	N	N	N
Luxembourg LU	F	NO									
Malta MT	T	√	X	N (but in development)	X	Y	X	X	X	Y	Y
Netherlands NL	ECHIM Partners -F-	√	N	N	N	Yp (only totals)	Y	Y	Y	Y	Y
Poland PL	T	√	X	N	X	Yp (Police records; 25+ missing)	X	X	X	N	N
Portugal PT	F	NO									
Romania RO	T	√	X	N	X	N	X	X	X	Yp	N
Slovakia SK	T	NO	X		X		X	X	X		
Slovenia SI	T	NO	X		X		X	X	X		
Spain ES	T	√	X	N	X	Yp (only totals)	X	X	X	Y	N
Sweden SE	F	NO									
United Kingdom UK	F	√	N	N	N	N	N	N	N	N	N
Norway NO	F	√	N	N	N	N	Yp	N	Yp	Yp	N
Liechtenstein LI	no contact person										
Switzerland CH	F	√	Y	N	Y	N	Y	Y	Y	N	N
Iceland IS	F	√	Yp (only medical treatment; 15+ per sex)	Yp	Yp (only medical treatment; 15+ per sex)	Yp	N	Yp	Yp	N	N
Moldova MD	F	√	N	N	N	N	N	N	YP (only totals)	N	N
Serbia RS	F	√	N	N	N	N	N	N	N	N	N
Croatia HR	F	NO									
Macedonia MK	no contact person										
Turkey TR	F (but no ALCOHOL)	NO									

Legend: X = excluded from questionnaire; Y = data delivered according to ECHI; N = no data received; Yp = data delivered but not (all) according to ECHI, e.g. missing breakdowns, SES, etc

ECHI#			49	50	57	58	59	60	71 (A)	71 (B)	72 (A)	72 (B)
JA Country	Questionnaire (F=Full; T= tailored = without EHIS derived	data received	fruit consum-ption	vegetable consum-ption	influ-enca vacc.	breast cancer screening	cervical cancer screening	colon cancer screening	GP utilization	GP utilization (Reg)	selected outpatient visits	selected outpatient visits (Reg)
Austria AT	F	√	N	N	Y	Y	Y	Y	Y	N	Yp	N
Belgium BE	F	√	Y	Y	Y	Y	Y	Y	Y	Yp	YP	Yp
Bulgaria BG	T	NO										
Cyprus CY	T	√	X	X	X	X	X	X	X	N	X	N
Czech Republic CZ	T	√	X	X	X	X	X	X	X	Yp (only totals 15+)	X	Yp (only totals 15+)
Denmark DK	F	√	Y	N	N	Y	Y	N	N	N	N	N
Estonia EE	F	√	Yp (only 15+ and 25-64y)	Yp (only 25-64y)	Y	Y	Y	N	Y	Yp (only 15+)	Y	Yp (only 15+)
Finland FI	ECHIM Partners -F-	√	N	Y	Y	Yp (recall period 5 yrs)	Yp (recall period 5 yrs)	N	Y	YP (no data by sex)	YP (no med./surg. Specialist)	Yp (no sex for dentists; no data for psychologists)
France FR	F	√	Yp (incl. juices)	Yp (incl. juices, potatoes)	Y	Y	Y	Y	Y	N	Yp	N
Germany DE	ECHIM Partners -F-	√	Y	Y	Y	N	N	N	N	N	N	N
Greece GR	T	NO	X	X	X	X	X	X	X		X	
Hungary HU	T	√	X	X	X	X	X	X	X	N	X	Yp
Ireland IR	F	√	Yp (only 15+ and sex)	Yp (only 15+ and sex)	N	N	N	N	Yp (only 15+ and sex)	N	N	N
Italy IT	ECHIM Partners -F-	√	Y	Y	Y	Y	Y	N	Y	N	Y	N
Latvia LV	T	√	X	X	X	X	X	X	X	Y	X	Yp
Lithuania LT	ECHIM Partners -F-	√	N	N	N	N	N	N	N	Y	N	Yp (no dentist)
Luxembourg LU	F	NO										
Malta MT	T	√	X	X	X	X	X	X	X	N	X	N
Netherlands NL	ECHIM Partners -F-	√	N	N	Y	Y	Y (plus additional strata)	N	Y	Yp (plus additional strata)	Yp (no mental health)	N
Poland PL	T	√	X	X	X	X	X	X	X	Yp (only 65+)	X	Yp (only 65+)
Portugal PT	F	NO										
Romania RO	T	√	X	X	X	X	X	X	X	N	X	N
Slovakia SK	T	NO	X	X	X	X	X	X	X		X	
Slovenia SI	T	NO	X	X	X	X	X	X	X		X	
Spain ES	T	√	X	X	X	X	X	X	X	Y	X	N
Sweden SE	F	NO										
United Kingdom UK	F	√	N	N	N	N	N	N	Yp (age=0+, only totals and sex)	N	N	Yp (no dentists, psych. only 15 64 and 65+)
Norway NO	F	√	Yp	Yp	N	Yp	Yp	N	Yp	N	Yp	N
Liechtenstein LI	no contact person											
Switzerland CH	F	√	Yp (incl. juices)	Yp (incl. juices, potatoes)	Y	Y	Y	Y	Y	N	Y (only dentists + psycho)	N
Iceland IS	F	√	Yp (only 15+ per sex)	N	N	N	N	N	N	Yp	N	N
Moldova MD	F	√	N	N	N	N	N	N	N	N	N	Yp (only totals of med./surg. specialists)
Serbia RS	F	√	N	N	N	N	N	N	N	N	N	N
Croatia HR	F	NO										
Macedonia MK	no contact person											
Turkey TR	F (but no ALCOHOL)	NO										

Legend: X = excluded from questionnaire; Y = data delivered according to ECHI; N = no data received; Yp = data delivered but not (all) according to ECHI, e.g. missing breakdowns, SES, etc

Annex II EHIS data collection: Survey overview

EUROPEAN COMMISSION
EUROSTAT
Directorate F: Social Statistics and Information Society
Unit F-5: Health and food safety statistics

EHIS data collection

Survey overview

Last update 19/04/2012

Source: DG Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/hlth_ehis_esms_an3.pdf

Country	fieldwork	Age restriction	final individual sample size[1]	Inclusion of institutional population	% proxy[2]	% response rate[3]	weighting factor information[4]
Austria	March 2006-February 2007	15+	15 474	Yes (Homes for the elderly, nursing homes, psychiatric institutions, institutions for the mentally handicapped, convents/ monasteries and prisons, boarding schools/student residences and homes for refugees	1.5	63.1	Min: 50 Max: 4 002 Mean: 452 Max/min: 79 Sum: 6 992 032 Population 2008 15+: 7 041 081
Belgium	May 2008-May 2009	15+	11 254 (of which 9651 persons 15+)	Yes	8.8	60	Min: 5 Max: 12883 Mean: 837 Max/min: 2577 Sum: 8 080 474 Population 2008 15+: 8 866 411
Bulgaria	October-November 2008	15+	5 661	No	8.8	73.8	Min: 732 Max: 1973 Mean: 1163 Max/min: 3 Sum: 6 584 814 Population 2008 15+: 6 616 829
Cyprus	September-December 2008	No	8 345 (of which 6 931 persons 15+)	No	10.5	81.6	Min: 2 Max: 295 Mean: 94 Max/min: 123 Sum: 652 198

[1] Sample size on which Eurostat indicators have been computed on. They could differ from national sample sizes if the national sample provided to Eurostat contained the persons aged 15+ only
[2] Computed in Eurostat on the national files received (filter on age : population aged 15+)
[3] Information given by the Member states in their quality reports
[4] Computed in Eurostat on the national files received (filter on age : population aged 15+)

Country	fieldwork	Age restriction	final individual sample size[1]	Inclusion of institutional population	% proxy[2]	% response rate[3]	weighting factor information[4]
							Population 2008 15+: 651 567
Czech Republic	June-July-September-October 2008	15+	1 955	Yes (nursing homes and convents/monasteries)	0	56	Min: 1 502 Max: 14 437 Mean: 4 555 Max/min: 10 Sum: 8 904 184 Population 2008 15+: 8 904 207
Denmark	No participation						
Estonia	October 2006-Autumn 2007	15-86	6 434	Yes	0	60.2	Min: 25 Max: 390 Mean: 175 Max/min: 15 Sum: 1 126 249 Population 2008 15+: 1 142 232
Finland	No participation						
France	April-June 2008[5]	15+	24 689	Yes (institutions dealing with disabilities).	4.9	unknown	Min: 24 Max: 17 388 Mean: 2 058 Max/min: 725 Sum: 50 810 160 Population 2008 15+: 52 180 659
Germany[6]	Sept 2009 – July 2010	18+	approx. 21 000 [7]	~~Yes (institutionalised population included).~~	0	54.33	n.a.

[5] October 2008 in some cases
[6] Data of Germany were submitted to Eurostat in the form of aggregated tables.
[7] Health care module was a follow up survey with the subsample 3100 from GEDA10.

Country	fieldwork	Age restriction	final individual sample size[1]	Inclusion of institutional population	% proxy[2]	% response rate[3]	weighting factor information[4]
Greece	October 2009 – December 2009	15+	6172	No	0.7	95.5	Min: 302 Max: 8382 Mean: 1508 Max/min: 28 Sum: 9 305 877 Population 2008 15+: 9 612 985
Hungary	15th September – 30th October 2009	15+	5 051	No	0	80.6	Min: 700 Max: 3 500 Mean: 1 661 Max/min: 5 Sum: 8 390 791 Population 2008 15+: 8 536 599
Ireland	No participation						
Italy	No participation						
Latvia	September-December 2008	15+	6 458	No	2.8	72	Min: 34 Max:748 Mean: 303 Max/min: 22 Sum: 1 958 593 Population 2008 15+: 1 958 585
Lithuania	No participation						
Malta	June-September 2008	15+	3 669	Yes (Homes for the elderly, nursing homes, psychiatric institutions, institutions for the mentally handicapped, convents/ monasteries and prisons)	2.1	72	n.a.
Netherlands	No participation						

Country	fieldwork	Age restriction	final individual sample size[1]	Inclusion of institutional population	% proxy[2]	% response rate[3]	weighting factor information[4]
Poland	October –December 2009	15+	35100	No	12.18	72	Min: 97 Max: 5926 Mean: 911 Max/min: 61 Sum: 31 995 410 Population 2008 15+: 32 214 763
Portugal	No participation						
Romania	May-June 2008	15+	18 172	No	15.9	89	Min: 293 Max: 6 602 Mean: 1 004 Max/min: 23 Sum: 18 249 492 Population 2008 15+: 18 249 385
Slovak Republic	16th September 2009 – 31st October 2009	15+		No	0	66	Min: 263 Max: 2543 Mean: 920 Max/min: 10 Sum: 4 576 071 Population 2008 15+: 4 549 954
Slovenia	October-November 2007[8]	15+	2 118	No	0	Not available	Min: 143 Max: 2456 Mean: 824 Max/min: 17 Sum: 1 744 764 Population 2008 15+: 1 729 872

[8] For districts where fieldwork could not be done in the main period of interviewing fieldwork was extended to end December 2007

Country	fieldwork	Age restriction	final individual sample size[1]	Inclusion of institutional population	% proxy[2]	% response rate[3]	weighting factor information[4]
Spain	April 2009 – March 2010	15+	22188	No	3	74	Min: 69 Max: 15712 Mean: 1733 Max/min: 228 Sum: 38 442 269 Population 2008 15+: 38 663 723
Sweden	No participation						
United Kingdom	No participation						
Switzerland	15 January 2007 – 31 December 2007		18 760				
Turkey	2008	15+	14655	No	0	84	Min: 1010 Max: 10163 Mean: 3457 Max/min:10 Sum: 50 652 342 Population 2008 15+: 51 943 865

Annex III Data tables of indicators presented in Chapter 1.3 in consecutive order

1.3.1. Data Table ECHI#21 Diabetes

"Proportion of individuals reporting to have been diagnosed with (any type of) diabetes which occurred during the past 12 months"

[Percentage]

	total 15+	men 15+	women 15+	total 15-64	total 65+	edu low	edu med.	edu high
BE (2008)	4,2	4,0	4,3	2,5	10,7	8,5	3,5	2,0
BG (2008)*	4,2	3,4	5,0	2,5	10,8	5,5	3,7	3,3
CZ (2008)*	6,1	5,8	6,4	4,0	18,0	8,4	6,2	2,7
DK (2005)	3,9	4,4	3,4	2,6	8,9	6,4	3,7	2,0
DE (2010) #	7,4	7,6	7,1	4,1	17,5	10,2	7,3	4,8
EE (2006)	3,4	3,0	3,8	2,2	8,7	6,1	2,8	2,9
IE (2007)	2,0	3,0	2,0	nd	6,0	nd	nd	nd
GR (2009)*	7,7	7,2	8,2	4,2	20,4	12,8	3,9	4,0
ES (2009)*	5,9	6,0	5,8	3,0	17,7	8,8	3,0	1,8
FR (2008)	4,2	4,7	3,8	2,7	10,9	7,2	2,8	1,7
IT (2005)	4,9	4,7	5,0	2,3	13,7	6,7	2,1	2,1
CY (2008)*	5,6	6,6	4,6	3,2	19,3	10,0	3,9	1,6
LV (2008)*	3,7	2,7	4,6	2,1	10,2	4,4	3,7	2,9
HU (2009)*	7,9	8,0	7,9	5,0	19,5	12,4	6,6	5,4
MT (2008)*	6,8	7,7	6,1	4,4	17,5	14,2	3,3	3,1
NL (2008)	5,0	5,5	4,5	3,2	12,9	7,4	3,3	3,5
AT (2006)	5,6	5,2	5,9	2,7	17,1	9,4	4,3	3,7
PL (2009)*	6,2	5,6	6,8	3,7	16,3	9,7	5,2	3,9
RO (2008)*	3,1	2,5	3,6	1,9	8,7	3,8	2,7	2,9
SI (2007)*	6,4	5,7	7,0	4,0	16,7	9,1	3,9	1,0
SK (2009)*	6,0	5,1	6,9	3,0	24,1	11,4	5,2	4,4
CH (2007)	2,5	3,0	2,1	1,3	9,0	4,8	2,2	2,5
Average	5,1	5,1	5,2	3,1	14,3	8,4	4,0	3,0
Min	2,0	2,5	2,0	1,3	6,0	3,8	2,1	1,0
Max	7,9	8,0	8,2	5,0	24,1	14,2	7,3	5,4

Legend:

* = data extracted from Eurostat calculations of June 2011

= age = 18+

1.3.2 Data Table ECHI#23 Depression

"Proportion of individuals reporting to have been diagnosed with chronic depression which occurred during the past 12 months"

[Percentage]

	total 15+	men 15+	women 15+	total 15-64	total 65+	edu low	edu med.	edu high
BE (2008)	6,0	4,3	7,7	5,9	6,8	9,0	6,0	3,9
BG (2008)*	0,8	0,4	1,2	0,7	1,4	1,2	0,8	0,3
CZ (2008)*	2,8	1,3	4,2	2,5	4,3	3,4	3	0,6
DK (2005)	3,8	2,5	5,1	3,5	5,3	6,3	3,3	2,9
DE (2010) #	7,1	5,1	9,0	7,2	5,8	9,1	7,0	5,4
EE (2006)	1,9	1,4	2,4	1,7	3,0	nd	nd	nd
IE (2007)	4,0	3,0	4,0	nd	3,0	nd	nd	nd
GR (2009)*	2,3	1,3	3,3	1,6	4,7	4,2	1,1	0,6
ES (2009)*	5,3	2,9	7,5	4	10,4	7,5	2,9	2,2
FR (2008)*	3,7	2,7	4,7	3,5	4,6	4,9	3,5	2,1
IT (2005)	4,9	2,8	6,9	3,4	10,3	6,3	3,0	2,6
CY (2008)*	2,4	1,6	3,2	1,8	5,7	4,6	1,4	0,6
LV (2008)*	1,6	0,9	2,2	1,4	2,7	1,6	1,6	1,7
HU (2009)*	4,9	2,5	6,9	4,4	6,5	7,8	4,1	2,7
MT (2008)*	4,7	4,1	5,1	4,1	7	8,2	3,4	1
NL (2008)	9,3	7,9	10,7	10,1	6,1	10,7	8,9	8,1
AT (2006)	5,6	4,2	7,0	4,9	8,7	8,1	4,8	4,5
PL (2009)*	2,6	1,8	3,1	2,3	3,4	3,1	2,6	1,5
RO (2008)*	0,8	0,6	0,9	0,7	1,2	1	0,7	0,6
SI (2007)*	3,4	2,2	4,6	2,7	6,3	4,7	2	1,9
SK (2009)*	1,8	1,1	2,4	1,5	3	2,9	1,6	1,4
CH (2007)	4,5	3,5	5,5	4,5	4,5	6,2	4,3	4,3
Average	3,8	2,6	4,9	3,4	5,2	5,5	3,3	2,4
Min	0,8	0,4	0,9	0,7	1,2	1,0	0,7	0,3
Max	9,3	7,9	10,7	10,1	10,4	10,7	8,9	8,1

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+

1.3.3 Data Table ECHI#24 Acute myocardial infarction (AMI)

"Attack rate of acute myocardial infarction (non-fatal and fatal) and coronary death per 100,000 population"

[Rate per 100,000]

	totals 35-74	men 35-74	women 35-74	totals 35-64	totals 65-74
CZ (2009)	314	484	161	203	933
DE (2008)	352	546	165	257	880
IE (2009)	220	340	101	144	644
ES (2008) §	142	238	53	106	320
IT (2003)	189	311	78	105	551
LT (2008) #	207	349	100	148	542
LV (2009)	446	763	215	294	1287
HU (2008)	305	470	173	225	753
MT (2009)	242	390	102	167	659
NL (2004)	222	337	110	155	595
PL (2006)	225	349	119	168	542
FI (2008)	267	425	121	164	845
UK (2008)	254	391	125	177	686
Average	260	415	125	178	711
Min	142	238	53	105	320
Max	446	763	215	294	1287

Legend:
§ = Data have been age-standardized and refer to total discharges from Hospitals (fatal or non-fatal), but do NOT include data from death registry

= Counted individuals, not separate attacks during the year

1.3.4 Data Table ECHI#25 Stroke

"Attack rate of stroke (non-fatal and fatal) per 100,000 population"

[Rate per 100,000]

	totals 35-84	men 35-84	women 35-84	totals 35-64	totals 65-84
CZ (2009)	435	539	346	182	1422
DE (2008)	509	628	401	268	1448
IE (2009)	210	252	171	86	692
ES (2009) §	173	231	122	81	591
IT (2003) $	154	204	111	72	540
LT (2008) #	598	708	523	296	1774
LV (2009)	486	632	386	221	1520
HU (2008)	743	913	621	426	1981
MT (2009)	183	242	133	64	644
NL (2004)	210	249	177	93	670
FI (2008)	436	551	339	204	1344
UK (2008)	228	270	190	111	683
Average	364	452	293	175	1109
Min	154	204	111	64	540
Max	743	913	621	426	1981

Legend:

§ = ES Data have been age-standardized and refer to total discharges from Hospitals (fatal or non-fatal), but do NOT include data from death registry

$ = max age is 74 years instead of 84 years

= Counted individuals, not separate attacks during the year.

1.3.5 Data Table ECHI#26 Asthma

"Proportion of individuals reporting to have been diagnosed with asthma which occurred during the past 12 months"

[Percentage]

	total 15+	men 15+	women 15+	edu low	edu med.	edu high
BE (2008)	4,2	3,4	4,9	5,3	4,2	3,4
BG (2008)*	2,0	1,6	2,4	2,6	1,9	1,3
CZ (2008)*	4,0	3,0	4,9	3,6	4,6	1,2
DK (2005)	6,4	5,4	7,3	9,4	5,6	5,4
DE (2010) #	5,3	4,2	6,2	6,4	5,3	4,1
EE (2006)	2,3	1,9	2,7	3,0	2,3	1,7
GR (2009)*	3,6	3,2	3,4	5,1	2,1	3,2
ES (2009)*	4,3	3,5	5,1	4,7	3,5	4,3
FR (2008)	3,5	3,3	3,8	4,0	3,3	3,2
IT (2005)	3,1	3,2	3,1	3,6	2,4	2,5
CY (2008)*	3,9	3,9	3,9	5,5	3,2	2,7
LV (2008)*	2,3	2,0	2,6	2,9	2,1	2,1
HU (2009)*	5,3	4,4	6,2	7,3	4,9	3,8
MT (2008)*	5,2	4,2	6,2	5,2	5,2	5,4
AT (2006)	4,3	3,6	4,9	6,2	3,5	3,8
PL (2009)*	3,7	3,6	3,9	5,8	3,1	2,4
RO (2008)*	1,6	1,5	1,6	2,8	1,0	0,5
SI (2007)*	3,5	3,7	3,2	4,5	2,3	2,2
SK (2009)*	2,7	2,0	3,3	3,2	2,4	3,4
FI (2000) ##	8,72	7,28	10,05	10,48	7,19	7,31
Average	3,7	3,2	4,2	4,8	3,3	3,0
Min	1,6	1,5	1,6	2,6	1,0	0,5
Max	6,4	5,4	7,3	9,4	5,6	5,4

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+
= reported but not diagnosed

1.3.6 Data Table ECHI#27 Chronic obstructive pulmonary disease

"Proportion of individuals reporting to have been diagnosed with chronic obstructive pulmonary disease (COPD) which occurred during the past 12 months"

[Percentage]

	totals 15+	men 15+	women 15+	totals 15-64	totals 65+	totals edu low	totals edu med.	totals edu high
BE (2008)	4,0	3,9	4,1	2,8	8,7	7,8	4,0	1,5
BG (2008)*	3,3	3,1	3,6	2,2	8,1	4,8	2,9	1,9
CZ (2008)*	2,7	1,8	3,5	1,8	7,7	2,8	2,8	2,0
DK (2005)	3,4	2,9	3,9	2,3	7,9	6,8	3,1	1,5
DE (2010) #	4,6	3,7	5,5	3,7	7,6	6,3	4,6	3,0
EE (2006)	2,1	1,7	2,4	1,7	4,1	2,6	2,3	1,1
GR (2009)*	2,9	2,9	2,9	1,7	7,1	4,7	1,5	1,6
ES (2009)*	3,5	3,7	3,2	2,1	9,4	5,0	1,8	1,5
FR (2008)	2,6	2,8	2,4	1,6	6,7	4,1	2,1	1,0
IT (2005)	3,8	4,0	3,5	1,7	10,9	5,3	1,6	1,4
CY (2008)*	2,4	2,4	2,3	1,7	6,2	3,9	1,5	1,4
LV (2008)*	3,3	3,0	3,5	2,6	6,1	4,3	2,9	2,7
HU (2009)*	4,7	3,2	6,0	3,7	8,5	7,4	3,8	3,3
MT (2008)*	1,2	0,8	1,5	1,0	2,0	1,8	1,0	0,6
AT (2006)	3,7	3,4	4,0	2,7	7,6	5,7	3,1	2,7
PL (2009)*	3,3	3,4	3,3	2,3	7,5	4,8	2,9	2,3
RO (2008)*	1,7	2,1	1,4	1,2	4,3	2,4	1,5	0,7
SI (2007)*	3,1	2,3	3,9	2,1	7,6	4,3	1,8	1,9
SK (2009)*	3,3	3,0	3,6	2,7	7,1	4,5	3,2	2,8
FI (2000) ##	1,5	1,6	1,3	1,0	3,1	2,2	1,0	0,8
Average	3,1	2,8	3,4	2,2	7,1	4,7	2,5	1,8
Min	1,2	0,8	1,4	1,0	2,0	1,8	1,0	0,6
Max	4,7	4,0	6,0	3,7	10,9	7,8	4,6	3,3

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+ and asked for "chronic bronchitis"
= age 30+

1.3.7 Data Table ECHI#29 (A) -1 Injuries: home, leisure, school

"Proportion of individuals reporting to have had an accident at home, during leisure activities, and/or at school during the past 12 months, which resulted in injury"

[Percentage]

	total 15+	men 15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)*	4,8	4,7	4,9	5,8	4,0	7,2	4,9	4,5	5,0
BG (2008)*	2,7	2,5	3,0	2,3	2,1	5,2	2,9	2,7	2,8
CZ (2008)*	7,6	8,4	6,9	16,2	5,4	7,8	14,3	6,1	7,0
DK (2005)	7,9	8,8	7,1	16,1	7,7	4,8	7,0	7,9	8,3
GR (2009)*	3,5	4,0	3,1	3,6	3,5	3,5	3,4	4,0	3,1
ES (2009)*	6,1	4,7	7,5	7,3	4,5	10,9	6,6	5,6	5,3
IT (2009)	4,9	2,9	6,8	2,9	4,3	7,4	5,8	3,8	3,6
CY (2008)*	2,0	2,0	2,0	1,7	1,7	3,3	2,7	1,5	1,6
LV (2008)*	7,3	8,0	6,7	9,3	7,0	6,2	8,6	7,1	5,9
HU (2009)*	6,7	7,0	6,5	9,7	5,6	8,4	7,9	6,0	7,0
MT (2008)*	8,1	7,3	8,8	7,7	7,1	11,9	9,7	7,3	7,4
PL (2009)*	2,5	2,8	2,2	4,3	1,9	3,1	3,4	2,2	1,9
RO (2008)*	1,3	1,5	1,1	1,4	1,1	2,1	1,8	1,1	1,2
SI (2007)*	6,6	6,1	8,5	10,4	6,9	9,5	8,6	6,9	8,1
SK (2009)*	7,4	7,8	6,9	8,9	6,3	10,4	10,1	6,5	8,2
CH (2007)	13,6	16,4	10,8	23,8	11,9	11,1	13,2	13,4	14,2
Average	5,8	5,9	5,8	8,2	5,1	7,1	6,9	5,4	5,7
Min	1,3	1,5	1,1	1,4	1,1	2,1	1,8	1,1	1,2
Max	13,6	16,4	10,8	23,8	11,9	11,9	14,3	13,4	14,2

Legend:
* = data extracted from Eurostat calculations of June 2011

1.3.8 Data Table ECHI#29 (A) -2 Injuries: home, leisure, school (medical treatment required)

"Proportion of individuals reporting to have had an accident at home, during leisure activities, and/or at school during the past 12 months, which resulted in injury for which medical treatment was sought"

[Percentage]

	total 15+	men 15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)*	3,3	3,4	3,2	5,0	2,7	4,7	3,3	3,5	3,2
BG (2008)*	2,0	1,9	2,0	1,6	1,4	4,1	2,1	1,8	2,0
CZ (2008)*	5,4	5,8	4,9	11,9	3,4	6,6	9,5	4,4	5,1
DE (2009) #	4,5	5,2	3,9	9,1	4,2	3,5	4,9	4,3	5,1
GR (2009)*	1,7	1,6	1,8	2,0	1,3	2,7	2,1	1,5	1,4
ES (2009)*	4,5	3,6	5,4	5,8	3,3	8,1	4,8	4,2	4,0
CY (2008)*	1,7	1,8	1,7	1,6	1,6	2,7	2,4	1,3	1,4
LV (2008)*	4,7	5,2	4,3	5,8	4,7	3,8	5,0	4,8	4,1
HU (2009)*	5,3	5,7	4,9	8,0	4,3	6,9	6,2	4,8	5,3
MT (2008)*	5,0	4,7	5,3	4,2	4,2	8,9	6,3	4,3	4,8
PL (2009)*	2,0	2,2	1,8	3,4	1,5	2,4	2,7	1,8	1,5
RO (2008)*	0,9	1,1	0,7	1,0	0,7	1,4	1,1	0,7	0,9
SI (2007)*	6,6	6,1	7,1	8,4	6,0	7,6	7,0	5,9	7,4
SK (2009)*	4,9	5,2	4,5	6,2	3,8	8,0	7,0	4,1	5,7
CH (2007)	8,80	9,90	7,80	13,30	8,10	7,70	8,30	8,70	9,30
Average	4,1	4,2	4,0	5,8	3,4	5,3	4,8	3,7	4,1
Min	0,9	1,1	0,7	1,0	0,7	1,4	1,1	0,7	0,9
Max	8,8	9,9	7,8	13,3	8,1	8,9	9,5	8,7	9,3

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+

1.3.9 Data Table ECHI#30 (A)-1 Injuries: road traffic

"Proportion of individuals reporting to have had a road traffic accident, which resulted in injury during the past 12 months"

[Percentage]

	total 15+	men 15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)*	2,2	2,4	2,1	2,7	2,3	2,0	2,2	2,8	1,7
BG (2008)*	1,1	1,4	0,8	1,1	1,0	1,2	1,2	1,0	1,0
CZ (2008)*	1,8	1,9	1,7	4,6	1,3	0,6	1,8	1,5	3,1
DK (2005)	1,9	1,9	1,8	5,2	1,6	1,0	1,8	1,8	1,9
EE (2006)	0,3	0,3	0,2	0,3	0,3	0,1	0,3	0,4	0,0
GR (2009)*	3,5	4,0	3,1	3,6	3,5	3,5	3,4	4,0	3,1
ES (2009)*	2,3	2,8	1,8	5,2	2,2	1,1	2,2	2,4	2,5
CY (2008)*	1,6	1,8	1,4	2,9	1,4	0,8	1,3	2,0	1,3
LV (2008)*	2,4	3,1	1,8	2,4	2,8	1,3	2,5	2,3	2,7
HU (2009)*	1,6	1,5	1,7	2,0	1,6	1,2	1,5	1,7	1,4
MT (2008)*	5,4	6,1	4,7	6,7	5,3	4,6	4,3	5,8	6,2
PL (2009)*	1,2	1,4	1,1	1,5	1,2	1,1	1,0	1,2	1,8
RO (2008)*	0,3	0,4	0,2	0,1	0,4	0,3	0,3	0,3	0,6
SI (2007)*	3,8	4,0	3,6	8,8	3,3	2,0	3,5	4,9	1,2
SK (2009)*	1,2	1,5	0,9	1,2	1,3	0,6	0,3	1,4	1,4
CH (2007)	1,9	2,2	1,6	2,7	1,9	1,3	2,0	1,9	2,0
Average	2,0	2,3	1,8	3,2	2,0	1,4	1,8	2,2	2,0
Min	0,3	0,3	0,2	0,1	0,3	0,1	0,3	0,3	0,0
Max	5,4	6,1	4,7	8,8	5,3	4,6	4,3	5,8	6,2

Legend:
* = data extracted from Eurostat calculations of June 2011

1.3.10 Data Table ECHI#30 (A)-2 Injuries: road traffic (medical treatment required)

"Proportion of individuals reporting to have had a road traffic accident, which resulted in injury for which medical treatment was sought during the past 12 months"

[Percentage]

	total 15+	men15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)	1,3	1,2	1,5	1,5	1,3	1,4	1,1	1,9	1,1
BG (2008)*	0,9	1,0	0,8	0,8	0,8	1,2	1,0	0,8	1,0
CZ (2008)*	0,8	1,0	0,6	1,7	0,8	nd	1,3	0,6	1,1
DE (2009) #	2,6	3,5	1,7	3,7	2,9	1,3	2,2	2,8	2,6
GR (2009)*	1,2	1,6	0,7	1,5	1,2	0,8	0,8	1,9	0,7
ES (2009)*	1,5	1,7	1,3	3,3	1,4	0,8	1,6	1,4	1,4
CY (2008)*	1,3	1,4	1,1	2,4	1,1	0,7	1,2	1,6	0,8
LV (2008)*	1,2	1,4	1,1	1,4	1,3	1,0	1,3	1,3	1,0
HU (2009)*	1,0	0,7	1,3	1,3	0,9	1,1	1,1	1,1	0,8
MT (2008)*	1,7	1,8	1,6	1,2	1,8	1,7	1,3	1,8	2,2
PL (2009)*	0,8	0,8	0,7	0,8	0,7	0,8	0,7	0,7	0,9
RO (2008)*	0,3	0,3	0,2	0,1	0,3	0,3	0,3	0,2	0,3
SI (2007)*	3,1	3,4	2,8	7,1	2,6	2,0	2,6	4,3	0,5
SK (2009)*	0,7	0,9	0,6	0,7	0,8	0,4	0,3	0,8	0,7
CH (2007)	1,4	1,6	1,1	0,8	1,6	0,9	1,2	1,3	1,6
Average	1,3	1,5	1,1	1,9	1,3	1,0	1,2	1,5	1,1
Min	0,3	0,3	0,2	0,1	0,3	0,3	0,3	0,2	0,3
Max	3,1	3,5	2,8	7,1	2,9	2,0	2,6	4,3	2,6

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+

1.3.11 Data Table ECHI#30 (B) Injuries: road traffic

"Number of persons non-fatally injured in a road traffic accident, per 100,000 inhabitants (injury rate)"

[Rate per 100,000 inhabitants]

	total	persons aged 0-14	persons aged 15-24	persons aged 25-64	persons aged 65+
CZ (2010) §	162	359	195	169	207
DE (2010)	454	260	997	471	235
EE (2009)	144,1	95,8	279,7	144,8	67,6
IE (2009)	218,5	90,0	433,2	211,3	127,9
FR (2008)	151	62	358	156	74
IT (2008) $	519	148	1136	561	231
LV (2009)	174	115	267	178	98
LT (2009)	133	118	227	122	94
HU (2009)	232	134	385	252	137
MT (2009)	254	15	67	145	21
AT (2009)	588	254	1511	560	315
PL (2009)	146,47	86,97	273,08	nd	nd
Average	265	145	511	270	146
Min	133	15	67	122	21
Max	588	359	1511	561	315

Legend:
§ = Data from the registry of hospitalized persons, non-fatal (ICD-10: V00-V99)
$ = Total number of persons injured in road accidents contains also persons with unknown age

1.3.12 Data Table ECHI#42 Body Mass Index (BMI)

"Proportion of adult persons (18+) who are obese, i.e. whose body mass index (BMI) is ≥ 30 kg/m²"

[Percentage]

	totals 18+	men 18+	women 18+	totals 18-64	totals 65+	edu low	edu med.	edu high
BE (2008)	13,8	13,1	14,4	13,3	15,6	19,6	14,5	9,1
BG (2008)*	11,5	11,6	11,3	10,5	14,9	12,3	11,6	9,7
CZ (2008)*	18,3	18,4	18,3	16,8	26,3	24,7	18,4	11,4
DK (2005)	11,5	11,9	11,1	11,3	12,2	16,6	12,0	6,4
DE (2010)	15,9	16,1	15,6	14,7	19,5	20,0	16,1	11,4
EE (2006)*	18,5	16,0	20,5	16,7	25,5	21,2	18,2	13,9
IE (2007)	15,0	16,0	13,0	nd	14,0	nd	nd	nd
GR (2009)*	17,6	17,7	17,6	15,8	24,3	23,0	15,5	11,4
ES (2009)*	15,7	17,0	14,4	14,1	*23,4*	21,1	10,6	9,4
FR (2008)	12,1	11,4	12,8	10,9	16,8	17,4	10,9	6,4
IT (2009)	10,3	11,3	9,3	9,1	14,4	13,3	7,0	5,5
CY (2008)*	15,6	16,7	14,5	14,1	23,1	22,2	12,8	10,8
LV (2008)*	16,9	12,0	20,9	14,3	27,3	18,4	17,1	14,8
HU (2009)*	20,0	21,4	18,8	18,4	26,0	25,8	19,1	15,0
MT (2008)*	22,8	*24,7*	*21,2*	*21,6*	*29,3*	*30,5*	*20,3*	17,6
NL (2008)	11,2	9,9	12,5	10,5	14,2	15,5	9,7	6,7
AT (2006)	12,9	12,5	13,2	12,0	16,2	18,3	11,4	10,4
PL (2009)*	18,0	*18,8*	17,4	16,3	24,1	22,9	17,9	11,0
RO (2008)*	7,9	*7,6*	8,0	*7,5*	*9,4*	*7,8*	*8,2*	*6,1*
SI (2007)*	16,8	17,3	16,3	15,9	20,7	21,4	13,4	6,8
SK (2009)*	15,1	14,5	15,7	13,2	25,8	23,6	15,2	9,6
CH (2007)	8,50	9,00	8,10	8,00	11,00	15,40	8,50	5,20
Average	14,8	14,8	14,8	13,6	19,7	19,6	13,7	9,9
Min	7,9	7,6	8	7,5	9,4	7,8	7	5,2
Max	22,8	24,7	21,2	21,6	29,3	30,5	20,3	17,6

Legend:
* = data extracted from Eurostat calculations of June 2011
Values in italics are rated "unreliable" by Eurostat

1.3.13 Data Table ECHI#43 Blood Pressure

"Proportion of individuals reporting to have been diagnosed with high blood pressure which occurred during the past 12 months"

[Percentage]

	total 25+	men 25+	women 25+	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)	18,2	16,0	20,1	12,4	36,7	27,3	18,1	11,7
BG (2008)*	26,5	23,3	29,3	17,4	55,9	37,0	22,6	20,5
CZ (2008)*	26,4	26,3	26,5	18,8	59,2	39,1	26,4	14,7
DK (2005)	16,3	14,7	17,8	10,7	32,3	26,8	14,9	10,8
DE (2010)	27,4	26,9	27,8	18,6	50,8	35,5	27,2	21,3
EE (2006)*	21,1	16,7	24,5	14,2	42,9	27,9	19,6	15,4
GR (2009)*	21,3	18,7	23,9	11,6	50,8	34,9	10,7	10,9
FR (2008)	11,2	9,9	12,4	7,3	24,3	17,0	9,1	5,9
IT (2005)	17,1	14,9	19,0	9,7	38,7	22,0	9,8	9,4
CY (2009)*	21,3	17,5	17,5	12,9	58,8	36,5	14,0	9,5
LV (2008)*	25,8	18,4	31,6	17,0	53,2	35,0	24,6	18,2
HU (2009)*	35,3	32,0	38,1	26,0	66,1	53,3	31,4	24,2
MT (2008)*	20,9	19,8	21,8	16,0	38,1	33,3	13,6	11,8
NL (2008)	17,7	16,4	18,9	12,5	37,2	23,9	15,8	11,6
AT (2006)	21,6	20,2	22,8	14,2	45,5	34,6	18,6	15,6
PL (2009)*	24,6	21,4	27,5	17,7	53,2	41,6	22,3	14,7
RO (2008)*	16,5	12,2	20,4	10,0	40,6	26,3	12,2	10,1
SI (2007)*	24,8	23,2	26,4	16,7	53,9	31,4	20,0	9,3
SK (2009)*	29,7	25,9	33,1	20,9	71,8	60,7	28,4	18,3
FI (2000)	14,8	12,0	17,3	10,3	31,0	19,9	11,7	9,6
CH (2007)	13,70	14,40	13,00	8,10	36,80	22,40	14,20	10,00
Average	21,5	19,1	23,3	14,4	46,6	32,7	18,3	13,5
Min	11,2	9,9	12,4	7,3	24,3	17,0	9,1	5,9
Max	35,3	32	38,1	26	71,8	60,7	31,4	24,2

Legend:
* = data extracted from Eurostat calculations of July 2011

1.3.14 Data Table ECHI#44 Regular Smokers

"Proportion of people reporting to smoke cigarettes daily"

[Percentage]

	total 15+	men 15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)	20,5	23,6	17,7	18,8	24,1	9,1	26,0	25,1	13,1
BG (2008)*	29,2	40,4	18,9	23,0	37,8	6,1	22,7	34,9	24,5
CZ (2008)*	24,3	29,8	19,2	20,2	28,5	10,7	25,1	25,8	14,1
DK (2005)	27,2	27,3	27,2	26,4	29,7	19,3	34,6	29,1	16,8
DE (2009) #	28,5	31,3	25,9	37,9	34,1	9,4	29,8	31,0	20,7
EE (2006)	26,7	38,6	14,8	25,7	30,0	8,2	24,8	31,3	20,8
GR (2009)*	31,8	37,8	26,1	25,0	39,6	12,2	27,3	39,0	29,4
ES (2009)*	25,1	29,4	21,0	26,0	29,7	7,1	25,0	29,5	21,3
FR (2008)	21,1	23,4	19,1	27,8	24,4	5,2	18,4	25,3	18,7
IT (2009)	23,3	29,9	17,1	21,6	28,2	10,3	22,1	26,3	19,7
CY (2008)*	25,9	37,9	14,3	25,8	29,5	10,0	21,2	30,7	25,4
LV (2008)*	27,9	45,9	12,9	23,8	35,2	8,6	29,3	32,6	14,3
HU (2009)*	26,1	31,4	21,5	27,5	30,9	9,4	27,1	29,7	14,3
MT (2008)*	19,2	23,9	15,2	17,7	22,2	9,5	18,1	21,3	13,8
NL (2008)	23,3	25,9	20,8	19,4	26,4	14,4	28,1	24,1	13,6
AT (2006)	22,9	26,8	19,3	29,4	26,7	5,8	21,0	25,2	17,0
PL (2009)*	22,5	29,7	17,2	14,6	28,6	8,6	17,8	27,0	14,3
RO (2008)*	20,5	32,7	9,1	12,4	26,5	5,9	12,2	25,3	22,7
SI (2007)*	18,7	22,1	15,5	18,2	22,7	5,2	20,7	17,8	11,3
SK (2009)*	19,3	26,9	12,3	16,0	23,2	5,3	12,1	23,2	11,6
FI (2000) ##	24,5	30,7	18,8	30,4	28,0	8,8	26,7	28,2	17,3
CH (2007)	19,50	21,60	17,40	21,70	22,10	7,70	18,20	21,80	14,40
Average	24,0	30,3	18,2	23,2	28,5	8,9	23,1	27,5	17,7
Min	18,7	21,6	9,1	12,4	22,1	5,2	12,1	17,8	11,3
Max	31,8	45,9	27,2	37,9	39,6	19,3	34,6	39,0	29,4

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+
= all types of tobacco products

1.3.15 Data Table ECHI#49 Consumption of fruit

"Proportion of people reporting to eat fruit (excluding juice) at least once a day"

[Percentage]

	total 15+	men 15+	women15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)	63,1	57,6	68,1	48,8	62,9	73,6	62,0	59,4	67,2
BG (2008)*	45,3	39,4	50,5	54,7	43,8	43,7	36,0	44,8	63,8
CZ (2008)*	66,4	57,4	74,8	65,2	66,3	67,9	62,9	66,8	69,0
DK (2005)	50,4	38,5	61,6	43,5	51,5	50,2	43,2	49,8	58,5
DE (2010) #	60,8	50,3	70,7	46,8	56,4	78,5	61,7	59,1	64,2
EE (2006)*	56,7	47,7	64,3	50,2	59,1	55,1	47,7	59,0	67,1
IE (2007)	73,8	69,6	78				62,9	57,7	61,1
GR (2009)*	60,7	59,0	62,2	46,5	60,8	68,4			
ES (2009)*	70,3	66,0	74,4	49,4	69,1	88,1	72,0	66,4	70,0
FR (2008)* ##	65,8	59,5	71,4	57	63	81,9	66,2	61,1	73
IT (2009)	76,2	73,0	79,2	62,1	75,3	85,8	76,6	74,9	78,2
CY (2008)*	65,8	63,1	68,3	52,3	66,7	73,8	69,5	64,3	62,3
LV (2008)*	60,1	52,3	66,6	60,6	60,9	57,4	51,5	59,6	73,7
HU (2009)*	68,3	61,2	74,6	52,1	67,4	82,2	66,5	67,5	73,6
MT (2008)*	73,9	69,0	78,1	60,3	74,9	82,5	79,7	70,7	73,2
PL (2009)*	62,1	56,6	66,1	62,9	62,3	61,1	56,6	62,2	71,4
RO (2008)*	45,6	41,2	49,2	57,8	45,9	35,3	33,4	49,3	69,3
SI (2007)*	74,7	66,8	82,3	59,6	74,3	87,4	73,7	74,7	80,4
SK (2009)*	64,2	53,8	73,7	62,6	63,7	68,5	64,6	62,7	69,2
CH (2007) ##	83,6	77,9	89,1	82,5	82,8	88	82,6	83,3	84,9
Average	64,4	58,0	70,2	56,6	63,5	70,0	61,5	62,8	70,0
Min	45,3	38,49	49,2	43,47	43,8	35,3	33,4	44,8	58,54
Max	83,6	77,9	89,1	82,5	82,8	88,1	82,6	83,3	84,9

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+
= incl. juices, soups and potatoes

1.3.16 Data Table ECHI#50 Consumption of vegetables

"Proportion of people reporting to eat vegetables (excluding potatoes and juice) at least once a day"

[Percentage]

	total 15+	men 15+	women 15+	total 15-24	total 25-64	total 65+	edu low	edu med.	edu high
BE (2008)	84,8	82,4	87,0	76,9	85,1	89,3	83,0	83,6	87,4
BG (2008)*	59,1	59,2	59,0	63,6	60,3	52,1	50,2	60,5	71,4
CZ (2008)*	59,8	53,1	66,1	59,4	60,9	55,6	53,8	60,3	65,3
DE (2010) #	40,5	31,2	49,3	38,7	39,5	44,2	39,1	38,2	47,8
EE (2006)*	51,7	47,7	55,0	45,7	54,3	48,7	45,3	52,8	61,8
IE (2007)	95,4	94,5	96,2	nd	nd	nd	63,8	60,8	68,6
GR (2009)*	63,8	62,3	65,3	53,1	65,5	65,0	60,1	61,2	65,6
ES (2009)*	61,7	56,0	67,1	43,7	62,7	69,0	nd	nd	nd
FR (2008) ##	76,7	73,3	79,8	65,6	76,7	86,0	75,9	74,4	81,9
IT (2009)	58,3	52,7	63,6	46,0	58,3	64,8	57,8	58,0	62,3
CY (2008)*	68,1	66,4	69,7	57,8	70,1	69,0	65,9	69,3	69,8
LV (2008)*	63,1	59,0	66,4	60,9	64,9	59,3	54,5	62,8	75,9
HU (2009)*	52,7	48,4	56,4	43,5	52,9	57,7	49,0	51,0	63,1
MT (2008)*	50,8	43,2	57,4	41,4	51,6	56,3	51,5	48,3	59,0
PL (2009)*	62,9	59,5	65,4	60,1	63,9	61,7	56,8	63,2	72,4
RO (2008)*	54,1	51,2	56,4	58,1	54,8	48,4	44,9	57,2	69,7
SI (2007)*	75,0	71,3	78,6	57,2	77,3	80,4	74,0	75,7	77,5
SK (2009)*	51,5	44,2	58,2	50,4	51,3	53,5	50,3	50,9	54,7
FI (2000)	56,4	49,9	62,3	49,4	58,0	54,1	50,2	55,4	67,6
CH (2007) ##	87,0	82,9	90,9	81,4	87,5	90,0	83,3	86,4	90,2
Average	63,7	59,4	67,5	55,4	62,9	63,4	58,4	61,6	69,1
Min	40,5	31,2	49,3	38,7	39,5	44,2	39,1	38,2	47,8
Max	95,4	94,5	96,2	81,4	87,5	90	83,3	86,4	90,2

Legend:
* = data extracted from Eurostat calculations of June 2011
# = age = 18+
= incl. juices, soups and potatoes

1.3.17 Data Table ECHI#57 Influenza vaccination rate in elderly

"Proportion of elderly individuals reporting to have received one shot of Influenza vaccine during the last 12 months"

[Percentage]

	totals 65+	men 65+	women 65+	edu low	edu med.	edu high
BE (2008)	64,7	63,0	65,9	65,3	62,2	63,4
BG (2008)*	4,8	5,0	4,6	3,2	5,7	10,1
CZ (2008)*	19,4	18,9	19,8	13,3	20,8	*29,4*
DE (2010) §	56,3	65,1	50,0	nd	58,4	57,2
EE (2006)	1,7	1,4	2,0	0,8	2,0	2,9
GR (2009)*	41,7	42,4	41,1	42,2	41,4	37,8
FR (2008)	66,6	69,1	64,8	67,2	65,5	65,2
IT (2005)	62,5	62,0	62,8	63,1	59,2	56,6
CY (2008)*	28,5	27,8	29,1	28,6	31,5	20,9
LV (2008)*	2,9	4,5	2,1	1,9	3,2	5,8
HU (2009)*	30,4	32,6	29,0	27,7	30,5	41,2
MT (2008)*	52,5	52,4	52,6	51,0	57,5	*52,5*
NL (2008)	75,0	73,6	76,2	75,7	72,1	76,9
AT (2006)	36,1	38,0	34,7	32,6	38,4	40,7
PL (2009)*	12,3	14,8	10,8	8,3	15,6	23,6
RO (2008)*	18,1	17,7	18,4	14,9	22,8	35,3
SI (2007)*	22,3	29,4	17,9	18,8	27,0	nd
SK (2009)*	24,4	23,5	25,0	23,2	23,3	33,9
FI (2000)	32,3	34,3	31,1	33,6	29,4	29,4
CH (2007)	49,40	50,20	48,80	46,90	48,80	54,10
Average	35,1	36,3	34,3	32,5	35,8	38,8
Min	1,7	1,4	2,0	0,8	2,0	2,9
Max	75,0	73,6	76,2	75,7	72,1	76,9

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample, N = 3.100
Values in italics are rated unreliable by Eurostat

1.3.18 Data Table ECHI#58 Breast Cancer screening

"Proportion of women (aged 50-69) reporting to have undergone a breast cancer screening test, i.e. mammography, within the past two years"

[Percentage]

	women 50-69	edu low	edu med.	edu high
BE (2008)	72,6	66,9	70,7	79,3
BG (2008)*	21,9	12,2	23,5	33,5
CZ (2008)*	67,7	46,7	71,2	*88,3*
DE (2010) §	68,4	nd	69,8	70,2
DK (2000)	22,7	20,3	23,0	25,8
EE (2006)	34,7	22,3	36,2	41,2
GR (2009)*	50,1	38,8	65,6	68,9
ES (2009)*	73,3	73,1	71,4	76,7
FR (2008)	79,9	76,6	82,4	83,9
IT (2005)	53,2	50,0	61,5	64,3
CY (2008)*	59,4	54,3	63,1	75,6
LV (2008)*	41,7	25,1	43,1	56,1
HU (2009)*	64,5	50,0	71,5	69,9
MT (2008)*	31,2	27,7	37,2	*36,6*
NL (2008)	88,6	88,6	89,6	87,5
AT (2006)	80,1	71,8	85,7	82,7
PL (2009)*	58,7	44,0	62,1	73,4
RO (2008)*	8,0	3,3	11,0	21,4
SI (2007)*	47,4	46,3	47,5	*56,0*
SK (2009)*	59,1	48,3	61,0	61,0
CH (2007)	44,8	45,1	44,1	47,0
Average	53,7	45,6	56,7	61,9
Min	8,0	3,3	11,0	21,4
Max	88,6	88,6	89,6	88,3

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample, N = 3.100
Values in italics are rated unreliable by Eurostat

1.3.19 Data Table ECHI#59 Cervical cancer screening

"Proportion of women (aged 20-69) reporting to have undergone a cervical cancer screening test within the past three years"

[Percentage]

	women 20-69	edu low	edu med.	edu high
BE (2008)	67,5	56,8	61,7	77,1
BG (2008)*	46,8	26,5	49,6	59,5
CZ (2008)*	66,8	59,3	68,1	81,7
DE (2010) §	78,8	nd	79,3	82,5
DK (2005)	69,4	55,4	70,3	75,9
EE (2006)	30,0	17,6	28,8	37,5
GR (2009)*	70,1	56,1	75,3	81,2
ES (2009)*	68,4	62,5	70,7	75,5
FR (2008)	76,3	65,9	77,9	84,5
IT (2005)	54,6	49,1	60,5	62,8
CY (2008)*	67,4	59,3	68,1	75,1
LV (2008)*	80,6	63,9	80,9	88,8
HU (2009)*	63,5	42,9	65,5	76,7
MT (2008)*	58,0	43,8	66,0	56,2
NL (2008)	68,4	66,8	69,5	68,8
AT (2006)	81,5	72,1	83,7	86,8
PL (2009)*	71,7	49,4	72,6	85,9
RO (2008)*	14,6	5,4	16,6	27,7
SI (2007)*	78,1	74,9	77,7	89,9
SK (2009)*	62,0	40,8	63,5	63,6
CH (2007)	74,9	59,1	76,4	77,7
Average	64,3	51,4	65,8	72,2
Min	14,6	5,4	16,6	27,7
Max	81,5	74,9	83,7	89,9

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample; N = 3.100

1.3.20 Data Table ECHI#60 Colon cancer screening

"Proportion of persons (aged 50-74) reporting to have undergone a colorectal cancer screening test in the past 2 years"

[Percentage]

	total 50-74	men 50-74	women 50-74	edu low	edu med.	edu high
BE (2008)	8,9	8,9	8,9	9,2	7,6	9,7
BG (2008)*	11,4	12,0	11,0	8,4	12,4	14,6
CZ (2008)*	25,4	26,4	24,5	12,7	25,2	44,7
GR (2009)*	3,9	4,0	3,7	3,1	5,8	4,0
ES (2009)*	3,6	4,5	2,7	3,1	4,0	5,0
FR (2008)	20,5	20,6	20,4	19,6	21,4	21,1
CY (2008)*	4,3	4,6	4,0	3,8	4,5	5,7
LV (2008)*	13,7	14,0	13,4	11,1	13,3	18,7
HU (2009)*	4,8	3,8	5,7	4,2	4,3	7,2
MT (2008)*	2,6	3,6	1,7	2,2	3,0	3,5
AT (2006)	24,6	25,0	24,2	23,3	25,6	23,7
PL (2009)*	2,9	2,8	2,9	2,0	3,0	4,5
RO (2008)*	1,9	2,4	1,5	0,9	2,5	3,6
SI (2007)*	5,9	7,5	4,4	5,4	6,5	*7,7*
SK (2009)*	18,5	18,2	18,8	13,3	19,2	19,9
CH (2007)	15,8	17,8	13,9	12,6	16,4	16,2
Average	10,5	11,0	10,1	8,4	10,9	13,1
Min	1,9	2,4	1,5	0,9	2,5	3,5
Max	25,4	26,4	24,5	23,3	25,6	44,7

Legend:
* = data extracted from Eurostat calculations of June 2011
Values in italics are rated unreliable by Eurostat

1.3.21 Data Table ECHI#71 General practitioner (GP) utilization

"Mean number of self-reported visits to general practitioner per person per year"

[Average number of visits]

	total 15+	men15+	women 15+	total 15-64	total 65+	edu low	edu med	edu high
BE (2008)	5,0	4,3	5,7	3,9	9,3	7,7	4,4	3,7
BG (2008)*	4,7	3,8	5,5	3,4	9,9	5,7	4,3	4,1
CZ (2008)*	6,2	6,0	6,4	5,2	11,9	6,8	6,4	4,1
DE (2010) §	8,2	8,5	7,9	7,8	9,3	9,4	8,4	6,4
EE (2006)*	4,6	3,7	5,3	3,9	7,3	5,3	4,5	3,2
IE (2007)	2,8	2,2	3,4	nd	nd	nd	nd	nd
GR (2009)*	5,6	4,8	6,4	4,4	9,9	7,5	4,1	4,4
ES (2009)*	5,3	4,2	6,2	4,2	9,5	6,4	4,2	3,6
FR (2008)	3,9	3,4	4,4	3,4	6,1	4,9	3,5	2,9
IT (2005)	3,6	3,0	4,2	2,5	7,4	4,5	2,5	2,2
CY (2008)*	0,6	0,4	0,7	0,5	1,4	0,7	0,6	0,4
LV (2008)*	3,6	2,8	4,3	3,0	6,2	4,0	3,6	3,3
HU (2009)*	7,2	6,3	7,9	5,9	12,2	9,8	6,3	5,8
MT (2008)*	5,6	5,1	6,0	5,3	6,9	7,3	4,9	4,1
NL (2008)	4,3	3,6	5,0	4,0	5,6	5,1	3,9	3,5
AT (2006)	7,2	6,3	7,9	5,6	13,5	9,4	6,4	6,2
PL (2009)*	6,6	5,4	7,5	5,4	11,1	7,9	6,1	5,7
RO (2008)*	2,7	2,0	3,3	1,9	6,1	3,2	2,4	2,4
SI (2007)*	5,7	4,9	6,4	5,0	8,5	7,1	4,2	3,8
SK (2009)*	6,8	5,8	7,7	5,6	13,6	9,2	6,7	5,2
FI (2000)	3,0	2,4	3,5	2,9	3,3	3,0	2,9	3,0
CH (2007)	2,3	2,2	2,5	2,0	3,9	3,8	2,3	1,8
Average	4,8	4,1	5,4	4,1	8,2	6,1	4,4	3,8
Min	0,6	0,4	0,7	0,5	1,4	0,7	0,6	0,4
Max	8,2	8,5	7,9	7,8	13,6	9,8	8,4	6,4

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample; N = 3100 and age 18+

1.3.22 Data Table ECHI#72-1 Selected outpatient visits (dentist/orthodontist)

"Mean number of self-reported visits to a dentist or orthodontist per person per year"

[Average number of visits]

	totals 15+	men 15+	women15+	totals 15-64	totals 65+	edu low	edu med.	edu high
BE (2008)	1,3	1,2	1,4	1,4	1,0	0,9	1,3	1,7
BG (2008)*	2,7	2,5	2,9	2,9	2,1	1,4	3,2	3,7
CZ (2008)*	3,8	3,3	4,4	4,0	2,9	3,5	4,0	3,6
DE (2010) §	3,4	3,0	3,7	3,5	3,1	3,6	3,2	3,7
EE (2006)*	2,2	1,7	2,6	2,3	1,7	1,7	2,3	2,8
ES (2009)*	1,6	1,4	1,7	1,7	1,3	1,4	1,5	2,0
IT (2005)	0,9	0,8	1,0	1,0	0,6	0,8	1,0	1,2
CY (2008)*	3,3	3,1	3,6	3,4	2,8	3,1	3,6	3,4
LV (2008)*	1,9	1,6	2,2	2,0	1,6	1,3	2,0	2,7
HU (2009)*	2,6	2,3	2,8	2,7	2,2	2,2	2,4	3,7
MT (2008)*	1,5	1,3	1,7	1,7	0,8	0,9	1,8	2,0
NL (2008)	2,3	2,0	2,5	2,4	1,4	2,0	2,2	2,7
AT (2006)	2,4	2,2	2,6	2,6	1,8	2,1	2,4	2,8
PL (2009)*	2,9	2,5	3,2	3,2	1,6	1,8	3,0	4,3
RO (2008)*	0,9	0,9	1,0	1,0	0,4	0,5	1,0	2,0
SI (2007)*	3,6	3,4	3,9	3,6	3,8	3,4	3,9	3,9
SK (2009)*	4,3	4,0	4,6	4,6	2,5	3,4	4,3	5,2
FI (2000)	1,4	1,3	1,6	1,5	1,1	1,2	1,6	1,7
CH (2007)	1,2	1,1	1,2	1,1	1,3	1,2	1,2	1,1
Average	2,3	2,1	2,5	2,4	1,8	1,9	2,4	2,8
Min	0,9	0,8	1,0	1,0	0,4	0,5	1,0	1,1
Max	4,3	4,0	4,6	4,6	3,8	3,6	4,3	5,2

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample; N = 3100 and age 18+

1.3.23 Data Table ECHI#72-2 Selected outpatient visits (medical/surgical specialist)

"Mean number of self-reported visits to a medical or surgical specialist per person per year"

[Percentage]

	totals 15+	men 15+	women 15+	totals 15-64	totals 65+	edu low	edu med.	edu high
BE (2008)*	2,9	2,4	3,3	2,7	3,5	2,8	2,9	2,9
BG (2008)*	1,8	1,4	2,3	1,5	3,3	1,9	1,8	2,0
CZ (2008)*	5,2	3,8	6,5	5,0	6,4	5,9	5,0	5,5
DE (2010) §	4,4	4,1	4,6	3,9	5,9	4,1	4,4	4,5
EE (2006)*	3,0	2,2	3,7	2,7	4,2	2,7	3,1	3,6
GR (2009)*	4,8	3,7	5,8	4,3	6,4	5,0	4,5	4,8
ES (2009)*	2,3	1,8	2,7	2,1	2,8	2,1	2,2	2,8
IT (2005)	3,5	3,0	4,0	3,1	4,8	3,6	3,4	3,5
CY (2008)*	5,1	4,2	6,0	4,4	9,6	7,0	4,2	3,9
LV (2008)*	2,7	2,0	3,3	2,4	3,6	2,2	2,8	3,2
HU (2009)*	4,7	3,9	5,4	4,2	6,6	5,1	4,3	5,3
MT (2008)*	1,3	1,1	1,5	1,3	1,5	1,2	1,4	1,4
AT (2006)	4,7	3,5	5,8	4,3	6,5	4,6	4,7	5,0
NL (2008)	2,0	1,7	2,2	1,8	2,8	2,3	1,8	1,7
PL (2009)*	4,0	3,4	4,6	3,6	5,8	3,7	4,0	4,8
RO (2008)*	0,8	0,7	0,9	0,7	1,3	0,7	0,8	1,0
SI (2007)*	3,0	2,6	3,5	2,6	4,9	3,2	2,8	2,7
SK (2009)*	5,2	4,2	6,2	4,4	10,4	6,4	5,1	4,5
Average	3,4	2,7	4,0	3,0	5,0	3,6	3,3	3,5
Min	0,8	0,7	0,9	0,7	1,3	0,7	0,8	1,0
Max	5,2	4,2	6,5	5,0	10,4	7,0	5,1	5,5

Legend:
* = data extracted from Eurostat calculations of June 2011
§ = subsample; N = 3100 and age 18+

1.3.24 Data Table ECHI#72-3 Selected outpatient visits (psychotherapist/ psychologist)

"Proportion of population reporting to have had a contact with a psychologist or psychotherapist during the past 12 months"

[Percentage]

	totals 15+	men 15+	women 15+	totals 15-64	totals 65+	edu low	edu med.	edu high
BE (2008)*	4,1	3,0	5,1	4,8	1,5	3,2	4,0	5,2
BG (2008)*	1,0	1,1	1,0	1,0	1,1	0,9	1,1	0,9
CZ (2008)*	2,7	1,5	3,8	3,0	0,8	1,1	3,0	2,7
DE (2010) $	6,6	5,7	7,5	8,1	nd	nd	7,7	6,5
GR (2009)*	2,2	1,5	2,9	2,2	2,1	3,0	1,3	2,2
ES (2009)*	3,3	2,7	3,8	3,5	2,5	3,4	2,8	3,4
FR (2008)	3,7	2,9	4,5	4,3	1,3	3,7	3,4	4,4
IT (2005)	0,3	0,3	0,4	0,3	0,2	0,3	0,3	0,2
CY (2008)*	2,0	1,7	2,3	2,0	2,2	3,1	1,7	0,9
LV (2008)*	2,7	2,3	3,0	2,9	1,7	2,4	2,3	3,8
HU (2009)*	3,9	2,9	4,8	3,9	3,8	4,2	3,6	4,4
MT (2008)*	2,5	2,2	2,8	2,6	2,3	2,5	2,5	2,4
AT (2006)	1,9	1,5	2,3	2,1	1,0	1,3	1,9	2,8
PL (2009)*	2,2	1,9	2,4	2,3	1,5	2,5	2,0	1,9
RO (2008)*	0,4	0,4	0,4	0,5	0,1	0,3	0,5	0,3
SI (2007)*	2,6	2,3	3,0	2,5	2,9	2,9	2,4	1,7
SK (2009)*	2,7	2,4	3,0	2,6	3,3	3,5	2,7	2,1
FI (2000)	3,2	2,4	3,9	3,7	0,8	2,5	3,1	4,5
CH (2007)	0,4	0,4	0,5	0,5	0,1	0,4	0,4	0,6
Average	2,6	2,1	3,0	2,8	1,6	2,3	2,5	2,7
Min	0,3	0,3	0,4	0,3	0,1	0,3	0,3	0,2
Max	6,6	5,7	7,5	8,1	3,8	4,2	7,7	6,5

Legend:
* = data extracted from Eurostat calculations of June 2011
$ = subsample; N = 3.100 and age 18+

Annex IV List of Abbreviations

Abbreviation	Explanation
AMI	Acute Myocardial Infarction
BMI	Body-mass-index
CoD	Causes of Death (DG Eurostat)
COPD	Chronic Obstructive Pulmonary Diseases
DG	European Commission's **D**irectorate **G**eneral; http://ec.europa.eu/about/ds_en.htm
DG EMPL	Directorate General Employment, Social Affairs and Inclusion; http://ec.europa.eu/social/home.jsp?langId=en
DG Eurostat	Directorate General Statistical Office of the European Communities; http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/
DG Health & Consumers (formerly Sanco)	Directorate General Health and Consumers; http://ec.europa.eu/dgs/health_consumer/index_en.htm
Documentation Sheets	Format of presenting complete metadata for ECHI shortlist indicators
ECDC	European Centre for Disease and Prevention Control; www.ecdc.europa.eu
ECHI	European Community Health Indicators
ECHI shortlist	A list of containing about 88 most essential European health indicators; soon available at http://www.echim.org/
ECHIM	European Community Health Indicators and Monitoring; http://www.echim.org/
EHES	European Health Examination Survey
EHIS	European Health Interview Survey
EHSS	European Health Survey System
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction; http://www.emcdda.europa.eu/
EUPHIX	DG Sanco funded project "European Public Health Information, Knowledge and Data Management System" (2004-2008); http://www.euphix.org/ (out-phasing soon)
EUROCISS	DG Sanco funded project "European Cardiovascular Indicators Surveillance Set" (2000-2008); http://www.cuore.iss.it/eurociss/en/project/project.asp
EU-SILC	European Statistics of Income and Living Conditions
FFQ	Food Frequency Questionnaire
HES	Health Examination Survey
HfA	WHO "Health for All" Database; http://data.euro.who.int/hfadb/
HIS	Health Interview Survey
HIS/HES database	Database comprising all European national HISs and HESs; https://hishes.iph.fgov.be
ICD (-revision Number)	International Statistical Classification of Diseases and Related Health Problems (10th Revision); http://apps.who.int/classifications/icd10/browse/2010/en
IDS	Indicator Data Sheet; format of presenting data and analysis, comparison and discussion of ECHI shortlist indicators (of the ECHIM Pilot Collection)
IH	Institute of Hygiene; Health Information Centre, Vilnius, Lithuania (Joint Action for ECHIM secretariat); http://sic.hi.lt/html/en/Ihic.htm

ISARE	DG Sanco funded project “Health Indicators in Europe’s Regions” (1999-2007), http://www.isare.org/
ISCED-97	International Standard Classification of Education; ISCED 1997; http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm
ISS	Istituto Superiore di Sanità, Italian National Institute of Public Health, Rome, Italy (Joint Action for ECHIM secretariat); http://www.iss.it/chis/?lang=2
Joint Action for ECHIM	DG Sanco funded project (also called ECHIM-2), running January 2009-June 2012; http://www.echim.org/
MINDFUL	DG Sanco funded project “Mental Health information and Determinants for the European level” (2004-2006); http://info.stakes.fi/mindful/EN/frontpage.htm
NIT	National Implementation Team
NUTS	Statistical regions of the European Union. There are three levels of **N**omenclature des **u**nités **t**erritoriales **s**tatistiques (fr.) defined
OECD	Organisation for Economic Co-Operation and Development; www.oecd.org
PHP	Public Health Programme of the European Commission’s DG Health & Consumers; currently 2008-2013
RIVM	National Institute for Public Health and the Environment, Bilthoven, The Netherlands (Joint Action for ECHIM secretariat); http://www.rivm.nl/English
RKI	Robert Koch Institute, Berlin, Germany (Joint Action for ECHIM secretariat); www.rki.de/EN
SES	Socio-Economic-Status
THL	National Institute for Health and Welfare, Helsinki, Finland (Joint Action for ECHIM main secretariat); http://www.thl.fi/en_US/web/en
WHO	World Health Organisation; http://www.who.int/en/