

# European health interview survey - methodology

Statistics Explained

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This background article explains the data from the [European health interview survey \(EHIS\)](#), a general population survey that provides information on health status, health determinants and [healthcare](#) activities in the [European Union \(EU\)](#).

The article provides information on the main features of these data, their historical development and current legal basis, some main methodological features, information concerning data quality and finally an overview of the uses of the data that come from this source.

This article is one of a set of background articles concerning the [methodology](#) for the production of health statistics in the EU and accompanies a number of statistical articles which make up an online publication on [health statistics](#).

## Main features

### Statistical objectives

The European health interview survey aims to provide statistical data — on a harmonised basis and with a high degree of comparability between the EU Member States — supporting the monitoring of health policies on social inclusion and protection, health inequalities, healthy lifestyles and healthy ageing.

### Scope of the data

EHIS covers three broad topics: health status (including disability-related concepts), health determinants — lifestyles and (use and limitations in access to) healthcare services.

EHIS targets the population aged at least 15 years and living in [private households](#). EHIS wave 3 is the latest data collection covering the following topics:

- Background variables on demography and socio economic status such as sex, age, household type, educational attainment level, main activity status, etc.
- Health status such as self-perceived health, chronic conditions, functional and activity limitations, disease specific morbidity, mental health, etc.
- Health care such as hospitalisation, consultations, unmet needs, use of medicines, preventive actions, etc.
- Health determinants such as height and weight, consumption of fruit and vegetables, smoking, alcohol consumption, etc.

## Development and legal basis

### Development and history

The European health interview survey was developed between 2003 and 2006. Its modules may be implemented nationally either as a single survey or as elements of existing surveys (such as national health interview surveys, labour force surveys or other household surveys).

The first wave of EHIS was conducted under a gentlemen's agreement in 17 EU Member States between 2006 and 2009. This first wave was driven by an input-harmonised approach with a model questionnaire, conceptual guidelines and a common translation protocol.

The development for the second wave of EHIS started with a review process of the first wave. This process was driven by an 18[0+2010] month project led by the Robert Koch Institute (RKI) – Germany, the Scientific Institute of Public Health (IPH) – Belgium and the National Institute for Health Development (NIHD) – Estonia. Over the period 2010-2012 detailed discussions were held by different European Statistical System (ESS) bodies such as the Core Group HIS (ESS-net sub-group in charge of health interview surveys), the Technical Group EHIS, the Public Health Working Group, and the Directors of Social Statistics. Finally, the Commission Regulation on the implementation of the second wave of EHIS was adopted in February 2013. The second wave of EHIS was conducted as a mandatory survey in all EU Member States, Iceland and Norway between 2013 and 2015<sup>1</sup>.

The work for EHIS wave 3 was launched by Eurostat in 2016 by a first draft of the new Commission Implementing Regulation. Over the period 2016 until 2018 detailed discussions and consultations were held by different European Statistical System (ESS) bodies including the Task Force EHIS (TF EHIS), the Technical Group Health Interview Surveys (TG HIS), the Public Health Working Group (PH WG), and the Group of the Directors of Social Statistics of the National Statistical Institutes<sup>2</sup>.

Finally, EHIS wave 4 is planned to be conducted in 2025 under Regulation (EU) 2019/1700 of the European Parliament and of the Council establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples (the Integrated European Social Statistics - IESS - Regulation), which foresees the periodicity of EHIS to change to 6 years.

## Legal basis

The first wave was conducted, as said before, on the basis of a gentlemen's agreement, in other words, without a legal obligation.

The second wave of EHIS was conducted in all EU Member States, as well as in Iceland and Norway during the period 2013–15 according to [Commission Regulation \(EU\) No 141/2013](#) and its subsequent amendment to take account of the accession of Croatia to the EU ( [Commission Regulation \(EU\) No 68/2014](#) ).

The EHIS wave 3 Regulation was endorsed by the European Statistical System Committee at its meeting in September 2017 and finally adopted by the European Commission on 19 February 2018 as [Commission Implementing Regulation \(EU\) No. 255/2018](#) .

## Methodology

The following refers to the implementation of the second and third waves of EHIS. Data for the third wave of EHIS have been partly disseminated at the time of publishing this article.

## Main sources

EHIS is implemented in each Member State or non-member country according to national practices: it can be conducted as a separate survey or incorporated into another, health or non-health survey. However, across the EU, the same list of variables is to be collected according to conceptual guidelines and a recommended common questionnaire.

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<sup>1</sup> [European Health Interview Survey \(EHIS wave 2\) - methodological manual](#)

<sup>2</sup> [European Health Interview Survey \(EHIS wave 3\) - methodological manual](#)

Data are collected using national questionnaires — which may sometimes comprise more questions than EHIS — and obtained through face-to-face interviews, telephone interviews, self-administered questionnaires, or by a combination of these means.

## Statistical units

The [statistical unit](#) is the individual.

## Main concepts and definitions

The tables below give an overview of the topics surveyed in the three waves of EHIS (it is indicated if the topic was included only in one of the three waves). Links to more detailed information is presented below under the heading further methodological information .

### Health status

This topic includes different dimensions of health status and health-related activity limitations:

#### Health care

General health status ( <a href="#">Minimum European health module</a> ): <a href="#">self-perceived health</a> , <a href="#">chronic morbidity</a> and <a href="#">activity limitation</a>
Disease-specific morbidity
Self-perceived oral health (wave 3)
Accidents and injuries
Health related absenteeism from work
Physical and sensory functional limitations (also cognitive limitations in wave 3)
Difficulties with personal care activities / Activities of daily living (such as eating and washing) and help received/needed
Difficulties with household activities / Instrumental activities of daily living (such as preparing meals and shopping) and help received/needed
Pain
Aspect of mental health (psychological distress and mental well-being in the first wave, depressive symptoms in the second wave)
Work-related health problems (only in the first wave)

This topic covers the use of different health care services, medicines, formal home care services, which are complemented by data on limitations in accessing the health care services:

#### Health determinants

Hospitalisation ( <a href="#">in-patient</a> and day care)
Consultations with doctors and dentists
Visits to specific non-medical health professionals (such as physiotherapists or psychologists)
Use of home care services
Use of medicines (prescribed and non-prescribed)
Healthcare preventive actions (such as influenza vaccination, breast examination, cervical smear test and blood tests)
Unmet needs for health care
Out-of-pocket payments for medical care (only in the first wave)
Satisfaction with services provided by healthcare providers (only in the first wave)
Visits to specific categories of alternative medicine practitioners (only in the first wave)

This topic includes various individual and environmental health determinants:

Similarly, EHIS wave 3 consists of 21 health-related sub-modules and the order of sub-modules is mainly based on

Height and weight
Physical activity
Consumption of fruits and vegetables
Drinking pure juice/sugar-sweetened soft drinks (only in wave 3)
Smoking behaviour and exposure to tobacco smoke (also use of e-cigarettes in wave 3)
Alcohol consumption
Social support
Provision of informal care or assistance (only in the second and third waves)
Illicit drug use (only in the first wave)
Environment (home and workplace exposures, criminality exposure) (only in the first wave)

the order used in EHIS waves 1 and 2. The term "module" refers to the set of sub-modules reflecting the three general public health areas: health status, health care use and health determinants. In general, the recommended order of modules, sub-modules and questions is given by the model questionnaire. For some questions the recommended order should be followed as it is crucial for comparability of observed data. For other questions it is recommended to follow the order of the questions in the questionnaire to ensure better comparability with the previous survey and between countries. Countries are also allowed to include additional questions in the specific sub-modules or even specific sub-modules in the survey if this does not have an impact on the results of the compulsory variables. In addition, a set of variables (called background variables) on demographic, geographical and socioeconomic characteristics of respondents is collected.

Overview of modules and sub-modules and their recommended order is as follows:

Concerning the variables composing the European Background Variables Module (EBVM): if the data are collected by interview then at least some of these variables should be collected at the beginning of the questionnaire (for example, age, sex and labour status as they also serve as filter for specific variables) and some should be collected at the end of the interview because of their sensitivity (for example, income).

The following rules concerning the order of some of the modules and sub-modules should be followed:

- EHSM before EHCM and EHDM
- Within EHSM:
  - HS shall be the first question set in EHSM
    - PL, PC and HA (in this sequence) after CD
- Within EHCM:
  - MD and PA after HO and AM
    - UN at the end of the module
- Within EHDM:
  - SS and IC at the end of the module (except if there are self-completion parts).

## Reference period

EHIS makes use of a variety of reference periods (the following refers to the second and third waves):

- Current period of time: some variables on health status and most variables on health determinants refer to the current (typical) situation;

Code	Name
EHSM	European Health Status Module
HS	Health Status - Minimum European Health Module
CD	Diseases and chronic conditions
AC	Accidents and injuries
AW	Absence from work (due to health problems)
PL	Functional limitations
PC	Personal care activities
HA	Household activities
PN	Pain
MH	Mental health
EHCM	European Health Care Module
HO	Use of inpatient and day care
AM	Use of ambulatory and home care
MD	Medicine use
PA	Preventive services
UN	Unmet needs for health care
EHDM	European Health Determinants Module
BM	Weight and height
PE	Physical activity / exercise
DH	Dietary habits
SK	Smoking
AL	Alcohol consumption
SS	Social support
IC	Provision of informal care or assistance

- One typical week: variables related to physical activity;
- Previous 2 weeks: variables related to medicine use and mental health;
- Previous 4 weeks: variables related to pain and frequency of consultations of health professionals;
- Previous 12 months: variables related to accidents and injuries, disease-specific [morbidity](#) , most variables on health care and alcohol consumption.

## Main classifications

EHIS makes use of the following international classifications:

- The regional codes are those from the classification of territorial units for statistics (NUTS) and the corresponding statistical regions for the EFTA and Enlargement countries;
- Educational attainment is compiled according to the 2011 version of the [international standard classification of education \(ISCED 2011\)](#) ;
- Occupation in employment uses the 2008 version of the international standard classification of occupations (ISCO-08);
- The economic sector in employment is collected according to the section level (one letter) of the 2008 version of the statistical classification of economic activities in the European Community (NACE Rev. 2).

## Further methodological information

A manual for planning and implementing the second and third waves of EHIS is available on the Eurostat website (see below). The first part of the manual includes conceptual guidelines, model questions and instructions for translation and interviewing. The second part deals with statistical survey guidelines.

Methodological information on the EHIS waves can be found here:

- [European Health Interview Survey \(EHIS wave 3\) — Methodological manual \(re-edition 2020\)](#)
- [European Health Interview Survey \(EHIS wave 2\) — Methodological manual - 2013 edition](#)
- [European Health Interview Survey \(EHIS\) Reference Metadata in Euro SDMX Metadata Structure \(ESMS\)](#)
- [EHIS data collection — surveys overview](#) (in relation to wave 1).

## Data quality

The data collection methods for this survey were prepared in detail in order to take into account the issues of comparability and of harmonisation between the EU Member States. As a basis for a high degree of comparability, a common questionnaire was proposed by Eurostat.

In practice, during the first wave of EHIS, the national surveys were conducted in different ways, for example in terms of the extent to which the common questionnaire was adapted and divergences from the standard coverage (reference population).

More information on the harmonisation of national questions with EHIS standard questionnaire for the first wave can be found in the [European Health Interview Survey \(EHIS\) Reference Metadata in Euro SDMX Metadata Structure \(ESMS\)](#) .

For the second wave, the same set of variables was collected across countries following the Commission Implementing Regulation on EHIS. However, in ten countries, national questionnaires comprised additional questions than those specified in the Commission Regulation, for national purposes. Most countries did not change the order of submodules or questions in their national questionnaires. More information on the modifications and adaptations applied at national level with reference to the EHIS standard questionnaire for the second wave as well as on other aspects of the national survey implementation can be found in the “ [Quality report of the second wave of the European Health Interview Survey \(2018 edition\)](#) ”.

For the third wave, further efforts for harmonization were made and the results showed a more homogenous implementation of the data collection. The assessment of wave 3 will be available in the last quarter of 2021.

## Data dissemination

### Published data

Statistical data are available on Eurobase, with a set of multi-dimensional [databases](#) and information in a simpler format as [main tables](#) .

Furthermore, microdata are available for scientific purposes and more information is provided [here](#) (specifically for EHIS [here](#) ).

Disseminated data are broken down by age and sex and one other dimension such as: educational attainment level, income quintile group or country of birth.

### Time and geographical coverage

The first wave of EHIS was carried out in the years and countries indicated below:

- 2006: Estonia and Austria
- 2007: Slovenia and Switzerland
- 2008: Belgium, Bulgaria, the Czech Republic, France, Cyprus, Latvia, Malta, Romania and Turkey
- 2009: Germany, Greece, Spain, Hungary, Poland and Slovakia.

Due to different time periods and to incomplete coverage reasons, no EU aggregates were calculated for the first wave of the EHIS.

The second wave of EHIS was implemented as follows:

- 2013: Belgium and the United Kingdom
- 2014: Bulgaria, the Czech Republic, Estonia, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland and Sweden
- 2015: Denmark, Germany, Ireland, Italy, Iceland and Norway.

The third wave of EHIS was conducted as follows:

- 2018: Belgium
- 2019: Bulgaria, Czechia, Denmark, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, Iceland, Norway, Serbia, Turkey and the United Kingdom
- 2020: Malta, Germany, Albania

### Units

All indicators are calculated in terms of percentages.

### Timing of data release

The data from the first wave of EHIS were disseminated at the latest in 2011. The dissemination of data concerning the second wave was finalised at the beginning of 2018 (few datasets were disseminated in 2020 to answer the new policy needs in relation to long-term care). For EHIS wave 3, all EU microdata files as well as most of the national quality reports were submitted by mid-2021. The data dissemination of the EHIS wave 3 is planned for the second half of 2021.

## See also

### Online publications

- [Health in the European Union – facts and figures](#)
- [Disability statistics](#)

### Statistical articles using data from the European health interview survey

- [Self-perceived health](#)
- [Long-term care statistics](#)
- [Population with disability](#)
- [Cardiovascular diseases](#)
- [Specific cancers](#)
- [Respiratory diseases](#)
- [Mental health and related issues](#)
- [Accidents and injuries](#)
- [Overweight and obesity](#)
- [Consultations](#)
- [Cancer screening statistics](#)
- [Medicine use](#)

### General health statistics articles

- [Health statistics introduced](#)

## Database

- [Health \(hlth\)](#) , see:

Health status (hlth\_state)

Health determinants (hlth\_det)

Health care (hlth\_care)

## Dedicated section

- [Health](#)

## Methodology

- [European health interview survey \(EHIS\)](#) (ESMS metadata file — hlth\_det\_esms)

## External links

- [European Commission — Directorate-General for Health and Food Safety — Public health — Indicators](#)
- [European Commission — Directorate-General for Health and Food Safety — Public health — ECHI — European Core Health Indicators](#)
- [European Commission — Directorate-General for Employment, Social Affairs and Inclusion — Social protection and social inclusion — EU social indicators](#)

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