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European Health Interview Survey wave 4

Methodological manual

2024 edition

MANUALS AND GUIDELINES

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Preface

Public health policies need reliable data on health status, health care use and health determinants from population surveys for all Member States. The European Health Interview Survey (EHIS) is the instrument to collect such information. The first wave of EHIS level was launched under a gentlemen's agreement and implemented in 17 EU Member States ([1]) between 2006 and 2009.

The second wave of EHIS was conducted in all EU Member States, Iceland, Norway and Turkey between 2013 and 2015 under Regulation 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 ([2]), complemented by Commission Implementing Regulation (EU) No 141/2013 ([3]) as regards statistics based on the European Health Interview Survey. More details for EHIS wave 2 were provided in the methodological manual ([4]) to achieve a high level of comparability of the survey results across countries.

The third wave of EHIS was also conducted under the Framework regulation above, the reference year being 2019. All Member States participated in the EHIS wave 3 in accordance with the Commission Regulation (EU) No. 2018/255 ([5]), as well as Iceland, Norway, Serbia, Turkey and Albania. A derogation regarding the data collection period was granted for some countries: the data collection period was 2018 for Belgium, 2018-2020 for Austria and Germany, and 2019-2020 for Malta.

The work for EHIS wave 4 was launched in Eurostat in 2022 when a first draft of the new legal acts were discussed by a dedicated task force. Over the 2022-2023 period, detailed discussions and consultations were held by different European Statistical System (ESS) bodies including the Task Force EHIS (TF EHIS), the Public Health Working Group (PH WG), and the Group of the Directors of Social Statistics of the National Statistical Institutes. The EHIS wave 4 Implementing regulation was endorsed by the European Statistical System Committee at its meeting in October 2023 and finally adopted by the European Commission on 17 November 2023 ([6]).

Eurostat would like to thank warmly all those who have contributed to the elaboration of this EHIS wave 4 methodological manual. We would like to mention the experts from national statistical offices and similar national authorities, but also the involved colleagues from DG SANTE and DG EMPL who supported the work of our team.

Anne Clemenceau,

Head of Eurostat Unit F4, Income and living conditions; quality of life.

([1]) Belgium, Bulgaria, Czechia, Germany, Estonia, Greece, Spain, France, Cyprus, Latvia, Hungary, Malta, Austria, Poland, Romania, Slovenia and Slovakia

([2]) Regulation 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

([3]) Commission Regulation (EU) 141/2013 of 19 February 2013 as regards statistics based on the European Health Interview Survey (EHIS)

([4]) European Health Interview Survey (EHIS wave 2). Methodological manual

([5]) Commission Regulation (EU) 2018/255 of 19 February 2018 as regards statistics based on the European Health Interview Survey (EHIS)

([6]) Commission Implementing Regulation (EU) 2023/2529 of 17 November 2023 specifying the technical items of the data set, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey in the health domain pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council

Introduction

Purpose of the manual

The manual should serve as a handbook for planning and implementing EHIS wave 4 in EU and EEA member states. Conducting the survey according to the rules and recommendations described in these guidelines is crucial for ensuring harmonized and high-quality data on health in the EU/ EEA.

The manual is split into two main parts. The first part includes conceptual guidelines, translation and interview instructions for all modules, sub-modules and variables (including model questions). The second part deals with statistical survey guidelines.

Instructions on data processing (including a codebook and validation rules) and its transmission to Eurostat as well as the format for quality reporting (a quality report template) are provided in separate documents.

No specific information on fieldwork organization (for example recruitment and training of interviewers or procedure of contacting interviewees) is provided in this document.

Legal basis

The new legal framework for conducting the European Health Interview Survey (EHIS) is the EU regulation 2019/1700 establishing a common framework for European statistics relating to persons and households (IESS regulation) ([7]). This framework regulation specifies the following topics for the health domain: health status and disability, access to and availability and use of health care and health determinants.

Detailed specification of the data and metadata to be provided is pursuant to the Commission Implementing Regulation (EU) No. 2023/2529 ([8]) of 17 November 2023 specifying the technical items of the data set, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey in the health domain pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council and Commission Delegated Regulation (EU) 2024/297 of 31 October 2023 supplementing Regulation (EU) 2019/1700 of the European Parliament and of the Council by specifying the number and the titles of the variables for the health domain ([9]).

Member States and other implementing countries are invited to follow the guidelines presented in this paper in preparing the 2025 wave.

([7]) Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples

([8]) Commission Implementing Regulation (EU) 2023/2529 of 17 November 2023 specifying the technical items of the data set, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey in the health domain

([9]) Commission Delegated Regulation (EU) 2024/297 of 31 October 2023 supplementing Regulation (EU) 2019/1700 of the European Parliament and of the Council by specifying the number and the titles of the variables for the health domain

1 Conceptual guidelines, translation and interview instructions

This document provides a guide to a comprehensive and conclusive understanding of European Health Interview Survey (EHIS) variables and the translation and use of the English EHIS model questionnaire. True comparability of the collected EHIS data between countries requires not simply a direct translation of the English but a full understanding of the definitions of the variables, the wording and format of the questions and the underlying concept of health to be elicited.

The document provides first some general information on the translation protocol, the order of the questions, the recommended list of showcards and the structure of specific guidelines for health modules. It is followed by detailed guidelines on all the health variables (including model questions). For the standardised key social variables, countries are invited to follow the implementing guidelines ([10]) that were presented to the Directors of Social Statistics in their May 2020 meeting.

The complete model questionnaire for EHIS wave 4 is included in annex 1.

1.1. General guidelines and instructions

1.1.1. Translation protocol

In general, the EHIS variables and associated English model questions were developed simultaneously. Experience shows that the implementation of the national questionnaires might hamper comparability if no specific translation method is used. The following protocol for translation into other languages is recommended by Eurostat for developing national linguistic versions of the model questionnaire:

1. Initial translation: a translator working in the health/ social statistics field, understanding the health concepts used and having the target language as mother tongue and English as working language is supposed to perform the initial translation.
2. Reviewing of the initial translation: a checker with the same characteristics as the translator checks the initial translation making use of the interviewer's guidelines/ Conceptual guidelines and instructions.
3. Final translation: the checker's views and the initial translation are brought together in a final translation. If they don't agree, a third expert is solicited to take a decision or lead the adjudication process.

It is also important to take note of the EHIS Commission Regulation which is adopted in all linguistic versions. This regulation contains the wordings of the variables and the answer categories in all languages and was reviewed by the national health interview survey experts.

([10]) Standardised key social variables. Implementing guidelines

The model questionnaire is designed for a face-to-face interview mode (Interviewer-PAPI and CAPI). Because several other survey modes like computer-assisted telephone interviews (CATI), computer-assisted web-based interviews (CAWI), self-completion mode as well as mixed-mode designs will be applied by the responsible national authorities, adaptations of the model questionnaire to the requirements of a specific survey mode may be necessary.

If a specific model question cannot be translated directly to a specific target language (that is if a model question does not perform in a specific target language due to cultural differences or different organization of health care services), further modification of the model question may also be needed.

All these adaptations can be introduced under the condition that the underlying concept (or concepts) of the original model question is completely applied and covered by a modified question and that the variable derived from the modified question completely corresponds to the target variable in the Regulation.

All modifications or adaptations shall be explained and documented in the national quality report.

Some sub-modules are based or adapted from existing instruments (as for example, PHQ-9). If there are national translations of these source instruments they are recommended to be used.

Countries sharing the same language are recommended to coordinate the translation process to obtain the same questionnaire as far as possible considering the linguistic and cultural differences.

Cognitive testing is recommended to verify the quality of the translation.

Brief but important notes are given after the English version of the question. These notes should also be translated into national languages and used in the implementation of the survey.

1.1.2. The order of the questions

The term "sub-module" refers to a coherent set of one or more questions included in the survey questionnaire and aiming to investigate a specific subject matter. EHIS wave 4 consists of 24 health-related sub-modules.

The term "module" refers to the set of sub-modules reflecting the three main public health areas: health status, health care use and health determinants ([11]).

In general, the recommended order of modules, sub-modules and questions is given by the model questionnaire (see annex). 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.

Overview of modules and sub-modules and their recommended order ([12]) is as follows:

Code	Name
EHSM	**European Health Status Module**
HS	Health Status–Minimum European Health Module
CD	Diseases and chronic conditions
AC	Accidents and injuries
AW	Temporary limitation in activity (due to health problems)
PN	Pain
MH	Mental health, including addictions – PHQ instrument

([11]) In addition, a set of variables (called background variables) on demographic, geographical and socioeconomic characteristics of respondents or their families is collected (they are known as standardised key social variables.

([12]) The order of sub-modules is mainly the one used in previous waves.

Code	Name
PL	Functional limitations
PC	Difficulties in personal care activities
HA	Difficulties in household activities
BA	Barriers to participation in specific life domains
MH	Mental health, including addictions – WHO5 instrument
EHCM	**European Health Care Module**
HO	Use of inpatient and day care
AM	Use of ambulatory
LT	Use of long-term services
MD	Medicine use
PA	Preventive care
UN	Unmet needs for health care
EHDM	**European Health Determinants Module**
BM	Weight and height
PE	Physical activity
DH	Nutritional habits
SK	Smoking
AL	Alcohol consumption
SS	Social support
IC	Provision of informal care or assistance
SU	Suicide

Concerning the variables on 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 (for example age, sex and labour status serve as those serve also as filter 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
  - PHQ-8 and WHO5 instruments should not be consecutive
- Within EHCM:
  - MD and PA after HO and AM
  - UN at the end of the module
- Within EHDM:
  - SS, IC and SU at the end of the module (except if there are self-completion parts).

1.1.3. A list of showcards

Showcards are generally used in face-to-face surveys for closed questions and provide the response categories from which the respondent can choose the most appropriate option(s). The main use of showcards is to allow the respondent to read through the response option categories at their own pace, repetitively if necessary, so that they can evaluate and consider all options adequately. Showcards can also be used for the delivery of sensitive questions, or to illustrate or help define what is asked about in the question.

The following list of showcards is recommended to be used for face-to-face interview mode:

- CD1: A list of diseases and chronic conditions
- PL: Response categories for difficulties in basic actions
- PC: A list of personal care activities
- HA: A list of household activities
- BA: Response categories showing the level of difficulty (BA1, BA2, BA3, BA5 and BA7)
- BA: A list of reasons for the optional variables BA4 and BA6 respectively
- PN: Response categories for PN1 question
- PN: Response categories for PN2 question
- MH1: Answer categories for MH1 questions (mental health)
- MH2: Answer categories for MH2 questions (mental health)
- LT3: Categories showing the hour bands
- UN2B: A list of reasons for unmet need for mental healthcare
- PE: SHOWCARD 1: Work-related physical activity
- PE: SHOWCARD 2: Getting to and from places
- PE: SHOWCARD 3: Sports, fitness, recreational (leisure) physical activity
- PE: SHOWCARD 4: Muscle-strengthening activities
- DH: Examples of fruits and standard portions
- DH: Examples of vegetables and standard portions
- DH: Examples of sugar-sweetened soft drinks
- DH: Examples of red meat
- DH: Examples of processed meat products
- AL: Country-specific standard drinks and containers
- AL: Response categories for AL1
- AL: Response categories for AL3 and AL5
- AL: Response categories for AL6
- IC: Categories showing the hour bands

1.1.4. Structure of the specific guidelines for the health modules and variables

Specific guidelines are defined according to the hierarchy of the model questionnaire: modules, sub-modules and individual variables. A short description and rationale are provided for each sub-module. For some sub-modules general guidelines or definitions relating to the whole sub-module are provided. The rest of the guidelines concern individual variables and follows the same structure:

Introduction: A statement used to facilitate introduction of the new question or set of questions.

Filter: An instruction to interviewers to facilitate correct conducting of the interview when asking question(s) only to a specific group of respondents or routing respondents to following questions based on their previous answers.

Code name and title of the variable: according to the EHIS Implementing regulation.

1) Question: Wording of the model question.

Some questions include wordings in brackets:

- Parentheses ( ):
- a) Synonyms (for example: "Myocardial infarction" and "heart attack") and explanations of abbreviations ("GP" and "General practitioner"). The text doesn't have to be read in case of personal interviews (but can if needed) but may be useful to put in the questionnaire for self-completion mode.
- b) Clarifications or specifications (for example, "including both work outside the home and housework"; or "Asthma" and "allergic asthma included"). The text is part of the question and is supposed to be read in case of personal interview and be part of a question in case of self-completion mode.
- Square brackets [ ]:
- Where optional wording is requested based on previous content (using singular or plural) or a place for country-specific adaptations ("[6 or more] drinks containing alcohol"). The text is part of the question but should be adapted according to the context.

Answer categories: Wording and codes for possible answers for the question. Besides these answer categories, other codes are to be used but are not mentioned in the further descriptions of questions/variables:

- "-1" for missing values (don't know, refusal);
- "-2" for not applicable questions (filter); and
- "-3" for the use of proxy answers (only for certain variables)
- "-4" for the optional variables when not included in the questionnaire

The order of response categories is important in many cases and should therefore be followed.

Interviewer instructions: Instructions of a technical kind facilitating correct formulation of the question, routing or recording of answers. The instructions are not to be read to respondents if not stated else.

Interviewer clarifications: An addition to the model question that facilitates and clarifies the content of the question. It is to be read to respondent if not stated else.

2)Guidelines:

- **General concept**: A short description of the variable.
- **Policy relevance**: A reference to policy needs is provided here. Most of the considered needs come from DG SANTE (European Core Health Indicators – ECHI ([13]), State of Health in the EU ([14])) and DG EMPL (indicators of the health and long-term care within the Open Method of Coordination (OMC) on Social Inclusion and Social Protection).
- **Use of proxy**: States whether a proxy interview (i.e., when another person responds on behalf of the selected respondent) is allowed for the variable. Proxy interviews are not allowed in cases when the question is very subjective, the topic is too sensitive or data is probably less known to proxy interviewees.
- **Comparability with EHIS wave 3**: Provides an evaluation of comparability of the variable in EHIS wave 4 with EHIS wave 3 using the scale: "identical question"; "slight revision of question", "strong revision of question", or "none: new question in EHIS wave 4".
- **Definitions and examples**: Definitions and clarifications of concepts included in the variable/model question (exclusion and inclusion criteria, reference to international classifications) as well as examples to facilitate its understanding. Further instructions for translators (for example adaptations of the model question) and interviewers (for example, correct recording of answers) are also included here. A reference to showcards is given for some variables.

1.2. European Health Status Module (EHSM)

The module on health status is a central point of the survey. It allows measurement of the health status of the population in general and not only in relation with specific health problems. It covers different aspects and dimensions of health: physical and mental health, chronic and temporary problems, specific conditions but also their general impact on the functional status and the limitations in activities of daily living of the respondents.

([13]) ECHI–European Core Health Indicators

([14]) State of Health in the EU

1.2.1. Health Status (HS)–Minimum European Health Module

The following three general questions on self-perceived health, chronic conditions and activity limitations constitute the Minimum European Health Module (MEHM). All three questions of the MEHM should be asked in the recommended order and with no inclusion of any other health status related questions before or between the MEHM questions as it could have an impact on the results. Similarly, no filter should be included. The indicators calculated from the data are given high importance in EU health policies and monitoring of health state of populations. The variables HS1, HS2 and HS3 of the MEHM are also used as standardised key social variables in other social surveys (EU-SILC, EU-LFS, HETUS, etc.).

Introduction HS:

I would now like to talk to you about your health.

HS1: Self-perceived general health

1) Question

How is your health in general? Is it …

1. very good
2. good
3. fair
4. bad
5. very bad?

2) Guidelines

- **General concept**: Self-perceived general health.
- **Policy relevance:** ECHI 33, OMC HC-S2 ([15]), State of Health in the EU ([16]).
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The **concept, by its very nature subjective**, is restricted to an assessment coming from the individual and not from anyone outside that individual, whether an interviewer, healthcare professional or relative. Self-perceived health might be influenced by impressions or opinions from others but is the result after these impressions have been processed by the individual relative to his/her own beliefs and attitudes.

The reference is to **health in general** rather than the present state of health, as the question is not intended to measure temporary health problems.

It is expected to include the **different dimensions of health**, i.e., physical, social and emotional functioning (covering psychological well-being and mental disorders) and biomedical signs and symptoms. It omits any reference to age as respondents are not specifically asked to compare their health with others of the same age or with their own previous or future health state.

The reference question is recommended by the World Health Organization (WHO). Five answer categories are proposed. Two of them ('very good' and 'good') are at the upper end of the scale and other two ('bad' and 'very bad') are at the lower end. "**Fair**": this intermediate category represents a neutral/ middle position and should be translated into an appropriately neutral term like "neither good nor bad" or "moderate", as far as possible keeping in mind cultural interpretations in different countries. In a self-completion questionnaire, the bracket ["neither good nor bad"] or ["moderate"] should be included here. In an interview mode, all possible answer categories should systematically be read to respondents.

([15]) Open Method of Coordination (OMC) on Social Inclusion and Social Protection

([16]) European Commission: DG Health and Food Safety: State of Health in the EU: The two-year State of Health in the EU cycle

HS2: Long-standing health problem

1) Question

Do you have any long-standing illness or [long-standing] health problem? Longstanding means illnesses or health problems which have lasted, or are expected to last, for 6 months or more.

1. Yes
2. No

2) Guidelines

- **General concept**: Self-reported long-standing illnesses and longstanding health problems.
- **Policy relevance:** ECHI 34, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

The **concept of long-standing illnesses and long-standing health problems is subjective**. The notion is restricted to an assessment coming from the individual and as far as possible not from anyone else, whether an interviewer, healthcare professional or relative.

Health problems cover different physical, emotional, behavioural and mental dimensions of health and besides diseases and disorders contain also for example pain, ill-health caused by accidents and injuries, congenital conditions.

The main characteristics of a **long-standing illness/ chronic condition** is that it is permanent and may be expected to require a long period of supervision, observation or care.

Long-standing illnesses or health problems should have lasted (or recurred) or are expected to last (recur) for **6 months or more**; therefore, temporary problems are not of interest. Problems that are seasonal or intermittent, even where they "flare up" for four to six months at a time are included (for instance allergies).

It is irrelevant whether the health problem is **diagnosed** by a medical doctor or not.

Two answer categories are proposed: '**yes'** referring to the occurrence of one or more long-standing/chronic health problems and '**no'** referring to the absence of any long-standing/chronic health problem as perceived by the respondent.

In case the respondent has/ had a longstanding disease that doesn't/ didn't bother him/ her and/ or it is/ was kept under control with medication (for instance, for a person with a high blood pressure), answer "**Yes**" must be marked.

As regards the implementation of the reference question, it is necessary to keep in mind that the recommended wording contains "**alternatives**". For instance:

- "chronic" or "**long-standing**" should be chosen according to what is "best understood" in a country/ language;
- it is intended to ask if people "**have**" a chronic condition, not if they really suffer from it. But it seems that in some countries/ languages it would be strange to use the word "have" and that the verb "suffer" means the same as "have";
- "**health problem**" seems not to be understood in some countries/ languages and therefore "illness or condition" is the alternative.
- **"health"** refers to the general condition of the body or mind with reference to soundness, vitality, and freedom from disease. **"Problem"** refers to the respondent's perception of a departure from physical, mental or emotional well-being. This includes specific health problems such as a disease or chronic condition, a missing limb or organ or any type of impairment or physical or psychological symptoms. It also includes more of vague disorders not always thought of as health-related such as senility, depression, developmental delay or intellectual impairment, drug dependency, accidental injuries, etc. ([17]).

In this question the words "disability, handicap, impairment" should not be used as synonyms for "**illness or health problem**", though.

([17]) Washington Group on Disability Statistics

Rather than adding further details to the question wording, interviewees should be instructed to be as inclusive as possible when considering the actual prevalence of a long-standing health problem. This means that the following could be considered as long-standing health problems (i.e. the corresponding answer category would be 'yes'):

- problems that are seasonal or intermittent, even where they 'flare up' for less than six months at a time (for instance allergies);
- chronic problems not considered by the respondent as very serious; severity doesn't play a role in this variable;
- problems that have not been diagnosed by a doctor (to exclude these would mean permitting those with better access to medical services to declare more problems);
- a long-standing disease that doesn't bother the respondent and/or is kept under control with medication (for instance people with a high blood pressure);
- not only problems of ill-health or diseases but also pain as well as ill-health caused by accidents and injuries, congenital conditions, birth defects, etc.

Specification of the concepts presented above or stating concrete examples of diseases or chronic conditions in the question should be avoided.

HS2 shall be asked just after HS1 and just before HS3 and should not be used as a filter question for HS3 or the CD sub-module.

HS3: Limitation in activities because of health problems

1) Question

HS3A. Are you limited because of a health problem in activities people usually do? Would you say you are …

1. severely limited
2. limited but not severely, or
3. not limited at all?

FILTER

Interviewer: Next question HS3B is to be asked only for respondents having replied "severely limited" or "limited but not severely" (codes 1 or 2 in HS3A).

HS3B. Have you been limited for at least the past 6 months?

1. Yes
2. No

2) Guidelines

- **General concept**: The variable reports on participation restriction through long-standing limitation (6 months or more) in activities that people usually do because of health problems, and its severity.
- **Policy relevance:** ECHI 35, OMC HC-S1, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** same routed question as in wave 3.

The purpose of the variable is to measure the presence of long-standing limitations, as the consequences of such long-standing limitations (e.g., care, dependency) are more serious. A six-month period is often used to define **chronic or long-standing diseases** in surveys, while temporary or short-term limitations are excluded.

The variable measures the **respondent's self-assessment** of whether she/ he is hampered in "activities people usually do", by any on-going physical, mental or emotional health problem, illness or disability. As for HS2 consequences of injuries/ accidents, congenital conditions and birth defects, etc. shall be covered.

"At least the past 6 months": the time period refers to the duration of the activity limitation and not to the duration of the health problem. The limitations must have started at least six 6 months ago and must still exist at the moment of the interview. This means that a positive answer (codes 1 or 2) should be recorded only if the person is currently limited and has been limited in activities for at least the past 6 months.

New limitations which have not yet lasted 6 months but are expected to continue for more than 6 months shall not be taken into consideration, even if usual medical knowledge would suggest that the health problem behind a new limitation is very likely to continue for a long time or for the rest of life of the respondent (such as for diabetes type 1).

One reason is that in terms of activity limitations it may be possible to counteract at some point negative consequences for activity limitations by using assisting devices or personal assistance. So, for the consequences it is a matter of experience from the individual, whether his or her limitation (e.g., diabetes) will have disabling consequences. **Only past experience** can provide the answer.

Only the limitations **directly caused by one or more *health* problems** of whatever type are considered. Limitations due to financial, cultural or other not health-related causes should not be taken into account.

An "**activity"** is defined as: "the performance of a task or action by an individual" and thus activity limitations are defined as "the difficulties the individual experience in performing an activity".

In "**activities people usually do"**: the question should clearly show that the reference is to the activities *people* usually do and *not to the own activities*. People with longstanding limitations due to health problems have passed through a process of adaptation which may have resulted in a reduction of their activities. To identify existing limitations a reference is necessary and therefore the activity limitations are assessed against a generally accepted population standard, relative to cultural and social expectations by referring only to activities people usually do.

Usual activities cover all spectrums of activities: work or school, home and leisure activities, but neither a list with examples of activities people usually do nor a reference to the age group of the subject is included in the question. This is a self-perceived health question and it gives no restrictions by culture, age, gender or the person's own ambition.

The **response categories** include three levels to better differentiate the severity of activity limitations. "Severely limited" (severe limitations) means that performing or accomplish an activity that people usually do can hardly be done or only with extreme difficulty and that this situation has been ongoing for at least the past 6 months. Persons in this category usually cannot do the activity alone and would need further help from other people.

'Limited but not severely' means that performing or accomplishing a usual activity can be done but only with some difficulties, and that this situation has been ongoing for at least the past 6 months. Persons in this category usually do not need help from other persons. When help is provided it is usually less often than daily.

'Not limited at all' means that performing or accomplishing usual activities can be done without any difficulties, or that any possible activity limitation has NOT been going on for at least the past 6 months (i.e., it is not a long-standing limitation).

Persons with recurring or fluctuating health conditions should refer to the most common (most frequent) situation impacting their usual activities. People with conditions where several activity domains are affected but to different extent (less impact in some domains but more impact in some other domains) should make an overall evaluation of their situation and prioritize more common activities.

HS3 should be asked to all respondents just after HS2 and should not be filtered by HS2. In an interview mode, all possible answer categories should systematically be read to respondents.

1.2.2. Diseases and chronic conditions (CD)

Chronic diseases or chronic conditions represent one of the main public health concerns. They are, in fact, a major cause of use of health care services and their treatments are often very expensive. Measuring chronic morbidity, both the extent of the phenomenon and the types of diseases, is useful for overall evaluations in the domain of health status. It is also useful for the study of health care systems in terms of evaluation, policy formulation and assessment of need for health care.

The following sub-module measuring chronic diseases and conditions also includes one question on general oral health (CD2). The position of CD2 could also be changed, e.g., after CD1. Inequalities of oral health mirror those in general health. Oral health affects people both physically and psychologically, and in a number of different ways (Sheiham, A., 2005).

Introduction CD2

Next question is about the health of your teeth and gums.

CD2: Self-perceived general oral health

1) Question

How would you describe the state of your teeth and gums?
Would you say it is … [read response categories]

1. very good
2. good
3. fair
4. bad
5. very bad?

2) Guidelines

- **General concept**: Self-perceived general oral health, i.e., teeth and gums.
- **Policy relevance:** Oral health status, (Planning of) health care resources and health care cost; health inequalities (including accessibility of care); (preventable) burden of disease.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

The concept of self-perceived general oral health is **subjective**. The notion is restricted to an assessment coming from the individual and as far as possible not from anyone else. So, proxy interview should not be allowed here.

The question on self-perceived general oral health asks for the state of teeth and gums in one question.

A respondent should **also take into account his/her denture or implants** when answering the question. His/her answer should include an assessment of (natural or false) teeth and gums.

The **question could be sensitive** as some people would feel embarrassed to admit a bad condition of their teeth; a way to deal with this is to put the question in the self-completion form.

Self-perceived general oral health (CD2) could be **interpreted together** with the questions of "Difficulty biting and chewing on hard foods (PL9)" and "Visit of a dentist or an orthodontist" (AM1).

"**Fair**": this intermediate category represents a neutral/ middle position and should be translated into an appropriately neutral term like "neither good nor bad" or "moderate", as far as possible keeping in mind cultural interpretations in different countries. In a self-completion questionnaire, the bracket ["neither good nor bad"] or ["moderate"] should be included here.

Introduction CD1

Here is a list of chronic diseases or conditions.

CD1: Having [specific disease] in the past 12 months

1) Question

During the past 12 months, have you had any of the following diseases or conditions?

1. Yes
2. No

Interviewer instruction: Tick "Yes" or "No" for each chronic disease.

A. Asthma (allergic asthma included)
B. Chronic bronchitis, chronic obstructive pulmonary disease, emphysema
C. A myocardial infarction (heart attack) or chronic consequences of myocardial infarction
D. A coronary heart disease or angina pectoris
E. High blood pressure
F. A stroke (cerebral haemorrhage, cerebral ischaemia[18]) or chronic consequences of stroke
G. Arthrosis (arthritis excluded)
H. A low back disorder or other chronic back defect ([19])
I. A neck disorder or other chronic neck defect
J. Diabetes
K. An allergy, such as rhinitis, hay fever, eye inflammation, dermatitis, food allergy or other allergy (allergic asthma excluded)
M. Urinary incontinence, problems in controlling the bladder
N. Kidney problems
O. Depression
P. High blood lipids
R. Cancer

2) Guidelines

- **General concept**: whether the person has or had the specific chronic disease or condition in the past 12 months.
- **Policy relevance:** ECHI21(A), ECHI23(A), ECHI24, ECHI25, ECHI26(A), ECHI27(A), ECHI43, State of Health in the EU; the listed diseases which are not specified in the ECHI indicators (e.g., arthrosis, back and neck disorders, allergies, incontinence, kidney problems, high cholesterol) are of importance as they may lead to major disabling consequences.
- **Use of proxy interview**: allowed (for some diseases like urinary incontinence or depression the answers may be biased and the use of the data is therefore limited).
- **Comparability with EHIS wave 3:**
  a) for conditions A to P identical question but condition L (cirrhosis) was removed;
  b) for condition R: none: new question in EHIS wave 4.

The **purpose of the question** is to monitor the prevalence of selected chronic (longstanding/ long term) diseases.

It is intended to ask if people **"*have*" a chronic condition**, not if they really suffer from it. But it seems that in some countries/ languages it would be strange to use the word "have" and that the verb "suffer" means the same as "have".

([18]) Strokes can be haemorrhagic or ischaemic; cerebral ischaemia can be caused by cerebral thrombosis.

([19]) See for point H in particular the "Descriptions and comments on the specific diseases" below according to ICD-10 codes and ICPC codes. Please include medical conditions of dorsalgia, lumbago and sciatica under "low back disorder and or other chronic back defect" in question CD1H.

ICD-10 ([20]) (resp. **ICPC** ([21])) **codes** are not specified in the questions and are only illustrative as no perfect matching between ICD (resp. ICPC) and questions in the health interview survey is possible. They are used to facilitate common understanding and translation only. Therefore, the ICD-10 (resp. ICPC) codes should not be used for presenting the results.

The past 12 months are taken into consideration from the date of the interview (e.g., the time between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

If a person had a disease/ condition for few months and this happened within the past 12 months, then answer "Yes" should be used. Problems which are **seasonal or intermittent**, even where they "flare up" for a few months are included, as they occurred during the past 12 months. If a person had an episode of a disease/ condition more than 12 month ago, then answer "No" should be used.

If the symptoms of a disease/ condition are **not present** due to a medical treatment or the use of medicines, the answer is still "Yes".

Pre-testing for the new question on "cholesterol" resulted in the formulation of the question as follows: "During the past 12 months, have you had **high cholesterol, high blood lipids or triglycerides in the past 12 months?"** Respondents were uncertain on one or more than one of the terms "high cholesterol", "high blood lipids" or "triglycerides"; almost nobody knew the term "hyperlipidemia". In consequence, it is proposed to use all the three more known expressions ("high cholesterol", "high blood lipids" or "triglycerides") as synonyms.

Descriptions and comments on the specific diseases:

	Chronic disease or condition	Explanations and comments	Illustrative ICD-10 ([22]) codes	Illustrative ICPC ([23]) v41 codes
A	Asthma (allergic asthma included)		J45 (Asthma), J46 (Status asthmaticus)	R96 Asthma
B	Chronic bronchitis, chronic obstructive pulmonary disease, emphysema	COPD need adaptation for local expression/ language Option: "chronic respiratory diseases excluding asthma"	J40-J44 and J47 (Chronic lower respiratory diseases excluding asthma but including chronic asthmatic bronchitis)	R79 Chronic bronchitis, R95 Chronic obstructive pulmonary disease
C	Myocardial infarction (heart attack) or chronic consequences of myocardial infarction	Includes also chronic consequences of an MI if the consequences occurred in the past 12 months (even if the MI occurred before) Heart attack can be used as an equivalent term The variable should not be filtered by "Coronary heart disease or angina pectoris" variable	I21 (Acute myocardial infarction), I22 (Subsequent myocardial infarction), I23 (Certain current complications following AMI), (consequences of former MI included partly also under I25 – "Chronic ischaemic heart disease")	K75 Acute myocardial infarction

([20]) International Statistical Classification of Diseases and Related Health Problems 10th Revision

([21]) International Classification of Primary Care

([22]) International Statistical Classification of Diseases and Related Health Problems 10th Revision

([23]) International Classification of Primary Care

	Chronic disease or condition	Explanations and comments	Illustrative ICD-10 ([22]) codes	Illustrative ICPC ([23]) v41 codes
D	Coronary heart disease or angina pectoris	A hint to respondent: "heart-related chest pain" (Adapted from: WHO, World Health Survey) All Ischaemic heart diseases should be included The variable should not be used as filter for "Myocardial infarction (heart attack) or chronic consequences of myocardial infarction" variable	I20-I25 (Ischaemic heart diseases)	K74 Ischaemic heart disease with angina K75 Acute myocardial infarction K76 Ischaemic heart disease without angina
E	High blood pressure (hypertension)	High blood pressure (hypertension) occurs when the systolic blood pressure is consistently over 140 mm Hg or the diastolic blood pressure is consistently over 90 mm Hg	I10-I13 and I15 (Hypertensive diseases)	K86 Hypertension uncomplicated, K87 Hypertension complicated
F	Stroke (cerebral haemorrhage, cerebral ischaemia) or chronic consequences of stroke	Includes also chronic consequences of a stroke if the consequences occurred in the past 12 months (even if the stroke occurred before)	I60-I69 (Cerebrovascular diseases)	K90 Stroke/ cerebrovascular accident, K91 Cerebrovascular disease
G	Arthrosis (arthritis excluded)	Arthrosis = non-inflammatory disease of the joints which destroys cartilage. Usually only affects the joints Arthritis = inflammation of joints which destroys cartilage. Symptoms can be felt throughout the entire body (Adapted from: http://www.rheumatoidarthritis.com/) Vertebral arthrosis is included even if there may be overlap in responses on "Low back disorder or other chronic back defect" and "Neck disorder or other chronic neck defect"	M15-M19 (Arthrosis)	Osteoarthrosis of hip, of knee and of other (L89-L91)

	Chronic disease or condition	Explanations and comments	Illustrative ICD-10 ([22]) codes	Illustrative ICPC ([23]) v41 codes
H	Low back disorder or other chronic back defect		No specific ICD-10 codes can be used but the condition is included under some M40-M54 (Dorsopathies) diagnosis (excluding M45–Ankylosing spondylitis and M50–Cervical disc disorders)	Back symptom/ complaint (L02), Low back symptom/ complaint (L03), Back syndrome without radiating pain (L84), Acquired deformity of spine (L85), Back syndrome with radiating pain (L86)
I	Neck disorder or other chronic neck defect		No specific ICD-10 codes can be used but the condition is included under some M40-M54 (Dorsopathies) diagnosis (excluding M45–Ankylosing spondylitis and M51–Other intervertebral disc disorders)	Neck symptom/ complaint (L01), Neck syndrome (L83)
J	Diabetes	Gestational diabetes excluded	E10-E14 (Diabetes mellitus)	T89 Diabetes insulin dependent, T90 Diabetes non-insulin dependent
K	Allergy, such as rhinitis, hay fever, eye inflammation, dermatitis, food allergy or other allergy (allergic asthma excluded)		J30 (Vasomotor and allergic rhinitis), L20-L30 (Dermatitis and eczema excluding L21–Seborrhoeic dermatitis); and other allergies irrespective of the origin (especially adverse effects of drugs, chemicals and food classified in Chapter XIX–Injury, poisoning and certain other consequences of external causes, for example T88.2–Shock due to anaesthesia)	R97 Allergic rhinitis, S02 Pruritus, S87 Dermatitis/ atopic eczema, S88 Dermatitis contact/ allergic
M	Urinary incontinence, problems in controlling the bladder	Urinary incontinence is kept because it's an important issue due to ageing population	R32 (Unspecified urinary incontinence); N39.3 (Stress incontinence); N39.4 (Other specified urinary incontinence)	U04 Incontinence urine

	Chronic disease or condition	Explanations and comments	Illustrative ICD-10 ([22]) codes	Illustrative ICPC ([23]) v41 codes
N	Kidney problems	Including renal or kidney failure It should be clarified that only serious and/or chronic kidney problems should be included Kidney stones in general are excluded but the perception of the respondent in how far she/he considers it as longstanding is finally decisive	Chronic conditions under N00-N08 (Glomerular diseases), N10-N16 (Renal tubulo-interstitial diseases) and N17-N19 (Renal failure), N25-N29 (Other disorders of kidney and ureter)	U14 (Kidney symptom/ complaint)
O	Depression		F31-F39 (Mood [affective] disorders excluding F30– Manic episode) F41.2 (Mixed anxiety and depressive disorder) F53.0 (Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified)	P73 Affective psychosis, P76 Depressive disorder
P	Hyperlipidemia	Having high cholesterol, high blood lipids or triglycerides in the past 12 months	E78 Disorders of lipoprotein metabolism and other lipidaemias	T93 Lipid disorder
R	Cancer	Having received cancer diagnosis, cancer treatment, or living with cancer in the past 12 months	C16 Malignant neoplasm of stomach C43 Malignant melanoma of skin	D74 Malignant neoplasm stomach S77 Malignant neoplasm of skin

Interviewer instructions:

- Showcard of chronic conditions and diseases can be used.
- Answers in all diseases/conditions should be recorded.

Adaptations of the sub-module:

- The sequencing of the questions is not obligatory; but no filtering of questions is allowed (for example for Myocardial infarction and Coronary heart disease)
- Familiar (popular) names of the diseases/conditions are to be indicated by each country in the interviewer's manual.
- Countries may add other chronic diseases or conditions in the list for national purposes.
- Countries may also use additional questions related to the conditions: whether the respondent has ever had the disease, whether the disease was diagnosed by a doctor or whether the respondent used any treatment for the condition.
- Question on **"Having high cholesterol, high blood lipids or triglycerides in the past 12 months"**: Pre-testing of this question revealed that respondents might be uncertain on one or more the terms "high cholesterol", "high blood lipids" or "triglycerides" and almost nobody knew the expression "hyperlipidemia". So, the proposal is to use the three more known expressions ("high cholesterol", "high blood lipids" or "triglycerides") as synonyms in the question.

Cancer – model question:

During the past 12 months, have you had cancer?

1. Yes
2. No

Interviewer clarification: Cancer covers all cancer cases that is, not only the newly diagnosed ones in the past 12 months but also cases where persons with cancer received treatment in the past 12 months. Furthermore, it covers cases where persons previously diagnosed with cancer and living with cancer do not receive treatment, but they did checks in the last 12 months to monitor cancer.

Leukaemia, lymphoma as well as all types of skin cancers are also covered.

Cancer treatment

There are many types of cancer treatment (see below). They depend on the type of cancer the patient has and how advanced it is.

- Surgery
- Radiation Therapy (radiotherapy)
- Chemotherapy
- Targeted Therapy, including monoclonal antibodies
- Immunotherapy, excluding monoclonal antibodies
  - Immunomodulators
  - Chimeric antigen receptor (CAR) T-cell therapy
- Hormone Therapy
- Other or unspecified systemic therapy
- Stem Cell Transplant / Bone Marrow
- Hyperthermia
- Photodynamic Therapy
- Blood Transfusion and Donation
- Clinical trials
- Laser treatment
- Complementary and Integrative medicine

1.2.3. Accidents and injuries (AC)

The following question aims to measure the occurrence of home or leisure accidents and injuries (excluding self-inflicted injuries or injuries due to interpersonal violence) which also represent a high burden in term of consequences on health state, use of health care services and health and rehabilitation expenditures, among young people (which on the opposite suffer less from chronic diseases).

AC1: Occurrence of a home or leisure accident in the past 12 months

1) Question

In the past 12 months, have you had any home or leisure accident resulting in injury?

1. Yes
2. No

Interviewer clarification: "Injuries resulting from poisoning or inflicted by animals or insects are also included. Injuries caused by wilful acts of other persons are excluded."

2) Guidelines

- **General concept**: whether within the past 12 months, the respondent was victim of a home or leisure accident resulting in injury.
- **Policy relevance:** ECHI 29(A), ECHI 30(A).
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: strong revision of question.

'Home or leisure accident' is an unintentional event characterised by a rapid force or an impact that leads to physical harm, occurring at home, around the house (garage, garden, alley) or during leisure time spent on activities done for pleasure or personal interest.

Home or leisure accidents also include:

- cases of acute poisoning;
- injuries inflicted by animals or insects.

Home or leisure accidents do not include:

- for employed persons, accidents occurred while working from home (teleworking), that is while performing an activity where a work-related purpose can be established and which is related to the conditions of employment;
- accidents at work or in school;
- traffic accidents;
- diseases or illnesses;
- intentional injuries (due to interpersonal violence–wilful acts by other persons–and deliberate self-harm);
- trivial injuries such as superficial cuts or scratches.

Examples of leisure activities: walking, jogging, playing a ball game, dancing, climbing a mountain, woodworking, engaging in hobbies, etc. The following activities/ places are also included here: visiting pub or restaurant, leisure parks, holiday resorts.

"The past 12 months" are taken into consideration from the date of the interview (e.g., accidents between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

Examples:

Situation	Interpretation
A person burns his hand while cooking.	Home accident.
A person is bitten by a dog while jogging.	Leisure accident.
A person riding a bicycle on the public road in his free time falls without having a collision with another vehicle or person.	Road traffic accident. It happened on public road and land transport vehicle (bicycle) is involved.
A person riding a bicycle in the mountains (not on a public road) in his free time falls without having a collision with another vehicle or person.	Leisure accident.
A bicyclist on his way home is hit by a car.	Road traffic accident
A person has a back pain while carrying heavy loads.	Health problem (it is not an accident).
A person injures his back as a result of a sudden movement.	Can be any type of accident; it depends where and during what activity it happens.
A person, shopping in the city, was attacked and injured in the street.	A wilful act so not classified as accident.

1.2.4. Absence from work (due to health problems) (AW)[24]

The questions measure the direct burden of health problems on the economic activity, i.e., in term of absenteeism during the last 12 months. They refer to all kind of health problems, i.e., the chronic diseases, injuries, occupational diseases, but also any other type of diseases and health problems including communicable diseases and temporary health problems.

FILTER

Interviewer: Next question (AW1) is to be asked only for respondents currently working (code 10 for variable MAINSTAT in the Background Module) ([25]).

The next questions are to be asked only for currently employed people. Those who worked before in the year and are unemployed at the date of interview are filtered out.

AW1: Absent from work due to personal health problems in the past 12 months

1) Question

In the past 12 months, have you been absent from work for reasons of health problems? Take into account all kind of diseases, injuries and other health problems that you had and which resulted in your absence from work.

1. Yes
2. No

2) Guidelines

- **General concept**: absence from work for reasons of health problems.
- **Policy relevance:** DG SANTE: health status of working population; DG EMPL: major socio-economic importance and social gradient.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question

Reasons of **"health problems"**: all kinds of physical or mental diseases (temporary, chronic, occupational), injuries, other health problems. All health problems even not due/ related to work are considered. Only reasons related to respondent's own health should be considered.

Only **full absence from work** should be counted (i.e., the person does not continue with minor activities).

The absence from work does **not necessarily be certified** by a doctor. It neither matters whether the person had or had not an official sick leave for the absence.

The **time period** refers to the absences and not to the time when the respondent got sick (it could happen that the health problem started more than 12 months ago).

Absences from work for **regular/ preventive check-ups**, not related to a specific health problem affecting the person, should not be included. Also, those absences for taking care of a sick person (for instance, a child) should not be considered. Maternity leave should also be excluded.

The **past 12 months** are taken into consideration from the date of the interview (ex: absences between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

([24]) This corresponds to the detailed topic *Temporary limitations in activity (due to health problems)*

([25]) Filter MAINSTAT (= 10) is self-assessed by the respondent and the chosen category there should appropriately describe how a person mainly perceives him/ herself. So, respondents can consider themselves being employed irrespective of their official labour market status, working time or kind of income from employment. Therefore, it is possible for someone with undeclared job to answer AW1 and AW2.

FILTER

Interviewer: Next question (AW2) is to be asked only for respondents having been absent from work for reasons of health problems (code 1 in AW1).

AW2: Number of days of absence from work due to personal health problems in the past 12 months

1) Question

In the past 12 months, how many days in total were you absent from work for reasons of health problems?

Number of days: |__|__|__|

2) Guidelines

- **General concept**: total number of calendar days of absence from work for reasons of health problems in the past 12 months.
- **Policy relevance:** DG SANTE: health status of working population/ DG EMPL: major socio-economic importance and social gradient.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

All calendar days when the person was **absent from work for reasons of health problems** (i.e., from the day he/ she was considered as unable to work until the day he/ she is able to work, even partly) have to be taken into consideration (normal working days or not, including Sundays, bank holidays, etc.).

If the respondent, at the day of the interview, is still absent from work for reasons of health problems, he/ she should report only the days of absence occurred **before the day of the interview**.

Only days lost strictly related to the inability to work because of a **health problem** must be counted. Consequently, when the respondent has already recovered from a health problem but has not started to work immediately, the days when he/ she was able to work but did not do it due to other reasons, should not be taken into consideration.

The absence from work does **not necessarily be certified by a doctor**. It neither matters whether the person had or had not an official sick leave for the absence.

If the person didn't work for a certain period of time and then started to be integrated back to work gradually, for example working part-time, only the days when he/ she was **not working at all** are counted.

The days of absence for **taking care of somebody else** (a family member, for instance a sick child) should not be counted.

The **past 12 months** are taken into consideration from the date of the interview (e.g., days of absence from work between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

1.2.5. Functional limitations (PL)

The questions come from the Budapest Initiative (BI) – Mark 2 (A Survey Module for Measuring Health State[26]). These questions address a number of functional domains: vision, hearing, mobility, cognition and communication. Measuring the prevalence of difficulties in these functional domains constitutes the basic evaluation of the health state of the population, i.e., its situation in terms of functioning capacity whatever the reasons of the difficulties (born with, disease, accident, ageing, etc.).

The **questions PL1 to PL8A** come from Budapest Initiative – Mark 2 (BI-M2; this is a survey module for measuring health state). The BI-M2 questions measure the **main physical, sensory, cognitive and communication functional difficulties** and are intended for respondents of all ages.

([26]) Survey module for measuring health state. Developed by the Budapest Initiative Task Force on Measurement of Health Status

The last question of the PL sub-module, question **PL9 ("Difficulty in biting and chewing on hard foods")** is not part of the BI-M2 module. PL9 had been asked with a very similar wording and a very similar embedding in EHIS wave 1 ([27]). But unlike in EHIS wave 1, the use of an age filter (only persons aged 55 or older) is recommended for PL9 in EHIS wave 4.

Introduction PL

Now, I am going to ask you some further questions about your general physical and sensory health. These questions deal with your ability to do different basic activities. Please ignore any temporary problems.

Guidelines

- **General physical and sensory health**: physical and sensory functional limitation can be measured through reference to many actions/ situations; the action/ situation is there only to help the respondent, and investigator, to assess the level of functioning. For this reason, the distances (half a kilometre), number of steps, etc. should not be taken literally but to describe the scale we are interested in. Sensory functional limitations include visual impairment, hearing impairment, blindness, deafness, and deafblindness.
- **Different basic activities**: respondents do not necessarily face the situation proposed and so the functional limitation is measured in terms of capacity to undertake the task (can you/ could you if you had to) rather than performance (do you).
- Ignore any temporary problems: the aim is to measure **long-term (chronic) limitations**. This wording is used so that a time limit is not required.
- The aim of the following questions is to assess the **person's own capacity** (Do you have difficulty …?). The actions/ situations are there only to help the respondent, and interviewer, to assess the level of functioning. In some cases, technical devices/ aids are considered (vision and hearing) while in others not (mobility).
- For vision and hearing, the general rule on measuring capacity was not followed. **Vision and hearing aids** are essentially being considered here as "within-the-skin" aids (that is independent of external factors such as the physical or social environment). Individuals who always use vision/ hearing aids to enhance or correct vision/ hearing problems would have difficulty responding about functioning without these aids. Moreover, given the omnipresence and effectiveness of such aids, one would not want to consider persons whose vision/ hearing was corrected by the aids as having a functional limitation.
- Without aids: the aim is to ensure that the limitation is not due to financial reasons for not owning the most commonly available types of technical aids for people with functional limitations (such as walking sticks).
- Assistance means help from another person (for instance, the help of someone who helps a disabled person to wash himself/ herself). It could be from a person not living in the household.
- Use of showcards (response categories): for questions PL2, PL4, PL5, PL6, PL7, PL8, PL8A and PL9.

Interviewer instruction: If the respondent is completely blind, do not ask the question, mark with code 3 in PL1 and then go to PL3. For the others, ask PL1.

PL1: Wearing glasses or contact lenses

1) Question

Do you wear glasses or contact lenses?

1. Yes
2. No
3. I am blind or cannot see at all

2) Guidelines

- **General concept**: whether the person uses or not glasses or contact lenses for improving his/ her seeing.
- **Policy relevance**: ECHI 36.

([27]) Question PL.11 (Can you bite and chew on hard foods such as a firm apple without any aid, for example, denture?) after 10 questions (PL.01 to PL.10) concerning physical and sensory functional limitations.

- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

Glasses or contact lenses not worn permanently (that is, only worn when needed) should be considered when answering this question (so, code 1 should be used in this case as the respondent should be aware to consider their use when answering the next question).

FILTER

Interviewer instruction: Next question (PL2) is to be asked only for respondents who are not blind (codes 1, 2 or -1 in PL1).

PL2: Difficulty in seeing, even when wearing glasses or contact lenses

1) Question

Interviewer instruction: Phrasing if PL1 = 1:

Do you have difficulty seeing even when wearing your glasses or contact lenses?
Would you say …

Interviewer instruction: Phrasing if PL1 = 2 or -1:

Do you have difficulty seeing?
Would you say …

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all/ Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in seeing.
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question

The aim of the question is to assess the **person's own capacity** (Do you have difficulty…?). The use of technical devices/ aids is considered. Both, long and short distance seeing should be considered. Eyesight problems should not be reported if glasses or contact lenses are "sufficiently effective". For a respondent with seeing impairment who does not have glasses (for instance, due to financial reasons), he/ she should answer without considering these aids.

If asked, the interviewer should mention that **good lightening conditions** are foreseen.

The Budapest initiative vision domain covers **a spectrum of seeing problems** including dimensions of near and far vision, night blindness, and monocular vision. Testing of the single Washington group (WG) ([28]) short set question provided evidence that this question was able to capture all these aspects of difficulty seeing.

([28]) Washington Group on Disability Statistics (WG); see http://www.washingtongroup-disability.com/.

The WG and the BI developed and tested extended questions to gain more insight into some of the **individual dimensions of vision**, near and far sightedness. Analyses of the results of the testing indicated that responses to the extended questions were able to differentiate between near and far sightedness but taken together they were not able to improve upon the single question regarding severity.

Interviewer instruction: If the respondent is completely deaf do not ask the question, mark with code 3 in PL3 and then go to PL6. For the others, ask PL3.

PL3: Use of a hearing aid

1) Question

Do you use a hearing aid?

1. Yes
2. No
3. I am profoundly deaf

2) Guidelines

- **General concept**: whether the person uses or not a hearing aid.
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

Other hearing aids habitually worn and considered as "within-the-skin" can be considered if it is relevant and important in a particular country. Implants are considered as "within-the-skin" aids.

If respondent has a hearing aid but declares to wear it only seldom should be considered as someone who does *not* use a hearing because the predominant situation for this person is 'without hearing aid'.

FILTER

Interviewer instruction: Next question (PL4) is to be asked only for respondents who are not deaf (codes 1, 2 or -1 in PL3). Otherwise go to question PL6.

PL4: Difficulty in hearing what is said in a conversation with one other person in a quiet room even when using a hearing aid

1) Question

Interviewer instruction: Phrasing if PL3 = 1

Do you have difficulty hearing what is said in a conversation with one other person in a quiet room, even when using your hearing aid?
Would you say …

Interviewer instruction: Phrasing if PL3 = 2 or -1

Do you have difficulty hearing what is said in a conversation with one other person in a quiet room?
Would you say …

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all/ Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in hearing what is said in a conversation in a quiet room.
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question.

The aim of the question is to assess the person's own capacity (Do you have difficulty. . .?). The situation is there only to help the respondent, and interviewer, to assess the level of functioning. The use of technical devices/ aids is considered. Hearing problems should not be reported if hearing aids are "sufficiently effective". For a respondent with hearing impairment who does not have hearing aid (for instance, due to financial reasons), he/ she should answer without considering these aids.

The question implies a normal situation where there is no background noise or at a very low level that could make it difficult to hear what another person says.

In case a person is deaf in one ear, his/ her answer should reflect an average situation.

Hearing difficulties include a range of problems that deal with some specific aspects of the hearing function: the perception of loudness and pitch, the discrimination of speech versus background noise, and the localization of sounds. Background noise is a detractor for hearing and this distraction becomes worse with increasing levels of hearing loss.

The WG and the BI developed and tested several versions of extended hearing questions to develop a scale of severity for hearing problems. The questions used in the cognitive and field testing elicited two levels of difficulty in hearing – hearing in a quiet room (easier activity) and hearing in a noisy room (more difficult activity). The extent of the hearing problem for individuals who report difficulty hearing in a quiet room is likely to be moderate to severe, while many more people are likely to find hearing in a noise room difficult (mild difficulty hearing). Analyses of results of the evidence provided from the testing indicated that responses to the extended questions were both able to discriminate individuals with hearing problems on a scale of severity.

PL5: Difficulty in hearing what is said in a conversation with one other person in a noisier room ([29]) even when using a hearing aid

1) Question

Interviewer instruction: Phrasing if PL3 = 1

Do you have difficulty hearing what is said in a conversation with one other person in a noisier room, even when using your hearing aid?
Would you say …

([29]) 'Noisier room' could be described as a room with ambient noise that is usually found for instance, in restaurants, bars, canteens.

Interviewer instruction: Phrasing if PL3 = 2 or -1

Do you have difficulty hearing what is said in a conversation with one other person in a noisier room? Would you say …

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all/ Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in hearing what is said in a conversation in a noisier room.
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question.

The aim of the question is to assess the **person's own capacity** (Do you have difficulty…). The situation is there only to help the respondent, and interviewer, to assess the level of functioning. The use of technical devices/ aids is considered. Hearing problems should not be reported if hearing aids are "sufficiently effective". For a respondent with hearing impairment who does not have hearing aid (for instance, due to financial reasons), he/ she should answer without considering these aids.

In case a person is **deaf in one ear**, his/ her answer should reflect an average situation.

Hearing difficulties include a range of problems that deal with some specific aspects of the hearing function: the perception of loudness and pitch, the discrimination of speech versus background noise, and the localization of sounds. Background noise is a detractor for hearing and this distraction becomes worse with increasing levels of hearing loss.

The WG and the BI developed and tested several versions of extended hearing questions to develop a scale of **severity for hearing problems**. The questions used in the cognitive and field testing elicited two levels of difficulty in hearing – hearing in a quiet room (easier activity) and hearing in a noisy room (more difficult activity). The extent of the hearing problem for individuals who report difficulty hearing in a quiet room is likely to be moderate to severe, while many more people are likely to find hearing in a noise room difficult (mild difficulty hearing). Analyses of results of the evidence provided from the testing indicated that responses to the extended questions were both able to discriminate individuals with hearing problems on a scale of severity.

PL6: Difficulty in walking half a km on level ground without the use of any aid

1) Question

Do you have difficulty walking half a km on level ground that would be […] ([30]) without the use of any aid? Would you say …

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in walking 500 meters on level ground without any aid or support.

([30]) The question has to be completed with an example fitting the national context. For example: "the length of five football fields" or "one city block".

- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

The aim of the question is to assess the **person's own capacity** (Do you have difficulty…?). The situation is there only to help the respondent, and interviewer, to assess the level of functioning.

Not only difficulties of a person with her legs, but also other health problems like a cardiac or a respiratory problem, etc., which prevents a person from walking for longer distances, should be considered as "**difficulties**" here.

The use of technical devices/ aids or assistance is not considered when evaluating the extent of difficulty. **Walking aids** includes surgical footwear, canes or walking sticks, zimmer frames, callipers, splints, crutches, wheelchair, someone's assistance. Holding someone's arm is considered as receiving **assistance**.

Some other walking aids such as **prosthesis and artificial leg** – in use without any further aid system like crutches, wheelchair, etc. – can be considered as an integral part of body (within-the-skin) and therefore not as walking aids.

For a blind person, the guide dog or the use of a stick or other walking aid or assistance, if the reason for using it is only limited seeing, should not be seen as a walking aid; such person (even using a walking stick or having a guide dog) should not be seen as having walking difficulties.

Even the respondent seems to be **permanently confined to bed**, it's preferable that the interviewer ask this question as well as the following ones.

Note: the question has to be completed with an **example** fitting the national context. For example: the length of five football fields.

Adaptation of the question: national equivalents for 500 metres are allowed to use in wording of the question.

PL7: Difficulty in walking up or down 12 steps

1) Question

Do you have difficulty walking up or down 12 steps? Would you say …

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in walking up or down 12 steps without any aid or assistance (both activities of walking up or walking down are implied by the question).
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

The aim of the question is to assess the **person's own capacity** (Do you have difficulty…?). The situation is there only to help the respondent, and interviewer, to assess the level of functioning.

Not only difficulties of a person with her legs, but also other health problems like a cardiac or a respiratory problem, etc., which prevents a person from walking up or down 12 steps, should be considered as "**difficulties**" here.

In general, the use of technical devices/ aids or assistance is not considered when evaluating the extent of difficulty but this should not be part of the question (standard BI question for this question), with the exceptions of handrails and bannisters.

The person may **use handrails or bannisters** because (BI justification):
a) the near-universal presence of handrails would make it difficult for respondents to conjure situations in which these would not be available and/ or used;

b) the use of handrails is nearly automatic as one walks up and down steps and is not necessarily a reflection of functional ability;
c) the use of handrails may be a greater reflection of external conditions, for example wet or icy steps. While not mentioning handrails does introduce a source of error, the testing done suggested that the error introduced was greater when handrails were mentioned.

Walking aids includes surgical footwear, canes or walking sticks, zimmer frames, callipers, splints, crutches, wheelchair, someone's assistance. Holding someone's arm is considered as receiving **assistance**.

Some other walking aids such as **prosthesis and artificial leg** – in use without any further aid system like crutches, wheelchair, etc. – can be considered as an integral part of body (within-the-skin) and therefore not as walking aids.

For a blind person, the guide dog or the use of a stick or other walking aid or assistance, if the reason for using it is only limited seeing, should not be seen as a walking aid; such person (even using a walking stick or having a guide dog) should not be seen as having walking difficulties.

"**A flight of stairs**" can be used as equivalent to 12 steps.

PL8: Difficulty in remembering or concentrating

1) Question

Do you have difficulty remembering or concentrating?
Would you say … [showcard]

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all/ Unable to do

2) Guidelines[31]

- **General concept**: assessment of the extent of difficulty which a person has in remembering or concentrating.
- **Policy relevance**: Healthy ageing.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question.

The purpose of this item is to identify persons who have some problems with remembering or focusing attention that contribute to difficulty in doing their daily activities.

Remembering refers to the use of memory to recall incidents or events. It means the individual can bring to mind or think again about something that has taken place in the past (either the recent past or further back). With younger people, remembering is often associated with storing facts learned in school and being able to retrieve them when needed.

Remembering should NOT be equated with memorizing or with good or bad memories.

Concentrating refers to the use of mental ability to accomplish some tasks such as reading, calculating numbers, learning something. It is associated with focusing on the task at hand in order to complete the task.

Included are problems:

- finding one's way around, being unable to concentrate on an activity, or forgetting one's whereabouts or the date, and
- problems remembering what someone just said or becoming confused or frightened about most things.

Any difficulty with remembering, concentrating or understanding what is going on around them that they or family members (if the family member is the respondent) consider a problem should be captured.

([31]) The Washington Group Short Set on Functioning: Questions Specifications

Note: difficulties remembering or concentrating because of common everyday situations such as high workload or stress, or as a result of substance abuse are EXCLUDED.

PL8A: Difficulty in communicating (using usual language, for example understanding or being understood by others)

1) Question

Using your usual (customary) language, do you have difficulty communicating, for example understanding or being understood?
Would you say…

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in communicating.
- **Policy relevance**: Healthy ageing.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** none: new question in EHIS wave 4.

The question specifications ([32]) developed by the Washington Group indicate that the aim of this question is to identify persons who have some problems with talking, listening or understanding speech such that it contributes to difficulty in making themselves understood to others or understanding others.

Communicating refers to a person exchanging information or ideas with other people using language (that is, both expressive and receptive communication).

Communication difficulties[33] can originate in numerous places in the exchange process. It may involve mechanical problems such as hearing impairment or speech impairment, or it may be related to the ability of the mind to interpret the sounds that the auditory system is gathering and to recognize the words that are being used or an inability of the mind to compose a sentence or say a word even when the person knows the word and sentence.

Included is the use of the voice for the exchange or using signs (including sign language) or writing the information to be conveyed.

Included are problems making oneself understood, or problems understanding other people when they speak or try to communicate in other ways.

([32]) The Washington Group Short Set on Functioning: Questions Specifications

([33]) The following explanations are provided in the UNECE report *Survey Module for Measuring Health State. Developed by the Budapest Initiative Task Force on Measurement of Health Status*:

Communication difficulties can stem from such problems as aphasia and or dysarthria from a stroke, head injury or cerebral palsy (acquired at birth), stuttering, poor articulation due to a cleft lip and/or palate, loss of dentition, or loss of their voice through removal of their larynx or other trauma, cognitive problems and hearing loss.

Those types of problems include:

1. Physical impairments, whereby respondents described problems with their tongues or mouths that prevent them from being able to speak clearly,
2. Cognition-related problems, in which respondents described difficulties remembering or concentrating such that it is not easy to focus on what others are saying or to speak at length, for example, to tell a story.
3. Hearing-related problems that prevent respondents from being able to clearly hear what others are saying, and
4. Social or interactional difficulties, whereby respondents described having problems interacting or relating to others. These social difficulties could also be broken down into sub-categories, specifically, a) respondents expressing difficulty because they are shy, b) because they talk too fast, c) because of interpersonal problems relating to others such as a spouse or child, or d) because they do not have much education and feel insecure talking to those who do.

NOTE: Difficulty understanding or being understood due to non-native or unfamiliar language is NOT included.

FILTER

Interviewer instruction: Next Question PL9 is to be asked only for respondents who are 55 years or older (AGE ≥ 55).

An age filter (55 or older) should be applied. Countries, which do not want to use the filter, can open the questions to all participants**.**

PL9: Difficulty in biting and chewing on hard foods

1) Question

Do you have difficulty biting and chewing on hard foods such as a firm apple? Would you say … [showcard]

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all/ Unable to do

2) Guidelines

- **General concept**: assessment of the extent of difficulty which a person has in biting and chewing on hard foods.
- **Policy relevance**: ECHI 36.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question

Question **"Difficulty in biting and chewing on hard foods (PL9)"** is not part of the BI-M2 module. PL9 had been asked with very similar wording and very similar embedding in EHIS wave 1 ([34]).

But unlike in EHIS wave 1, **an age filter** (only persons aged 55 or older) is added for PL9 since EHIS wave 3 ([35]).

The assessment of difficulty in biting and chewing is less subjective than the question on self-perceived general oral health (CD2) and consequently, **proxy interview** should be allowed here.

The aim of the question is to **assess the person's own capacity** (Do you have difficulty…?). The situation is there only to help the respondent, and interviewer, to assess the level of functioning. The use of technical devices/ aids or assistance (for example, denture) is not considered.

1.2.6. Personal care activities (PC)

The questions measure the performance and the help received or needed concerning the main Activities of Daily Living (ADL) according to the International Classification of Functioning, Disability and Health (ICF). The measurement of the ADL

([34]) Question PL.11 (Can you bite and chew on hard foods such as a firm apple without any aid, for example, denture?) after 10 questions (PL.01 to PL.10) concerning physical and sensory functional limitations.

([35]) Pre-testing done by the Eurostat contractor showed that:
(-) all parts of the question are clear and understandable; moreover, the answer categories seem understandable and can be rather easily distinguished from each other;
(-) Use of "hard foods": respondents had no problem to identify and define "hard foods"; the example "such as a firm apple" is useful for understanding the question;
(-) that the question is somewhat sensitive and some people would feel embarrassed to admit such difficulties; on the other hand, the question seems also suitable for self-completion;
(-) that the aspect of "without any aid (for example, denture)" should be put at the beginning of the question; this proposal was disregarded by the majority of the TF EHIS; the latter decided in July 2017 to propose the question for EHIS wave 3 without explicitly mentioning the supplement "without any aid (for example, denture)".

constitutes the first basic evaluation of disability prevalence in the population, in terms of performance for personal care activities, whatever the reasons of the disabilities (born with, disease, accident, ageing, etc.), and of related support provided to persons with disabilities.

FILTER

Interviewer: Next questions (PC1 to PC3) are to be asked only for respondents below 55 who are severely limited or limited but not severely in usual activities (HS3 = 1 or 2) or to those who are 55 years or older (AGE ≥ 55).

Countries, which don't want to use the filter, can open the questions to all participants**.**

Introduction PC1

Now, I would like you to think about some everyday personal care activities. Here is a list of activities. Please ignore temporary problems [showcard: list of personal care activities].

PC1: Difficulty in [kind of personal care activity]

1) Question

Do you usually have difficulty doing any of these activities without help?

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do

Interviewer instruction: Tick an answer for each of the personal care activities.

Personal care activities
A. Feeding yourself
B. Getting in and out of a bed or chair
C. Dressing and undressing
D. Using toilets
E. Bathing or showering

2) Guidelines

- **General concept**: measure the degree of independence in doing activities of personal care.
- **Policy relevance:** ageing population and pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

"Do you": the listed activities are the most essential for self-care in daily life and that respondents have to perform. Independence corresponds to what respondents do (not what they think they can do) and we therefore **ask about reported performance (do you...)** rather than self-assessed capacity (can you...), thus closer to actual performance.

"Usually" is included to **exclude temporary problems**. This wording is used so that a time limit is not required.

"Without help": help from another person/ other persons, the use of technical aids and housing adaptations should all be excluded from question PC1; i.e., *ask here for possible difficulties in doing personal care activities if the respondent would have no personal, technical or similar help at all.* Question PC1 aims at finding out all difficulties in doing personal care activities due to health, disability or age problems.

"Feeding yourself": the respondent is able to get the food from the plate to his/ her mouth, lift a full glass to his/ her mouth, cut up food, use the fork, spoon, spread butter and/ or jam on a slice of bread, add salt. This activity excludes shopping for food or food preparation and cooking.

"Getting in and out of a bed or chair": the respondent does not need help to get in and out of the bed or chair; coming to a standing position is implied. In case the respondent has a different level of difficulty in performing these 2 activities, the interviewer should record the answer corresponding to the activity which is more difficult for the respondent.

"Dressing and undressing": getting clothes from closets and drawers, putting them on, removing and fastening all clothing and tie shoelaces, doing buttons ([36]). In case the respondent has a different level of difficulty in performing the 2 activities, the interviewer should record the answer corresponding to the activity which is more difficult for the respondent.

"Using toilets": the following activities are concerned: using toilet paper / cleaning himself/ herself after elimination, arranging clothes before and after toilet use. For persons being able to use toilets, but suffering from incontinency problems, the ability to change the nappies should be considered here.

"Bathing or showering": the following activities are concerned: washing and drying the whole body; get in and out of the shower or the bathtub. In case the respondent has a different level of difficulty in performing these 2 activities, the interviewer should record the answer corresponding to the activity which is more difficult for the respondent.

Use of showcards: A showcard of activities can be used.

FILTER

Interviewer: Next question (PC2) is to be asked only for respondents who have declared having a certain level of difficulty in at least one activity (codes 2, 3, 4 in PC1A – PC1E)([37]). Otherwise go to Introduction HA1 (Household care activities).

Introduction PC2

Thinking about all personal care activities where you have difficulty in doing them without help…

PC2: Usually receiving help with one or more self-care activities: feeding yourself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering

1) Question

Do you usually have help for any of these activities?

1. Yes, with at least one activity
2. No

2) Guidelines

- **General concept**: assessing whether the person has help in performing an activity.
- **Policy relevance:** importance for Long-Term Care issues, active ageing dimension (incl. pre-retirement population) and to improve the knowledge on health inequalities.

([36]) The inability of an appropriate selection of clothes (such as clothes for a particular weather or temperature situation) is considered as a cognitive problem and should not be included here.

([37]) In addition to the filter for PC1

- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

Any kinds of help should be considered: help from another person, the use of technical aids and housing adaptation.

PC3: Need to receive help or more help with one or more self-care activities: feeding yourself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering

1) Question

[Interviewer instruction: Phrasing if PC2 = 1]

Would you need more help?

[Interviewer instruction: Phrasing if PC2 = 2]

Would you need help?

1. Yes, with at least one activity
2. No

2) Guidelines

- **General concept**: assessing whether the person needs help / whether the help is enough (need more help).
- **Policy relevance:** importance for Long-Term Care issues, active ageing dimension and to improve the knowledge on health inequalities.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

Any kinds of help should be considered: help from another person, the use of technical aids and housing adaptation.

1.2.7. Household activities (HA)

These questions measure the performance and the help received or needed concerning the main instrumental activities of daily living (IADL) according to the International Classification of Functioning, Disability and Health (ICF). The measurement of the IADL constitutes the second basic evaluation of disability prevalence in the population, in terms of performance for household care activities, whatever the reasons of the disabilities are (born with, disease, accident, ageing, etc.), and of related support provided to the disabled persons.

FILTER

Interviewer: Next questions (HA1 to HA3) are to be asked only for respondents below 55 who are severely limited or limited but not severely in usual activities (HS3 = 1 or 2) or to those who are 55 years or older (AGE ≥ 55).

Countries, which don't want to use the filter, can open the questions to all participants**.**

Introduction HA1

Now, I would like you to think about some household activities. Here is a list of activities. Please ignore any temporary problems [showcard: list of household activities].

HA1: Difficulty in doing [kind of household activity]

1) Question

Do you usually have difficulty doing any of these activities without help?

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do
5. Not applicable (never tried it or do not need to do it)

Interviewer instruction: Tick an answer for each of the household activities.

Interviewer instruction: If the spontaneous answer is "NO DIFFICULTY" or you are not sure about the answer you should probe if the respondent does the activity or cannot do the activity by him-/ herself but for other reasons than his/her health state. In these cases, answer "Not applicable" should be recorded.

Household activities
A. Preparing meals
B. Using the telephone
C. Shopping
D. Managing medication
E. Light housework
F. Occasional heavy housework
G. Taking care of finances and everyday administrative tasks

2) Guidelines

- **General concept**: measure the degree of independence in doing activities of household care related to longstanding health-related problems.
- **Policy relevance:** ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

The question probes primarily for difficulties due to health state, disability or old age. If the problems are due to other reasons the last answer category should be ticked (Not applicable, never tried it or do not need to do it). This difference should be stressed to respondents.

"Do you": as for personal care activities we ask about reported performance (do you...) rather than self-assessed capacity (can you...), to be closer to the actual performance. However, respondents may have the capacity but choose to have the activity performed by someone else, for instance employment of a cleaner. This is addressed later in the question.

"Usually" is included to exclude temporary problems. This wording is used so that a time limit is not required.

"Without help": help from another person/ other persons, the use of technical aids and housing adaptations should all be excluded from question HA1; i.e., *ask here for possible difficulties in doing household activities if the respondent would have no personal, technical or similar help at all.* Question HA1 aims at finding out all difficulties in doing household activities due to health, disability or age problems.

Explaining the response categories:

- 1. No difficulty = I do the activity and I can do it without any help;
- 5. Not applicable (never tried it or do not need to do it) = I never tried or do not need to do the activity; or I cannot do the activity by myself but for other reasons than a health state, difficulties with basic activities or old age.

"Preparing meals": the person can cook or prepare meals for himself/ herself.

"Using the telephone": the person can make calls and answer the telephone ([38]).

"Shopping": the person can go for shopping without help from another person.

"Managing medication": the person does not need help from another person to prepare a daily pillbox and take his/ her medication. This activity concerns only the fact that the person is able to take his/ her medication (the ability to take pills oneself including remembering to take the medicine) and not the one of being able to go to the pharmacy in order to take the pills home.

"Light housework": the person can do the following activities: washing dishes, ironing, bed making, childcare.

"Occasional heavy housework": the person can do the following activities: walking with heavy shopping for more than 5 minutes, spring cleaning, scrubbing floors with a scrubbing brush, vacuum-cleaning, cleaning windows, or other similar heavy housework.

"Taking care of finances and repetitive administrative tasks": paying bills, completing forms, going to the bank or the post office, etc.

Use of showcard: A showcard of activities can be used.

FILTER

Interviewer instruction: Next question (HA2) is to be asked only for respondents who have declared a certain level of difficulty in at least one domestic activity because of health state (codes 2, 3, 4 in HA1A to HA1G)([39]). Otherwise go to the next sub-module.

Introduction HA2

Thinking about all household activities where you have difficulty in doing them without help.

HA2: Usually receiving help with one or more domestic activities: preparing meals, using the telephone, shopping, managing medication, light or occasional heavy housework, taking care of finances and everyday administrative tasks

1) Question

Do you usually have help with any of these activities?

1. Yes, with at least one activity
2. No

([38]) It does not matter which device – landline phones, smartphones, etc. – the respondent is using but what matters is the ability to make a call and answer the telephone. In cases where clarifications are asked, it should be referred to respondents' own telephone/device. (and not to any device that exists on the market but is not owned or was not previously used by the respondent).

([39]) In addition to the filter for PC1

2) Guidelines

- **General concept**: assessing whether the person has help in performing an activity.
- **Policy relevance:** importance for Long-Term Care issues, active ageing incl. pre-retirement population dimension and to improve the knowledge on health inequalities.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

Any kind of "help" should be considered: help from another person, the use of technical aids and housing adaptation.

HA3: Need for help or more help with one or more domestic activities: preparing meals, using the telephone, shopping, managing medication, light or occasional heavy housework, taking care of finances and everyday administrative tasks.

1) Question

[Interviewer instruction: Phrasing if HA2 = 1]

Would you need more help?

[Interviewer instruction: Phrasing if HA2 = 2]

Would you need help?

1. Yes, with at least one activity
2. No

2) Guidelines

- **General concept**: assessing whether the person needs help / whether the help is enough (need more help).
- **Policy relevance:** importance for Long-Term Care issues, active ageing incl. pre-retirement population dimension and to improve the knowledge on health inequalities.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question; age filter extended to also cover those below 55 who have at least some difficulties with usual activities.

1.2.8. Barriers to participation in specific life domains

The purpose of these questions is to get data about what individuals are actually able to do in their lives and what elements of their environment (that could be natural, human-made, personal or social) prevents them to participate in society. No filter is proposed to these questions although reference to long-standing health problems is made in the questioning.

Only participation restrictions that are due to a long-standing health problem are of interest. **Long-standing** means that the physical or mental health condition, illness or disease or the difficulties with basic activities have lasted or is likely to last for at least 6 months. Temporary conditions or problems (for example, influenza, broken arm or leg) should not be considered.

A **physical or mental health condition, illness or disease** does not have to be diagnosed by a health professional – symptoms such as pain or breathlessness or fatigue should also be included. This may also include claustrophobia, agoraphobia.

Difficulties with basic activities (such as seeing, hearing, concentrating, communicating, walking, lifting, gripping, orientation problems) should also be considered answering the questions.

If the respondent uses special technical aids or has personal help, this should be considered when answering the questions.

Many difficulties in basic activities may be solely due to environmental factors – difficulty in walking because of difficult terrain – this would not be considered here. Also, it could be a combination of both personal and environmental factors, for example, poor hearing and a noisy environment, which contribute to experiencing a certain level of difficulty. Only the poor hearing will be have to be considered.

Introduction BA1

Next questions are about the opportunities that people could have in participating in everyday life activities as much as they want to. We will start with questions asking about your ability to move from one place to another either by walking or by using various forms of transportation.

BA1: Difficulty leaving home due to long-standing health problems (chronic conditions or impairments)

1) Question

Do you usually have difficulty leaving your home (that is going out on the street) because of a long-standing health problem? Would you say having…

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do
5. No interest in this activity / Do not want to do it

Interviewer instruction: The use of mobility aids such as, canes, crutches, wheelchairs as well as personal help is to be considered when answering the question.

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

The aim of the question is to assess the **person's ability** to leave his/her home whenever he/she wants or needs to.

"Leave home" means going beyond the boundary of one's property. It would not include going out to the garden shed for example but being able to get out and about in the local neighbourhood (that is going out on the nearby streets).

It does not matter whether the person leaves home on foot (or in a wheelchair) or by transport, with or without assistance, or with or without assistive devices.

The reason for lack of mobility is most likely caused by an interaction of personal factors (such as health) and environmental characteristics (poor surfaces, lack of transport etc.). Mental health issues are also to be considered when answering these questions. For instance, a person might not have walking limitations but is scared to leave the house.

The questions target a usual situation for the respondent and therefore, any occasional circumstances should not be considered (for instance, bad weather conditions or an acute illness at the interview time).

In the situation when the respondent indicates not having any long-standing health problem, code 1 "No difficulty" should be used.

BA2: Difficulty using various forms of transportation due to long-standing health problems

1) Question

Do you usually have difficulty using various forms of transportation (such as a car, bus, train, coach, taxi) because of a long-standing health problem? Would you say having…

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do
5. No interest in this activity / Do not want to do it

Interviewer instruction: The use of mobility aids such as, canes, crutches, wheelchairs as well as personal help is to be considered when answering the question.

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

This question asks about the **person is able** using any form of private or public motorised transport that any member of the public could use, as well as about accessing and using the area surrounding transport station or stop (such as hills, slopes, steps, footpath design). It therefore means that the respondent intends to travel as passenger on such transport (bus, tram, coach, train, underground, taxi, plane etc.). It does not however include special transport provided for persons with disabilities such as a bus service provided by the local authority for people with disabilities. It is about accessing and using public transport that respondent wants to use as often as they want to use it, in order to carry out their normal activities. It includes local as well as long distance travel.

When assessing the level of difficulty, the respondent should consider all kind of factors that could influence him/her. Those factors could be of various nature (for instance, cannot afford it, distance, unsuitable timetable, no convenient transport, difficulty getting on or off transport, unsuitable platforms). May also include difficulty getting to the boarding point, not being able to see signs or notices or to hear staff or announcements.

In the situation when the respondent indicates not having any long-standing health problem, code 1 "No difficulty" should be used.

BA3: Difficulty accessing public buildings, including moving about once inside and using indoor building facilities due to long-standing health problems

1) Question

Do you usually have difficulty accessing the buildings you want or need to use, including moving about once inside and using indoor building facilities because of a long-standing health problem? Would you say having…

1. No difficulty
2. Some difficulty

3. A lot of difficulty
4. Cannot do at all / Unable to do
5. No interest in this activity / Do not want to do it

Interviewer instruction: The use of mobility aids such as, canes, crutches, wheelchairs as well as personal help is to be considered when answering the question.

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

This question aims to tap into the concept of accessibility and focuses on the **person's ability** in using buildings whenever they want or need to. It covers entry to and exit from buildings such as workplaces, shops, restaurants, cafes, offices, leisure facilities and other people's homes. Adaptations such as portable and stationary ramps, power-assisted doors, lever door handles are covered as well as use of washroom facilities, telephones, lifts, escalators etc. Finally, it covers finding one's way around the building in terms of signs (size), size of corridors, floor surfaces. If the respondent uses special technical aids or is helped by someone else, this should be considered when answering the question.

The interest is in the interaction between the respondent and the environment with respect to buildings. When assessing the level of difficulty, the respondent should consider all kind of factors such as difficulties getting into the buildings (for instance, doors not wide enough for wheelchair), getting around the building (for instance, as aisles not wide enough for baby buggy or no lift access), and using the facilities inside the buildings (for instance, toilets). Not being able to use buildings after normal opening hours would not be included nor, for example, forgetting the access code to a building.

In the situation when the respondent indicates not having any long-standing health problem, code 1 "No difficulty" should be used.

BA4 (optional): Main reason contributing to the difficulty experienced (other than long-standing health problems)

FILTER

Interviewer instruction: Next question (BA4) is to be asked only for respondents who have declared a certain degree of difficulty in the previous BA questions (codes 2, 3, 4 in BA1 to BA3). Otherwise go to question BA5.

1) Question

You have previously stated that you have a certain degree of difficulty. Is any of the following reasons also contributing to the difficulty experienced? Please indicate the main reason contributing to the difficulty experienced.

1. Lack of money, can't afford it
2. Lack of self-confidence
3. Attitudes of other people
4. Lack of convenient or available transport
5. Difficulties travelling on transport (such as getting on or off transport, no seats available, too uncomfortable)

6. Difficulties parking (such as not enough spaces)
7. Poor buildings' infrastructure and accessibility (lack of elevators, ramps, signs, doors too narrow, toilets not adapted, etc.)
8. Other reasons
9. None

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

A **showcard** with the possible answer categories could be used.

1. Lack of money, can't afford it: This code includes where the respondent has difficulty doing one of the activities due to the cost of public transport or general vehicle costs – insurance, tax, fuel, road charges, parking charges. It does not include if the respondent says they are prevented from going out socially (such as going out for dinner) as much as they would like due to the cost of eating out. This is because the focus of the BA1, BA2 and BA3 questions is on mobility and accessibility issues.

2. Lack of self-confidence includes those situations when respondent lacks confidence as a driver, or on the abilities of the driver, being nervous about travelling late in the evening, etc. Different types of phobia are also to be considered here.

3. Attitudes of other people includes 'feeling stigmatised', other people lacking confidence in the respondent as the driver, comments or staring from other people.

4. Lack of convenient or available transport: It refers to both private and public forms of transport. The transport which is available may not go where the person wants to go or at the time the person wants to go. Includes no close public transport, not frequent enough, distance to places which may apply particularly where the respondent lives in a rural area.

5. Difficulties travelling on transport (such as getting on or off transport, no seats available, too uncomfortable): It includes different situations inter alia, difficulties using transport with small children, or lack of space (too crowded, impossibility to sit as no seats are available), transport too noisy or too dirty. Unsuitable area surrounding transport station or stop (such as hills, slopes, steps, footpath design) are also to be include here.

6. Difficulties parking (such as not enough spaces) Includes not enough drop off areas.

7. Poor buildings' infrastructure and accessibility (lack of elevators, ramps, signs, doors too narrow, toilets not adapted, etc.): It refers to the design of buildings or the immediate surrounding area which restricts people from getting in, out or around the building once inside (for example, going through a department store or getting from one floor to another). It includes difficulty using stairs to get into building or poor signage, using the facilities in the building (for example, using the toilets where perhaps the cubicle is too small).

8. Other reasons: Any other reason that cannot be classified under codes 1 to 7 is to be included here. Some examples:

- does not have the time, too busy looking after the family or children, too busy with school or college, too tired, time taken up caring for sick relatives
- weather conditions not appropriate for the respondent to leave their home whenever they want to

BA5: Difficulty attending social activities such as getting together with family or friends, going to dinner, going to social events due to long-standing health problems

1) Question

Do you usually have difficulty attending social activities such as getting together with family or friends, going to dinner, going to social events (either alone or accompanied) because of a long-standing health problem? Would you say having…

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do
5. No interest in this activity / Do not want to do it

Interviewer instruction: The use of mobility aids such as, canes, crutches, wheelchairs as well as personal help is to be considered when answering the question.

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

This question focuses on social activities where other people are present. They could be immediate or extended family members, friends, or work /school colleagues but also unknown persons. Some people may live in such remote communities that regular social participation is not practicable. Other people due to a health condition or activity limitation might face external barriers to participation in social activities (such as, family responsibilities, accessibility, transport problems, societal attitudes). Therefore, the key issue is not the range and frequency of the respondent's participation in such activities but on the difficulty they face in doing it. Attending social activities also refers to the situations where the person goes alone to public places or events where there will be other people around. It includes, inter alia, going to the cinema, attending music events or the theatre, visiting places of special interest such as art galleries, museums or other places of historic interest, stately homes or gardens, going to the circus or visiting a zoo, attending local events such as fetes or carnivals.

In the situation when the respondent indicates not having any long-standing health problem, code 1 "No difficulty" should be used.

BA6 (optional): Main reason contributing to the difficulty experienced attending social events (other than long-standing health problems)

FILTER

Interviewer instruction: Next question (BA6) is to be asked only for respondents who have declared a certain degree of difficulty in the previous BA5 question (code 2 or 3 or 4). Otherwise go to question BA7.

1) Question

Is any of the following reasons also contributing to the difficulty experienced? Please indicate the main reason contributing to the difficulty experienced.

1. Too busy (with work, family, caring or other responsibilities)
2. Lack of money, can't afford it
3. Lack of self-confidence
4. Attitudes of other people
5. Lack of knowledge or information
6. Environmental barriers/no friendly environment (for instance, difficulties with access and use of public transportation, accessing or using buildings, shops, easy movement along streets, parking, etc.)

7. Other reasons
8. None

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

A **showcard** with the possible answer categories could be used.

1. Too busy (with work, family, caring or other responsibilities) includes does not have the time, too busy looking after the family or children, too busy with school or college, work long hours, time taken up caring for sick relatives.

2. Lack of money, can't afford it refers to situations when the respondent has difficulty attending social events due to the cost (for instance, the cost of eating out, buying tickets for sport events).

3. Lack of self-confidence includes those situations when respondent lacks confidence in own abilities, for instance, getting along with other persons. Being nervous about travelling late in the evening is also to be covered here.

4. Attitudes of other people includes 'feeling stigmatised', other people lacking confidence in the respondent, lack of support from family, friends, colleagues, comments or staring from other people.

5. Lack of knowledge or information includes not knowing what possibilities are available or how to access them.

6. Environmental barriers/no friendly environment (for instance, difficulties with access and use of public transportation, accessing or using buildings, shops, easy movement along streets, parking, etc.) includes situations where:

- The venue is too far away, transport is not convenient or available to get there, difficulty getting on or off transport, limited parking spaces, etc.
- The respondent faces difficulties getting into the building or using the facilities there (lack of ramp/handrails, lack of resting areas, lack of bathroom facilities, doors too narrow, etc.)
- The surrounding terrain of a venue is poor

7. Other reasons Any other reason not classified above is to be included here. There is no need to specify these reasons.

BA7: Difficulty using internet due to long-standing health problems

1) Question

Do you usually have difficulty using the internet because of a long-standing health problem? Would you say having…

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all / Unable to do
5. No interest in this activity / Do not want to do it

2) Guidelines

- **General concept**: measure the participation restriction related to long-standing health problems.
- **Policy relevance:** disability policies, ageing population incl. pre-retirement population issues.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** new question.

The Internet holds much potential for enhancing opportunities for obtaining knowledge and communication.

The interest is in finding out whether the respondent has difficulties due to long-standing health problems using the interne (whatever the purpose, such as communicating using email or social networking sites, Skyping, shopping, listening to music or watching video clips, studying, working or just browsing through websites). The internet can be accessed from different locations such as from home, work, education establishments, hotels, Internet cafes, libraries, or day-care centres. The internet can be accessed using different types of devices such as PC, laptop, tablet, smartphone or television. People of all ages can use the internet and should not be excluded from the questioning.

There may be many various reasons as to why the respondent has difficulty using the internet. Of interest with this question is only to identify those that have difficulties due to physical or mental health-related reason. Therefore, lacking computer skills, limitations on the time using the internet or the availability of the internet connection used are of no interest here. Also, if the respondent usually has internet access and uses it, but it is currently unavailable for some reason, such as a faulty connection, this should not count as having difficulties using internet.

In the situation when the respondent indicates not having any long-standing health problem, code 1 "No difficulty" should be used.

Code 5 corresponds to those who do not want to use the internet. If respondents cite 'I'm too old for this', the interviewer should find out why they say that. If there is no interest in using the internet or lack of knowledge about the internet, then use code 5. For other reasons (such as, or if the respondent has cognition or concentration problems) ask the respondent to indicate the level of difficulty.

1.2.9. Pain (PN)

Pain covers another important domain of health state, in particular in terms of physical aspects of well-being.

The questions on measuring bodily (physical) pain comes from SF-36v™ 2 Health Survey © 1996, 2000 by Quality Metric Incorporated and Medical Outcomes Trust. They focus the intensity of bodily pain and the extent pain interfered with normal work.

Some national language versions of the questions are available.

Introduction PN

Next questions are about any physical pain you have had during the past 4 weeks.

PN1: Intensity of bodily pain during the past 4 weeks

1) Question

How much bodily pain have you had during the past 4 weeks?

1. None
2. Very mild
3. Mild
4. Moderate
5. Severe
6. Very severe

2) Guidelines

- **General concept**: physical pain experienced by the respondent in the past 4 weeks, on average (measure of the intensity of pain).
- **Policy relevance**: ECHI 37.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"Bodily (physical) pain" is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage ([40]); it is always unpleasant and therefore also an emotional experience.

([40]) The definition of pain according to the International Association for the Study of Pain

As regards the issue of considering or not the **use of medication** when answering the questions on pain, Eurostat recommends – in line with the Washington Group – the following instruction for interviewers: If respondent asks whether they are to answer about their pain when taking their medications, say: **Please answer according to whatever medication** [you were/he was/she was] **taking**."

Pain is always **subjective** and respondents should reply according to their experience of it.

Respondents who experienced more than one pain ([41]) have to consider **all of them together**.

Use of showcard: A showcard of response categories can be used.

FILTER

Interviewer instruction: Next question (PN2) is to be asked only for respondents who have declared a certain level of pain (codes 2, 3, 4, 5 or 6 in PN1). Otherwise go to the next sub-module.

PN2: Extent that pain interfered with normal work during the past 4 weeks (including both work outside the home and housework)

1) Question

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

1. Not at all
2. A little bit
3. Moderately
4. Quite a bit
5. Extremely

2) Guidelines

- **General concept**: impact of the pain on respondent's daily life.
- **Policy relevance**: ECHI 37.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question but the filter is new.

"Pain" is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage ([42]); it is always unpleasant and therefore also an emotional experience.

Pain is always **subjective** and respondents should reply according to their experience of it.

Respondents who experienced more than one pain have to **consider all of them**.

"Normal work" includes all activities respondent usually does in leisure time (sports, housework) or at work (or school).

Use of showcard: A showcard of response categories can be used.

([41]) The International Association for the Study of Pain recommends different wait-times for different types of pain:
(•) Acute painful conditions should be treated immediately (e.g., sickle cell painful crises and pain related to trauma or surgery);
(•) Most urgent (1 week): A painful severe condition with the risk of deterioration or chronicity, such as the acute phase of complex regional pain syndrome (CRPS), pain in children, or pain related to cancer or terminal or end-stage illness;
(•) Urgent or semi-urgent (1 month): Severe undiagnosed or progressive pain with the risk of increasing functional impairment, generally of 6 months' duration or less (back pain that is not resolving or persistent postsurgical or post-traumatic pain);
(•) Routine or regular (8 weeks): Persistent long-term pain without significant progression.

([42]) The definition of pain according to the International Association for the Study of Pain

1.2.10. Mental health (MH)

Mental health is an important domain of health state as it composes high share of total burden of diseases and is important part of well-being.

Patient Health Questionnaire (PHQ-8), 8-item depression screener, was selected as the instrument to monitor mental health and it encompasses a subset of the negative mental health dimension–mental health problems. It is an instrument for assessing and monitoring the prevalence and severity of current depressive symptoms and functional impairment and to make tentative depression diagnosis ([43]).

It originally comes from the Brief Patient Health Questionnaire, Depression Module (PHQ-9) ([44]) and was based on criteria for depression of the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV)[45].

WHO-5 is an instrument on positive mental health allowing to identify not only individuals who presently suffer from depression, but also those with impaired level of functioning who may be at risk for developing future mental and other health-related problems and should be thus included in targeted prevention activities.

Introduction MH1

Next questions are about how you feel and how things have been with you during the past 2 weeks. For each question, please give the answer that come closest to the way you have been feeling.

MH1: Extent of [problem related to mental health] over the last 2 weeks

1) Question

Over the last 2 weeks, how often have you been bothered by any of the following problems?

1. Not at all ([46])
2. Several days
3. More than half the days
4. Nearly every day

Interviewer instruction: Tick an answer for each of the questions.

Problem
A. Little interest or pleasure in doing things
B. Feeling down, depressed or hopeless
C. Trouble falling or staying asleep, or sleeping too much
D. Feeling tired or having little energy
E. Poor appetite or overeating
F. Feeling negative about yourself or that you are a failure or have let yourself or your family down

([43]) For more information, see the Final Report of the Eurostat grant on Improvement of the European Health Interview Survey (EHIS) modules on alcohol consumption, physical activity and mental health, pages 322-341

([44]) The 9th question of the PHQ-9 is about "thoughts that one would be better off dead or of hurting oneself in some way" which is a particularly important question is to assess suicide risk, but is particularly sensitive to ask at the same time. Pretesting by the Eurostat contractor confirmed the **strong sensitivity** of the question and therefore should not be declared as mandatory in EHIS wave 3.

([45]) The newest version of Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-V) is in use since 2013.

([46]) If a respondent insists on having had one of the problems for only one day during the past 2 weeks, Eurostat proposes that the answer to be coded by the interviewer should be "Not at all" (not "Several days"). This in spite of the fact that pre-testing by the Robert Koch Institute for the preparation of EHIS wave 2 (2011) remained without final conclusion on this issue.

Problem
G. Trouble concentrating on things, such as reading the newspaper or watching television
H. Moving or speaking so slowly that other people could have noticed; or being so fidgety or restless that you have been moving around a lot more than usual

2) Guidelines

- **General concept**: sub-module for assessing and monitoring the prevalence and severity of current depression according to criteria of the Diagnostic and Statistical Manual of Mental Disorders – version 4 (DSM-IV).
- **Policy relevance**: ECHI 38, Communication on a comprehensive approach to mental health
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

Country specific versions of the PHQ-9 are freely available at www.phqscreeners.com and these should be used by preference. It has been translated into some European languages. The following European language translations are still missing: Latvian, Estonian, Slovenian and Maltese.

Otherwise, please use the instrument version above and apply the following descriptions of the specific criteria for major depressive episodes according to DSM-IV for the translation process:

- **"Little interest or pleasure in doing things"**: markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others);
- **"Feeling down, depressed or hopeless"**: depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observations made by others (e.g., appears tearful);
- **"Trouble falling or staying asleep, or sleeping too much"**: sleep disturbances or excessive sleepiness nearly every day;
- **"Feeling tired or having little energy"**: fatigue or loss of energy nearly every day;
- **"Poor appetite or overeating"**: decrease or increase in appetite nearly every day;
- **"Feeling negative ([47]) about yourself–or that you are a failure or have let yourself or your family down"**: feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being ill);
- **"Trouble concentrating on things, such as reading the newspaper or watching television"**: diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others);
- **"Moving or speaking so slowly that other people could notice. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual"**: psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down);

Interviewer's instructions:

- The interviewer should ensure that **complete information** is obtained for all of the questions; otherwise, the output indicators can't be calculated.
- Respondents should select the answer categories that best describe their situation **over the last 2 weeks** that is the preceding period of 2 weeks (from yesterday).
- Respondents should answer the questions by using the **given answer options only**. Answers outside the given answer categories are not permitted ([48]).
- A **showcard** with possible response categories can be used.

([47]) The countries are free to choose the official version of PHQ-9 and change the wording from "negative" to "bad".

([48]) If a respondent insists on having had one of the problems for only one day during the past 2 weeks, Eurostat proposes that the answer to be coded by the interviewer should be "Not at all" (not "Several days"). This in spite of the fact that pre-testing by the Robert Koch Institute for the preparation of EHIS wave 2 (2011) remained without final conclusion on this issue.

Introduction MH2

Please indicate for each of the following five statements which is closest to how you have been feeling over the last two weeks.

MH2A	**Feeling cheerful and in good spirits over the last 2 weeks**
MH2B	**Feeling calm and relaxed over the last 2 weeks**
MH2C	**Feeling active and vigorous over the last 2 weeks**
MH2D	**Waking up feeling fresh and rested over the last 2 weeks**
MH2E	**Feeling that daily life has been filled with things that interest over the last 2 weeks**

MH2: WHO-5 Well-being Index

1) Question

How much of the time over the last 2 weeks …?

1. All of the time
2. Most of the time
3. More than half of the time
4. Less than half of the time
5. Some of the time
6. At no time

Interviewer instruction: Tick an answer for each of the questions.

Statement
I have felt cheerful and in good spirits
I have felt calm and relaxed
I have felt active and vigorous
I woke up feeling fresh and rested
My daily life has been filled with things that interest me

2) Guidelines

- **General concept**: The WHO-5 Well-being Index is a questionnaire that measures current mental well-being in the time frame of the previous two weeks([49]).
- **Policy relevance**: Communication on a comprehensive approach to mental health, the High-Level Conference on Mental Health and Well-being underscored the importance and relevance of mental health and well-being for the European Union, its Member States, stakeholders and citizens" (European Union, 2008).
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new questions.

([49]) From an original 28-item WHO Well-Being Questionnaire 10 items were identified which belonged to an overall index of positive and negative well-being in a single unidimensional scale. Subsequent examination revealed that 5 of the 10 items focused on being interested in things, while one item (being depressed) was indicative of negative well-being. The 5 items covering being interested in things were collapsed to one: "My daily life has been filled with things that interest me" while the negatively phrased item was changed to the positively phrased: "I have felt cheerful and in good spirits". This resulted in the WHO-5 Well-Being Index.

WHO-5 has been validated in several studies with regard to both clinical and psychometric validity.

WHO-5 is a measure of general wellbeing which asks respondents to rate their interest, engagement and mood. The questions are best set out on a grid, with the ability to score which statements are closest to how someone has been feeling over the last two weeks ([50]).

Country specific versions of the WHO-5 instrument are freely available at this link and these should be used by preference. It has been translated into some European languages. Some European language translations are still missing: Croatian, Latvian, Estonian, Slovakian and Maltese.

Interviewer's instructions:

The interviewer should ensure that **complete information** is obtained for all of the questions; otherwise, the output indicators can't be calculated.

Respondents should select the answer categories that best describe their situation **over the last 2 weeks** that is the preceding period of 2 weeks (from yesterday).

Respondents should answer the questions by using the **given answer options only**. Answers outside the given answer categories are not permitted ([51]).

A **showcard** with possible response categories can be used.

1.3. European Health Care Module (EHCM)

The ECHM module collects data on the use of formal health care services and the unmet needs for formal health care. Information on health care consumption is an essential part of the health information system to assign necessary resources to the population.

Administrative data may provide more reliable and accurate data on health care services, but not necessarily comparable between countries. The advantage of observing the data via EHIS is that firstly, we can receive comparable data for all countries due to same method of data collection; and secondly, it enables linking the data with characteristics of health status, health determinants and socio-economic characteristics.

This allows analysing the relations between health consumption and several determinants such as health status, lifestyles or socio-demographic characteristics as well as the relations between different types of health care use. As such EHIS data permit the comparison of the health needs and health consumption and thus make it also possible to explore the concepts of vertical and horizontal equity in health care.

A general note: for all questions of the EHCM, the operationalization and translation into the different national languages should consider the specificities of the national health care systems.

1.3.1. Use of inpatient and day care (HO)

Introduction HO

The next set of questions is about time spent in hospital. All types of hospitals are included.

Interviewer clarification: For women up to age 50 years, add: "The time spent in hospital for giving birth should not be included".

([50]) World Health Organisation Five Well-Being Index (WHO-5)

([51]) If a respondent insists on having had one of the problems for only one day during the past 2 weeks, Eurostat proposes that the answer to be coded by the interviewer should be "Not at all" (not "Several days"). This in spite of the fact that pre-testing by the Robert Koch Institute for the preparation of EHIS wave 2 (2011) remained without final conclusion on this issue.

Hospital services are the most expensive care services and are related to the most severe health problems for which ill person are admitted either as inpatients or day patients.

Inpatients are patients who are formally admitted to a healthcare facility (hospitalised) for treatment and/ or care and require at least an overnight stay in a hospital or other institution providing inpatient care. Being formally admitted means that the patient is assigned a room or a bed during their stay in the healthcare facility.

Day patients are patients who receive planned medical and paramedical services delivered in a healthcare facility and who are formally admitted for diagnosis, treatment or other types of healthcare and are discharged on the same day. The term does not cover those using outpatient services (who are not formally admitted to a healthcare facility), emergency services or services provided by diagnostic centres or similar facilities that are not part of private or public hospitals or clinics. Being formally admitted means that the patient is assigned a room or a bed during their stay in the healthcare facility.

Guidelines

Hospitals comprise licensed establishments primarily engaged in providing medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialised accommodation services required by inpatients.

Hospitals provide inpatient health services, many of which can only be provided using the specialised facilities and equipment that form a significant and integral part of the hospitals' production process. In some countries, health facilities need in addition a minimum size (such as a minimum number of beds) to be formally registered as a hospital (SHA definition).

Hospitals may also provide out-patient services (i.e., a patient has contact with an ambulatory care physician in hospital or a short-term treatment in the emergency unit of the hospital) as a secondary activity, but such cases are not considered within variable HO12.

All types of hospitals are included: the general term hospital is preferred. When necessary and due to local singularities, the interviewer should explain that all kinds of hospitals as well as psychiatric/ mental health hospitals and specialized hospitals or clinics are included. On the other hand, nursing homes and institutes providing care for those with learning disabilities are excluded.

Hospitalisation abroad is also included.

The time spent in hospital for women giving birth without further complications should not be included in the number of hospital days. However, time spent for reasons related to antenatal and postnatal period (e.g., complications during pregnancy, abortions, and complications after giving birth) should be included.

The same model questions are proposed for EHIS wave 4 as in wave 3.

HO12: Number of nights spent as a patient in a hospital the past 12 months

1) Question

HO1A:

In the past 12 months have you been in hospital as an inpatient, that is overnight or longer?

1. Yes
2. No

Interviewer clarification: "Visits to emergency departments only (without overnight stay) or as outpatient only should not be included".

FILTER

Interviewer: Next question (HO1B) is to be asked only for respondents who have been in hospital as an inpatient (codes 1 in HO1A).

HO1B:

Thinking of all these occasions you have been an inpatient, how many nights in total did you spend in hospital?

Number of nights: |__|__|__|

2) Guidelines

- **General concept**: inpatient hospitalisation and number of nights hospitalised as inpatients.
- **Policy relevance:** health system performance and sustainability, planning of health care resources, equity.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical questions.

An **inpatient** is a patient who is formally admitted (or "hospitalised") to an institution for treatment and/ or care and stays **for a minimum of one night or more than 24 hours** in the hospital or other institution providing inpatient care.

Overnight stay means a stay of minimum one night or more than 24 hours.

During the past 12 months, that is since (date one year ago): a period of 12 months that started one year from the date of the interview (ex: the time period between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

The **day of interview** should not be considered as part of the reference period.

Excluded are day (care) cases (patients formally admitted for a medical procedure or surgery in the morning and released before the evening).

In case the **respondent is currently hospitalised**, the number of nights corresponding to the current hospitalisation should not be counted.

HO34: Number of times admitted as a day patient in a hospital the past 12 months

1) Question

HO2A:

In the past 12 months have you been admitted to hospital as a day patient, that is admitted to a hospital for diagnostic, treatment or other types of health care, but not required to remain overnight?

1. Yes
2. No

FILTER

Interviewer: Next question (HO2B) is to be asked only for respondents who have been in hospital as a day patient (code 1 in HO2A).

HO2B:

In the past 12 months how many times have you been admitted to hospital as a day patient?

Number of times: |__|__|__|

2) Guidelines

- **General concept**: Number of hospitalisations as day patient.
- **Policy relevance:** health system performance and sustainability, planning of health care resources, equity.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical questions.

A "**day patient"** is a patient who is formally admitted to an institution for acute treatment and/ or acute care but stays for **less than 24 hours** (and does **not stay overnight**) in the hospital or other institution providing acute care.

"During the past 12 months", that is since (date one year ago): a period of 12 months that started one year from the date of the interview (ex: the time period between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

Day care (adapted according to SHA 2011) ([52]): In contrast to inpatient and outpatient care, **day care** comprises planned medical and paramedical services delivered to **patients who have been formally admitted** for diagnosis, treatment or other types of health care but with intention to **discharge the patient on the same day**. Day care can relate to preventive, curative, rehabilitative ([53]) and long-term care services.

Day-care services can be delivered in **hospitals, ambulatory premises or free-standing day-care centres**. Day-care elective surgery is often performed in institutions or wards that specialise in planned services. This can include any elective invasive therapies provided, usually under general or local anaesthesia, to day-care patients whose post-surveillance and convalescence care requires no overnight stay as an inpatient (for example, laser surgery, dialysis and so on). It may also include non-invasive recurrent and planned therapy (such as rehabilitation in individual or group sessions).

Excluded are services delivered by diagnostic centres or similar facilities that are not part of private or public hospitals or clinics; they are not considered as an "admittance as day patient in a hospital".

A day patient (or "same-day patient") is usually admitted and then discharged after staying between 3 and 8 hours on the same day. Services for non-admitted patients that are extended to formal admission for day-care are considered as day care.

Being (formally) admitted usually mean that the patient is assigned a room or a bed during his stay in the health care facility.

A contact for a patient who is admitted as a day-care patient, but then due to a complication is retained for at least one night, should be **re-classified as an inpatient case** and his/ her number of nights in spent in hospital should be counted under HO12.

A contact for a patient who is **not formally admitted** for diagnosis, treatment or other types of health care should be considered as outpatient care and therefore not included here a case of day care.

1.3.2. Use of ambulatory and home care (AM)

Introduction AM1

The next question is about visits to dentists, orthodontists or other dental care specialist.

Guidelines

Dental services are not the most frequently used outpatient care services but they are often expensive and have a big prevention potential.

Dentist: health professional who diagnoses and treats diseases, injuries and malformations of the teeth, gums and related oral structures. They restore normal oral function using a broad range of treatments, such as surgery and other specialist techniques, and advice on oral health. Dentists' tasks include: diagnosing, advising on and providing necessary dental treatment, administering surgical, medical and other forms of treatment for particular types of dental and oral diseases and disorders.

Orthodontist: dental specialist who diagnoses, prevents and corrects irregularities of the teeth and jaw problems (for example, correcting misaligned teeth through the use of braces).

Other dental care specialists (dental hygienists or dental hygiene practitioner). Their tasks can differ from one country to another. Also, in some cases they practice under the supervision of a dentist. They do less complex dental and oral care, such

([52]) OECD/Eurostat/WHO (2017), A System of Health Accounts 2011: Revised edition, OECD Publishing, Paris

([53]) Also more paramedical therapies like art therapy and musicology – as long as they are done for rehabilitation purposes in a hospital – should be included.

as advice patients to develop and maintain good oral health, examine patients' teeth and gums, remove deposits and plaque from teeth, make fillings, dental X-rays or local anaesthesia, etc.

AM1: Last time of a visit to a dentist or orthodontist (for personal treatment)

1) Question

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.)? Would you say …

1. Less than 6 months
2. 6 to less than 12 months
3. 12 months or longer
4. Never

2) Guidelines

- **General concept**: moment of last visit to a dentist.
- **Policy relevance:** ECHI 72, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"On your own behalf": refers to visits that focus on respondent's health.

Only consultations in a medical office should be considered. Home visits and consultations by telephone should not be included.

Adaptations of the question: Countries may split the first answer category further to "less than 3 months" and to "3 to less than 6 months".

Pre-testing of the Eurostat contractor revealed that the question is somewhat **sensitive** and some people would feel embarrassed to admit that they cannot afford a dentist or orthodontist; on the other hand, the question seems also **suitable for self-completion**.

Introduction AM2

The next questions are about consultations with your general practitioner or family doctor. Please include visits to your doctor's office as well as home visits and consultations by telephone.

General practitioners (GP) and family doctors constitute the primary access to health care in most of the EU Member States. In addition, in numerous countries, the GPs and family doctors shall be consulted to be oriented to a specialist when needed. Access to dental or primary medical examination is consequently a key element of equity in relation to health care.

Guidelines

Consultations with your general practitioner or family doctor: all types of consultations are considered (face-to-face, by telephone or e-mail).

Excluded: Contacts with a nurse on behalf of the GP, for instance for receiving a receipt; or visits for prescribed laboratory tests or visits to perform prescribed and scheduled treatment procedures (e.g., injections). Telephone contacts (even with a doctor) without consulting own health (for example just for arranging an appointment with a doctor).

Your doctor's practice: the office of the physician.

Home visits: consultations at your place/ at home.

General practitioner (GP)/ family doctor is a physician (medical doctor) who does not limit his/ her practice to certain disease categories (is not specialised), who provides individuals, families and communities with a wide range of ongoing medical care or and who can refer patients to another health care professional. In some countries, GP is treated as a specialisation. The definition should be accommodated local languages/ terms.

Some illustrative **examples of GP's** given in ISCO-08 ([54]) and SHA 2011 ([55]): district medical doctor – therapist, family medical practitioner, general practitioner, medical doctor (general), medical officer (general), resident medical officer specializing in general practice, paediatricians providing general medicine in private offices (general practitioner for children and adolescents), physicians in walk-in offices/ centres.

Adaptations of the questions: If some countries cannot distinguish between GPs/ family doctors and specialists they may join the respective questions into one. This adaptation should only be exceptional as the split is requested by ECHI (71 and 72). This should also be justified and described in quality report.

AM2: Last time of a consultation of a general practitioner or family doctor (for personal treatment)

1) Question

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

2) Guidelines

- **General concept**: moment of last consultation of a general practitioner or family doctor.
- **Policy relevance:** ECHI 71, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"When was the last time you consulted" refers to the moment of the last consultation.

"On your behalf": refers to visits/ contacts that focus on respondent's health.

Also visits to a physician in **foreign countries** are to be included.

Adaptations of the questions: Countries may further split the first answer category to "less than 3 months" and to "3 to less than 6 months" or to "6 to less than 12 months".

FILTER

Interviewer: Next question is to be asked only for respondents who consulted a GP in the last 12 months (code 1 in AM2).

AM3: Number of consultations of a general practitioner or family doctor during the past four weeks (for personal treatment)

1) Question

During the past four weeks, how many times did you consult a GP (general practitioner) or family doctor on your own behalf?

Number of times: |__|__| [not at all = 0]

([54]) International Standard Classification of Occupations 2008 (ISCO-08): Structure, group definitions and correspondence tables

([55]) OECD/Eurostat/WHO (2017), A System of Health Accounts 2011: Revised edition, OECD Publishing, Paris

2) Guidelines

- **General concept**: number of consultations of general practitioner or family doctor within the past 4 weeks.
- **Policy relevance:** ECHI 71, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"During the past four weeks": a period that started 4 weeks from yesterday.

"How many times did you consult …?": number of consultations.

"On your behalf": refers to visits/ contacts that focus on respondent's health.

Introduction AM4

Next questions are about consultations with medical or surgical specialists. Include visits to doctors as outpatient or emergency departments only, but do not include contacts while in hospital as an in-patient or day-patient.

Specialists treat often more severe diseases and are usually not directly accessible but only if referred by a GPs and family doctors. In some Member States this situation is generating waiting lists. In addition, medical and surgical specialists' rates may be high and consequently not fully compensated by insurance systems. For all these reasons the access to medical and surgical specialists is measuring an important aspect of equity in relation to health care.

Guidelines

Consultations with medical or surgical specialists: all types of consultations are considered (face-to-face, by telephone or e-mail).

Medical or surgical specialists: refers to medical doctors specialized in the diagnosis or use of surgical techniques, or both, to treat disorders and diseases. Their tasks include: conducting medical examination and making diagnosis, prescribing medication and giving treatment for diagnosed illnesses, disorders or injuries, giving specialized medical or surgical treatment for particular types of illnesses, disorders or injuries, giving advice on and applying preventive medicine methods and treatments. Included are also general gynaecologists, psychiatrists or other medical specialists fulfilling this definition. Dental surgeons are also included, but not general dentists.

Psychiatrists should be included in medical specialties but put also into mental health care providers (together with psychologists and psychotherapists) (see AM6b).

Visits to doctors at the workplace or school: Tasks of doctors at the workplace or school may differ between countries. If their tasks cover mainly or the reason for visiting these doctors is occupational health care (preventive, curative or any other) then the doctors should be treated as specialists. If the nature of their task is mainly general medicine, they should be treated as GPs.

Outpatient departments: ward at hospital for ambulatory care. It refers to visits/ consultations of patients at the specialist's office in a hospital.

Emergency departments: ward at hospital for emergency care.

Adaptations of the questions: If some countries cannot distinguish between GPs/ family doctors and specialists they may join the respective questions into one. This adaptation should only be exceptional as the split is requested by ECHI (71 and 72). This should also be justified and described in quality report.

AM4: Last time of a consultation of a medical or surgical specialist (for personal treatment)

1) Question

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

Interviewer clarification: "Do not include visits to general dentists".

Only for countries where this may cause confusion, add: "Visits to dental surgeons should be included".

2) Guidelines

- **General concept**: moment of last consultation of (medical or surgical) specialist.
- **Policy relevance:** ECHI 72, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"When was the last time you consulted a medical or surgical specialist" refers to the moment of the last consultation.

"On your behalf": refers to visits/ contacts that focus on respondent's health.

Also visits to a physician in **foreign countries** are to be included.

Excluded are general practitioners and dentists/ stomatologists.

Included are paediatricians, obstetricians and gynaecologists, chiropractors and psychiatrists.

Countries could only include those professional groups of medical or surgical specialists that are formally recognised in the national health system.

Adaptations of the questions: Countries may further split the first answer category to "less than 3 months" and to "3 to less than 6 months" or to "6 to less than 12 months".

FILTER

Interviewer instruction: Next question is to be asked only for respondents who consulted a specialist in the last 12 months (code 1 in AM4).

AM5: Number of consultations of a medical or surgical specialist during the past four weeks (for personal treatment)

1) Question

During the past four weeks, how many times did you consult a specialist on your own behalf?

Number of times: |__|__| [not at all = 0]

2) Guidelines

- **General concept**: number of consultations with (medical or surgical) specialist.
- **Policy relevance:** ECHI 72, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"**During the past four weeks**": a period that started 4 weeks from yesterday.

"**How many times did you consult?**": number of consultations.

"**On your behalf**": refers to visits/ contacts that focus on respondent's health.

AM6: Consultation of a [type of profession] in the past 12 months

Rehabilitative care services and mental care services constitute an important part of health care services and are increasing due to ageing societies and changes in burden of diseases profile. The survey questions focus on outpatient visits of the following professionals: physiotherapists, kinesitherapists, chiropractors or osteopaths representing rehabilitative care services and psychologists and psychotherapists (including psychiatrists) representing mental care services.

1) Question

In the past 12 months have you visited on your own behalf a …?

1. Yes
2. No

Interviewer instruction: Tick YES or NO for each of the professions.

Type of profession
A. Physiotherapist, kinesitherapist, chiropractor or osteopath[56]
B. Psychologist, psychotherapist or psychiatrist

2) Guidelines

- **General concept**: whether the respondent visited different types of health care professionals.
- **Policy relevance:** ECHI 72, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question

In the past 12 months, that is since (date one year ago): a period of 12 months that started one year from the date of the interview (ex: the time period between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

"Physiotherapist, kinesitherapist, chiropractor or osteopath" cover both non-physician and medical (chiropractor) health care providers.

Specific for these **health care professionals** is that they apply one or more of following therapies for the improvement or restoration of patient's motor functions: movement therapy, massage therapy and physical therapy in a strict sense, i.e., the application of physical stimuli, electrotherapy, ultra-sound therapy, thermotherapy, hydrotherapy, balneotherapy and electro-diagnostics, with the exclusion of the application of ionising beams. They treat disorders of bones, muscles and parts of the circulatory or the nervous system by manipulative methods, and ultrasound, heating, laser or similar techniques, or apply therapies as part of the treatment for the (temporarily) physically disabled, mentally ill or unbalanced.

Chiropractors are health care professionals (specialised medical doctors) focused on the diagnosis and treatment of neuromuscular disorders, with an emphasis on treatment through manual adjustment and/ or manipulation of the spine.[57]

The therapies are provided by these health care professionals in a variety of settings, such as hospitals, private practices, outpatient medical units, home care services establishment, schools, fitness centres, etc.

Fitness instructors are not to be included.

The **psychologist, psychotherapist or psychiatrist** are health professionals providing mental healthcare, who may be medical professionals (psychiatrists) or not. The tasks of these health care professionals cover psychological assessment and psychotherapy but also medical psychiatric care (psychiatrists).

([56]) The professions of chiropractors or osteopaths are not mentioned (yet) under variable AM6A in the Implementing Regulation; see also "Adaptation of the question" in the Guidelines.

([57]) See e.g., What is a Chiropractor?

Adaptations of the question:

A: Countries may further split AM6A to distinguish visits to chiropractors from visits to physiotherapists, kinesitherapists and osteopaths. And countries can include in question AM6A only those professional groups that are existing in their health system.

B: Countries may further split AM6B to distinguish visits to psychiatrists from visits to psychologists or psychotherapists.

Instruction to interviewer: An answer should be recorded for each type of profession.

LT1: Receiving regularly (at least once a week) informal care or assistance due to a chronic health condition or infirmity or due to old age

Use of home care services and the corresponding expenditures are strongly increasing with the ageing of the society and are a key element of the future development of health care systems.

Introduction LT1:

The next question is about regularly receiving any unpaid care or assistance from family members, friends or neighbours for a wide spectrum of personal care or household care activities (for instance, house cleaning or shopping but also receiving companionship and emotional support) due to a long-standing health problem or old age.

1) Question

In the past 12 months, have you received any unpaid care or assistance from a family member (within or outside your household), partner, friend or neighbour because of a long-standing health problem or old age, at least once a week? Please include any help or assistance with personal care and household activities, as well as companionship and emotional support.

1. Yes, mainly from a family member
2. Yes, mainly from a non-family member
2. No

2) Guidelines

- **General concept**: whether the respondent has received any type of informal care (that is, receiving help and support from someone in the social environment of the person in need of care without a contractual obligation) on a regular basis (at least once a week).
- **Policy relevance:** European care strategy.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: new question.

Receiving care or assistance from others make it possible for people with a need for long-term care to remain at home rather than use residential, long-term or institution-based nursing care.

The question aims to identify those persons who, due to mental and/or physical frailty, disease and/or disability over an extended period of time, and on a regular basis, receive any unpaid personal care or household assistance. Being accompanied to and from appointments or places, having someone running any errands or providing emotional support are also to be considered among the activities of informal care. This implies that those persons cannot perform one or more day-to-day activities (mainly, personal or household care activities) or are confined to their own houses.

While informal care is provided without contractual obligation based on the personal relationship between the carer and care recipient, and is generally unpaid, the informal carer could receive some monetary compensation from the care recipient or financial support from national or local authorities (caregiver of a family member).

Help with personal care: assistance received for personal hygiene, eating, dressing, bathing, getting in and out of bed or a chair, etc. The help is provided at the person's in need own house.

Home help include tasks such as assistance received in performing daily or routine domestic tasks (preparing meals, house cleaning, doing laundry, ironing, medication reminder, support or taking care of administrative or budgetary tasks, shopping for groceries or personal items, etc.).

Also, the following activities should be considered when answering the question:

- **Transportation, companionship** (for instance, reading a book, playing games or being accompanied by someone when leaving home for a medical appointment, having a walk with the person who receives the care or assistance, for recreational activities, etc.).
- **Moral support, general and family support**; the same for help with interpreting for deaf people and reading for blind people.

Doctor visits (e.g., by the family doctor) at patient's homes are not included.

'At least once a week': care should be provided on a regular basis, i.e., at least some hours per week. If care is not provided every week, it should be provided for at least several hours per week on average. In this context, one week is defined as a whole week, i.e., 7 days.

Informal care means long-term care provided by an informal carer, namely someone in the social environment of the person in need of care, including a partner, child, parent or other person, who is not hired as a professional long-term care worker. Also, **long-term care home volunteers** are included if they are not paid at all.

Any help or assistance received temporarily, for example, during recovery should be excluded. Also, code 3 'No' should be used when the respondent regularly receives help or assistance but not because he/she has a chronic health condition or infirmity or is old (for instance, parents regularly going to child's home for some housework).

LT2: Receiving regularly (at least once a week) any formal services due to a chronic health condition or infirmity or due to old age

Introduction LT2:

The next question is about home care services that cover a wide range of health and social services provided to people with long-standing health problems or who are old, at their homes. These services comprise for example, [home care service provided by a nurse or midwife, home help for the housework or for elderly people, meals on wheels or transportation service] ([58]). Only services provided by professional health or social workers on a regular basis (that is, at least once a week) because of a chronic health condition or infirmity or old age should be considered.

1) Question

In the past 12 months, have you used or received for yourself any home care services provided by professional health or care workers, at least once a week?

1. Yes
2. No

2) Guidelines

- **General concept**: whether the respondent has used any type of formal home (health and social) care services because they have mental and/or physical frailty, disease and/or disability.
- **Policy relevance:** European care strategy.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: question slightly changed.

Home care services cover a wide range of health and social services and interviewers should specify them to get a full picture on their use. Home care services refer to the provision of **medical and non-medical in-home supporting care services** for persons who, due to mental and/or physical frailty, disease and/or disability, cannot perform specific personal

([58]) Kinds of services according to national organization of the services should be presented to respondents.

or household care activities or are confined to their own houses. It includes home-offered services provided by a visiting nurse or midwife from a health institute, agency or association, or by a community organisation using professional or non-professional (volunteer) staff for care delivery.

Kinds of services according to national organization of the services should be presented to respondents by interviewers.

Examples of **home medical services**: extra assistance after a stay in the hospital, assistance to persons with chronic illnesses who need help caring for themselves long term, home dialysis, provision of antenatal and post-natal care instructions to parents, etc.

Examples of **home non-medical (personal) services**: assistance for personal hygiene, eating, dressing, bathing, etc. The services are provided at the person's in need own house.

Home help for the housework or for older people (non-medical non-personal services): these services include tasks such as assistance in performing daily or routine domestic tasks (preparing meals, housecleaning, doing laundry, ironing, medication reminder, taking care of finances and administrative tasks, shopping for different items, etc.). These services are offered by the municipality or private organisations to allow to the person in need to continue living in his own house.

"Meals on wheels": care service aiming at delivering a meal to persons who cannot go out to shop for food or have difficulty in preparing meals for themselves because of physical or mental illness or disability or because of impairment due to old age.

Transportation service: door-to-door and sometimes specially adapted service who allows to the ones who are confined to their own houses because of a disability and/ or old age to travel for different purposes, such as to medical appointments, to shop, for recreational activities, etc.

Other home care services can be provided such as support in the personal development to persons with a physical or mental disability and/ or who are in a social isolation (to overcome the barriers in accessing employment, education and leisure opportunities). Moral support, general and family support should be included when answering the question; the same for help with interpreting for deaf people and reading for blind people.

Doctor visits (e.g., by the family doctor) at patient's homes are not included.

Only **formal care services** provided by professional health or social workers (but not informal help and support by family members, friends or neighbours) should be included here.

'At least once a week': care should be provided on a regular basis, i.e., at least some hours per week. If care is not provided every week, it should be provided for at least several hours per week on average. In this context, one week is defined as a whole week, i.e., 7 days.

LT3 Number of hours per week regularly receiving (formal) home care services for personal needs

FILTER

Interviewer: Next question is to be asked only for respondents who used home care services in the last 12 months (code 1 in LT2).

1) Question

How many hours per week do you receive care or assistance from a professional health or care workers?

1. Less than 5 hours per week
2. 5 hours to less than 10 hours per week
3. 10 hours to less than 20 hours per week
4. 20 hours to less than 30 hours per week

5. 30 hours to less than 40 hours per week
6. 40 hours per week or more

2) Guidelines

- **General concept**: number of hours during one week receiving care or assistance from professional health or care workers.
- **Policy relevance:** European care strategy.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: new question.

How many hours per week: the respondent should do the sum of the time a professional health or care workers spends with him/her. If the number of hours per week differs substantially from week to week, an average should be reported. If the respondent doesn't know exactly, he/ she should be asked to give an estimate for the whole week.

All days in the week should be considered for the number of hours per week, even Saturdays and Sundays.

1.3.3. Medicine use (MD)

The use of medicines (pharmaceuticals, drugs) has increased a lot during the last decades (it may also be an issue in an ageing society) and it indicates aspects of accessibility, up-to-date quality of care and costs. They shall consequently be also surveyed together with the other elements of the health care services consumption.

The sub-module used distinguishes between prescribed medicines and non-prescribed medicines (also called over-the-counter medicines).

Introduction MD

I'd now like to ask about your use of medicines in the past 2 weeks.

MD1: Use of any medicines prescribed by a doctor during the past two weeks (excluding contraception)

1) Question

During the past two weeks, have you used any medicines that were prescribed for you by a doctor?

Interview clarification: For women, also add: "Exclude contraceptive pills or hormones used solely for contraception".

1. Yes
2. No

2) Guidelines

- **General concept**: use of medicines prescribed by a doctor.
- **Policy relevance**: ECHI 74.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

This question aims at measuring prescribed medicine consumption.

"Your use of medicines": measures use of products that can be understood under the general term "medicines".

"During the past 2 weeks": the preceding period of 2 weeks (from yesterday).

"Have you used?": aims to measure actual use of all medicines used on a doctor's initiative.

"Medicine": product that is used to alleviate symptoms, to prevent illness, or to improve poor health, and which is ordinarily purchased from a pharmacy (including hospital pharmacy; adapted EUROHIS definition) ([59]).

"Prescribed": medicines which were written on a prescription by a doctor (irrespective whether they are reimbursed by health insurance or not). Also included here are consumed medicines which were prescribed in the past by a doctor and recently, the respondent has not visited the doctor to renew the prescription.

Included: medicines, herbal medicines, homeopathic medicines, or dietary supplements (such as vitamins, minerals or tonics), contraceptive pills used for different purposes than contraception, hormones (other than for contraception) that are prescribed by a doctor.

Excluded: contraceptive pills or hormones (both used for contraception) prescribed by a doctor, all non-prescribed medicines.

Adaptations of the question: Exclusion of medicines used for contraception is important for better comparability of medicine consumption between women and men. Countries may ask in an additional and separate question the consumption of contraceptive pills or hormones (both exclusively used for contraception and prescribed by a doctor).

MD2: Use of any medicines, herbal medicines or vitamins not prescribed by a doctor during the past two weeks

1) Question

During the past two weeks, have you used any medicines or herbal medicines or vitamins not prescribed by a doctor?

Interview clarification: For women, also add: "Exclude contraceptive pills or hormones used solely for contraception".

1. Yes
2. No

2) Guidelines

- **General concept**: use of medicines, herbal medicines or vitamins not prescribed by a doctor.
- **Policy relevance:** relevant in order to obtain a whole picture of the medicines consumption.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

"Not prescribed by a doctor": medicines used at the respondent's own initiative or consulted with a doctor but were not written on a prescription.

Included: medicines, herbal medicines, homeopathic medicines, or dietary supplements (such as vitamins, minerals or tonics) that are not prescribed by a doctor.

Excluded: contraceptive pills or hormones (both used for contraception) and herbal teas (if they are not considered as medicines), all medicines or dietary supplements prescribed by a doctor.

1.3.4. Preventive services (PA)

Preventive health care services are important not only to avoid certain diseases but also to identify already existing health problems in their early stages. This enables more effective treatment in terms of bigger impact on health status of the population but also in terms of saving of total health care expenditure.

([59]) See EUROHIS–Developing common instruments for health surveys.

Questions to measure the use of preventing health care services, such as vaccination, checking for important blood parameters related to risk of diseases of the circulatory system and diabetes, and screening of some cancers, are included in this section.

In EU Member States, the majority of the population is covered from the first years of the life by the systematic vaccination against some of the most dangerous communicable diseases. In terms of vaccinations, a growing challenge, in particular again in an ageing society, is to protect persons at risk – elderly people and people suffering some chronic diseases – against influenza.

In addition, the most important causes of deaths among people 44-65 are different types of cancer. Among people 65+ diseases of the circulatory system – this last type of diseases counting also for an important share of premature deaths (<65) – are the most important causes of deaths.

Finally, in relation with the important increase of obesity in EU Member States in the last decades, diabetes is one of the main concerns for the health care system – and could become an important cause of death in the future.

This is why the preventing actions related to these risks are important strategic elements for the quality and sustainability of health care systems and for the increase of healthy life years.

Introduction PA1

Now I would like to ask you about flu vaccination.

PA1: Last time of vaccination against flu

1) Question

When was the last time you've been vaccinated against flu?

Month / year: |__|__|/ |__|__|__|__|
1. Too long ago (before last year)
2. Never

2) Guidelines

- **General concept**: moment of last flu vaccination.
- **Policy relevance:** ECHI 57, OMC HC-S4, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The intention of the question is to find out how many people are protected against seasonal flu.

Asking for the month and the year of the last vaccination should enable to construct indicator of "Proportion of population reporting to have received influenza vaccine during the last 12 months" or even better "Proportion of population reporting to have received influenza vaccine during the last season."

"**too long ago**" is supposed to be used when the last vaccination was provided "before last year" that is when the last vaccination is not effective anymore (in the survey year). Example: If the interview is conducted in 2025 the period "before last year" refers to any date before 31 December 2023.

The answer category "**too long ago**" was included to avoid too many missing answers in cases when the respondent was vaccinated a long time ago but cannot recall the month and year.

The following **adaptation/ split of the question** is allowed: first question: "*Have you ever been vaccinated against flu?*", and the second one: "*When was the last time? Month/ Year?*"

For transmission of data to Eurostat answer categories "Too long ago (before last year)" and "Never" are to be merged and a category "Never or too long ago" is to be used.

Introduction PA2

Now I would like to ask you about your blood pressure, blood cholesterol and blood sugar (glycaemia).

PA2: Last time of blood pressure measurement by a health professional

1) Question

When was the last time that your blood pressure was measured by a health professional?

1. Within the past 12 months
2. 1 to less than 3 years
3. 3 to less than 5 years
4. 5 years or more
5. Never

2) Guidelines

- **General concept**: moment of last blood pressure measurement by a health professional.
- **Policy relevance**: ECHI 43; health care system performance, quality and equity of health care services (hypertension can be a risk factor for many diseases (heart disease, stroke, etc.); it often goes undetected because of infrequent monitoring and the absence of symptoms).
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The answer should refer to blood pressure measured by a health professional and not by the respondent himself/ herself.

A "health professional" is person who by education, training, certification, or licensure is qualified to and is engaged in providing health care. A healthcare professional is associated with either a specialty or a discipline and belongs to one of the following groups:

- medical and dental staff (associated with one or more specialties)
- nurses, midwives and health visitors
- professionals allied to medicine, e.g., clinical psychologists, dieticians, physiotherapy.
- accident & emergency ambulance staff/ paramedics
- other professionals who have direct patient contact, e.g., pharmacists, medical photographers, medical records staff.

Adaptation of the question allowed: first question: "*Have you ever been . . .?*" with answer categories Yes/ No, and the second one if Yes: "*When was the last time. . .?*" with answer categories as above except the option "Never."

PA3: Last time of blood cholesterol measurement by a health professional

1) Question

When was the last time that your blood cholesterol was measured by a health professional?

1. Within the past 12 months
2. 1 to less than 3 years
3. 3 to less than 5 years
4. 5 years or more
5. Never

2) Guidelines

- **General concept**: moment of last blood cholesterol measurement by a health professional.
- **Policy relevance:** Health care system performance, quality and equity of health care services (elevated blood cholesterol can be a risk factor for many diseases (atherosclerosis, heart attack, stroke, etc.); it often goes undetected because of infrequent monitoring and the absence of symptoms).

- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The answer should refer to blood cholesterol **measured by a health professional** and not by the respondent himself/ herself.

A "**health professional"** is person who by education, training, certification, or licensure is qualified to and is engaged in providing health care. A healthcare professional is associated with either a specialty or a discipline and belongs to one of the following groups:

- medical and dental staff (associated with one or more specialties)
- nurses, midwives and health visitors
- professionals allied to medicine, e.g., clinical psychologists, dieticians, physiotherapy.
- accident & emergency ambulance staff/ paramedics
- other professionals who have direct patient contact, e.g., pharmacists, medical photographers, medical records staff.

Adaptation of the question allowed: first question: "*Have you ever been …?*" with answer categories Yes/ No, and the second one if Yes: "*When was the last time…?*" with answer categories as above except the option "Never."

PA4: Last time of blood sugar measurement by a health professional

1) Question

When was the last time that your blood sugar was measured by a health professional?

1. Within the past 12 months
2. 1 to less than 3 years
3. 3 to less than 5 years
4. 5 years or more
5. Never

2) Guidelines

- **General concept**: moment of last blood sugar measurement by a health professional.
- **Policy relevance:** Health care system performance, quality and equity of health care services (long-term chronic hyperglycaemia can be a risk factor for many diseases (kidney damage, neurological damage, cardiovascular damage, etc.); it often goes undetected because of infrequent monitoring and the absence of symptoms.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The answer should refer to blood sugar **measured by a health professional** and not by the respondent himself/ herself.

A **health professional** is person who by education, training, certification, or licensure is qualified to and is engaged in providing health care. A healthcare professional is associated with either a specialty or a discipline and belongs to one of the following groups:

- medical and dental staff (associated with one or more specialties)
- nurses, midwives and health visitors
- professionals allied to medicine, e.g., clinical psychologists, dieticians, physiotherapy.
- accident & emergency ambulance staff/ paramedics
- other professionals who have direct patient contact, e.g., pharmacists, medical photographers, medical records staff.

Adaptation of the question allowed: first question: "*Have you ever been …?*" with answer categories Yes/ No, and the second one if Yes: "*When was the last time…?*" with answer categories as above except the option "Never."

Introduction PA5

The next questions are about faecal occult blood test and colonoscopy examination.

PA5: Last time of a faecal occult blood test

1) Question

When was the last time you had a faecal occult blood test?

1. Within the past 12 months
2. 1 to less than 2 years
3. 2 to less than 3 years
4. 3 years or more
5. Never

Interviewer clarification: You can add: "The aim of the test is to detect subtle blood loss in the gastrointestinal tract, anywhere from the mouth to the colon".

2) Guidelines

- **General concept**: moment of last faecal occult blood test.
- **Policy relevance**: ECHI 60.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

Faecal occult blood testing (FOBT) aims to detect subtle blood loss in the gastrointestinal tract, anywhere from the mouth to the colon. It is used for colorectal cancer screening.

All examinations (not only preventive) should be considered.

Adaptation of the question allowed: first question: "*Have you ever been . . .?*" with answer categories Yes/ No, and the second one if Yes: "*When was the last time. . .?*" with answer categories as above except the option "Never."

PA6: Last time of a colonoscopy

1) Question

When was the last time you had a colonoscopy?

1. Within the past 12 months
2. 1 to less than 5 years
3. 5 to less than 10 years
4. 10 years or more
5. Never

Interviewer clarification: You can add: "It is visual examination of the colon (with a colonoscope) from the cecum to the rectum".

2) Guidelines

- **General concept**: moment of last colonoscopy.
- **Policy relevance:** no explicit but important to monitor colorectal cancer screening.

- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

Colonoscopy: visual examination of the colon (with a colonoscope) from the cecum to the rectum. Colonoscopy should be distinguished from rectoscopy (i.e., the method of examining the anus and rectum using an endoscope inserted through the anus); rectoscopy should not be reported here.

According to European **guidelines** for quality assurance in colorectal cancer screening and diagnosis ([60]) screening colonoscopies do not need to be performed at intervals shorter than 10 years and average risk colonoscopy screening should not be performed before age 50 and should be discontinued after age 74.

All examinations (not only preventive) should be considered.

Adaptation of the question allowed: first question: "Have you ever been …?" with answer categories Yes/ No, and the second one if Yes: "When was the last time…?" with answer categories as above except the option "Never."

FILTER

Interviewer instruction: Next questions (PA7 and PA8) are to be asked only to women.

Introduction PA7

The next questions are about mammography and cervical smear tests.

PA7: Last time of a mammography (breast X-ray)

1) Question

When was the last time you had a mammography (breast X-ray)?

1. Within the past 12 months
2. 1 to less than 2 years
3. 2 to less than 3 years
4. 3 years or more
5. Never

2) Guidelines

- **General concept**: moment of last mammography.
- **Policy relevance**: ECHI 58, OMC HC-S5.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"Mammography" is a procedure used to generate a mammogram, an X-ray image of the breast. Echography is excluded.

All examinations (not only preventive) should be considered.

Adaptation of the question allowed: first question: "*Have you ever had a mammography (breast X-ray)?*" with answer categories Yes/ No, and the second one if Yes: "*When was the last time…?*" with answer categories as above except the option "Never."

([60]) European guidelines for quality assurance in colorectal cancer screening and diagnosis–First Edition. Segnan N, Patnick J, von Karsa L (eds), 2010 (updated 23 August 2012).

PA8: Last time of a cervical smear test

1) Question

When was the last time you had a cervical smear test?

1. Within the past 12 months
2. 1 to less than 2 years
3. 2 to less than 3 years
4. 3 years or more
5. Never

2) Guidelines

- **General concept**: moment of last cervical smear test (Pap smear test).
- **Policy relevance**: ECHI 59, OMC HG-P7.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

A "**cervical smear test"**: test to screen for cervical cancer known also as a pap smear test.

All examinations (not only the preventive ones) should be considered.

Adaptation of the question allowed: first question: "*Have you ever had a cervical smear test?*" with answer categories Yes/No, and the second one if Yes: "*When was the last time…?*" with answer categories as above except the option "Never."

The human papillomavirus **(HPV) test** to detect the presence of human papillomavirus – a virus that can lead to the development of genital warts, abnormal cervical cells or cervical cancer – should **not be included here**. If countries want to collect the information, they are recommended to add an additional question asking for the HPV test.

1.3.5. Unmet needs for health care (UN)

Equity in access to health care services including financial barriers to health care is given high importance in different EU policies.

Introduction UN

There are many reasons why people experience some delay in getting health care or do not get it at all.

UN1A: Unmet need for health care in the past 12 months due to long waiting list(s)

1) Question

Have you experienced delay in getting health care in the past 12 months because the time needed to obtain an appointment was too long?

1. Yes
2. No
3. No need for health care

Interviewer instruction: If the spontaneous answer is "No" you should probe if the respondent needed health care or not. In case no care was needed answer "3. No need for health care" should be coded.

2) Guidelines

- **General concept**: person's own assessment of unmet need for health care in the past 12 months due to long waiting list(s).

- **Policy relevance:** ECHI 80 and OMC indicators.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

This question aims to capture the dimension of **restricted access to health care** due to long waiting list(s). The perception of a need and delay is **subjective**.

Health care is defined according to the System of Health Accounts (SHA) ([61]) as individual health care goods and services (that is provided directly to and consumed by individual persons) (HC.1 – HC.5 codes). It covers curative care, rehabilitative care, long-term health care, ancillary services and medical goods provided to outpatients. Care provided for different purposes (curative, rehabilitative, long-term health care) and by different modes of provision (inpatient, outpatient, day, own home) should all be included.

Only the **delay** which is perceived by respondent as worrying or possibly causing additional health problem or further significantly deteriorating his/ her health should be considered.

"Delay" refers to either not receiving the health care soon enough or not receiving the health care at all by now. The cases when the respondent was refused for health care, had to look for and found after some time an alternative provider of health care services should also be reported as "experiencing a delay".

Included (should be considered as delay): a delay in getting appointment soon enough, someone being on a waiting list but needed an urgent care, someone discouraged from seeking care because of perceptions of the long waiting lists. In case of "medical goods provided to outpatients" (HC.5) the situation of delay may occur when a medicine is not available in stock in the pharmacy and the patient cannot receive it when he/ she really needs it.

Excluded (should not be considered as delay): waiting time to see a doctor on day of appointment (the time spend in the waiting room), being on waiting list for planned (non-urgent) care if the need is not seen as urgent.

"**in past 12 months**": the period of the past 12 months from the date of the interview should be taken into consideration (ex: the time between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

UN2A: Unmet need for mental health care

1) Question

Was there any time in the past 12 months when you needed a mental health consultation or treatment (by a psychologist, psychotherapist or a psychiatrist, for example) for yourself?

1. Yes (I really needed at least on one occasion mental health consultation or treatment)
2. No (I did not need any mental health consultation or treatment)

FILTER

Interviewer: Next question is to be asked only for respondents who answered Yes (code 1).

2) Question

Did you have a mental health consultation or treatment each time you really needed?

1. Yes (I had a mental health consultation or treatment each time I needed)
2. No (there was at least one occasion when I did not have a mental health consultation or treatment)

2) Guidelines

- **General concept**: person's own assessment of unmet need for mental health care in the past 12 months.

([61]) OECD/Eurostat/WHO (2017), A System of Health Accounts 2011: Revised edition, OECD Publishing, Paris,

- **Policy relevance:** Health inequalities and Mental health.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new questions.

Mental health care refers to healthcare services provided to treat mental and behavioural disorders. Care can be provided by medical staff (psychiatrists) or non-medical staff (psychologists). Services provided by life coaches or priests are not to be included.

The purpose of the variable is to capture the restricted access to mental health care according to the person's own assessment of whether he or she needed a consultation or treatment, but did not get it, experienced a delay in getting it (too late appointment) or did not seek for it. It does not concern the quality of the healthcare provided.

Delay in getting healthcare can be treated as unmet need if considered by respondents as important. However, detailing the time between the need for the service and the time of having the service is not possible as for different health conditions/ problems different time references would be needed. It is up to respondents to consider if the delay was too long and if they consider it as unmet need.

A respondent who consulted a practitioner who did not "meet their need" should not report an "unmet need". Respondents who should declare unmet needs are those who wanted having a mental health consultation or treatment but could not do it.

Care provided for **different purposes** (curative, rehabilitative, long-term health care) and by **different modes of provision** (inpatient, outpatient, day, and home care) should all be included.

To make sure that only consultations or treatments needed on the person's own behalf rather than on behalf of children, spouse, etc., the question should include '**for yourself**'.

"in past 12 months": the period of the past 12 months from the date of the interview should be taken into consideration (ex: the time between the 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

FILTER

Interviewer: Next question is to be asked only for respondents who answered No (code 2) to the 2nd question of UN2A.

UN2B Main reason for unmet need for mental healthcare

1) Question

What was the main reason for not having a mental health consultation or treatment?

1. Could not afford to (too expensive or not covered by the insurance fund)
2. Waiting list, don't have the referral letter
3. Could not take time because of work, care for children or for others
4. Too far to travel/no means of transportation
5. Having concerns about confidentiality and trust
6. Being afraid of negative reaction or comments from family, friends or colleagues
7. Fear about the consultation or treatment (for instance, fear of negative outcome or fear of side effects of medication)
8. Not knowing where to seek help
9. Other reason

2) Guidelines

- **General concept**: main reason for unmet need for mental health consultation or treatment based on personal assessment.
- **Policy relevance:** Health inequalities and Mental health.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new question.

The purpose of the question is to capture the reasons for a restricted access to mental health care according to the person's own assessment.

In the proposed reasons, code 2 (**waiting list**) should be used for people who were actually on a waiting list and who were not helped, for respondents who were discouraged from seeking care because of perceptions of long waiting lists, as well as people who have 'applied' and are still waiting to see a specialist. It's up to the respondent to assess how long it is fine to wait considering the mental problem they might have.

'**Not covered by insurance**' should be coded as '**could not afford to**' if the respondent could not afford to pay for the consultation/treatment himself or herself.

The issue regarding the perception of '**Could not afford to (too expensive)**' should be addressed to exclude the response of 'too expensive' which is relative (more expensive than before, etc.) so that it relates only to whether the person could not pay the price/did not have enough money to pay. The fact that the price is not covered by an insurance fund is an important element that is to be considered.

1.4. European Health Determinants Module (EHDM)

The general focus of the module is to measure some aspects in lifestyles or health-related behaviours having a positive or negative impact on someone's health state. Better lifestyles are probably the main potential source of improvement in the health of the population. For public health actors in health-promotion it is essential to regularly measure the prevalence of specific health-related behaviours and their trends at population level and in specific population subgroups. Such measurement is imperative for the evaluation of programmes and policies and for raising awareness of the population.

1.4.1. Weight and height (BM)

The increase of obesity and overweight among the population becomes one of the most important public health issues in the developed countries, as overweight and obesity represent a high-risk factor for diseases of the circulatory system, diabetes and other chronic diseases. The evolution of the way of life and food consumption in the EU Member States is characterised by low physical activity and energetic food intake which involve the increase of the body mass index.

The questions on height and weight enable calculating the Body Mass Index (BMI). The BMI is defined as a person's weight in kilograms divided by the square of the person's height in metres (kg/m2) ([62]).

Introduction BM

Now, I'm going to ask you about your height and weight.

BM1: Height without shoes

1) Question

How tall are you without shoes? in [cm]

|__|__|__|[cm]

([62]) Body mass index–BMI

2) Guidelines

- **General concept**: body height.
- **Policy relevance**: ECHI 42, OMC HG-P18, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

How tall are you without shoes: body length measured without wearing shoes.

Other **measurement units** are allowed but the data must be converted into cm.

Ask for an **estimate**: an estimate should only be asked when respondent indicates that she/ he does not know the exact answer.

Self-completion allowed.

BM2: Weight without clothes and shoes

1) Question

How much do you weigh without clothes and shoes? in [kg]

|_|_|_| **[kg]**

Interviewer instruction: Check women aged 50 or younger whether they are pregnant and ask for weight before pregnancy.

2) Guidelines

- **General concept**: body weight.
- **Policy relevance**: ECHI 42, OMC HG-P18, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical question.

The respondent is allowed to specify her/ his **weight** without clothes and shoes in kilograms, stones and pounds.

For **women** who are pregnant the weight **before pregnancy** should be noted.

Other measurement units are allowed but the data must be converted into kg.

An **estimate** should only be asked when respondent indicates that she/ he does not know the exact answer.

Self-completion allowed.

1.4.2. Physical activity / exercise (PE)

While also linked with the previous topic on obesity and overweight, monitoring physical activity focuses more generally the measurement of the effect of physical activity on health states and risks of morbidity and mortality. Increased physical activity has been related to reduction of mortality for all causes and in particular cardiovascular mortality; it decreases the risk of colorectal cancer, diabetes, depression, and is a factor in the prevention of osteoporosis.

There is a strong social gradient for physical activities and distinction between working and leisure time activities is essential from this point of view.

The physical activity sub-module enables assessment of work-related physical activity, transportation (commuting) physical activity and leisure-time physical activities ([63]).

Introduction PE

Next, I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.

The questionnaire will guide the respondents through different **domains of physical activity** such as "work-related physical activity", "transportation (commuting) physical activity" and "sports, fitness recreational (leisure) physical activity".

All respondents are requested to answer the questions – including respondents who indicate that they do not do any "sports, fitness or recreational physical activities", since the questionnaire also focuses on "work-related" and "transportation physical activity".

Respondents should refer their answers to a **typical week**. If respondents perform physical activities irregularly, or the physical activity behaviour differs between summer and winter or between weekdays and weekend days, they should **estimate** an average frequency and duration of the activities they perform in a "typical week" in given season.

A typical week: refers to a period, namely a "typical" 7-day week, including weekdays and weekend days in given season (the season of the interview). The term "typical week" can also be translated as a "normal week" or "usual week" if such terms are more commonly used in the specific language setting.

SHOWCARDS for Physical activity / exercise

SHOWCARD 1

Work-related physical activity

Mostly sitting or standing	**Tasks of light physical effort, for example** - Light office work - Reading - Writing - Drawing - Using the computer - Talking or talking on the phone - Studying - Driving a car or truck - Teaching - Sewing - Selling bakery products - Hair styling - Directing traffic - etc.

([63]) For more information and some other language versions, see: Robert Koch Institute (2011): Improvement of the European Health Interview Survey (EHIS) modules on alcohol consumption, physical activity and mental health

Mostly walking or tasks of moderate physical effort	**Tasks of moderate physical effort, for example** - Delivering letters - Carrying light loads - Watering the lawn or garden - Electrical work - Plumbing - Automobile repairs - Machine tooling - Tapping - Drilling - Painting the house - Nursing - Multiple household chores of moderate physical effort such as - Cleaning the house - Vacuuming - Shopping - Playing with the children - etc.
Mostly heavy labour or physically demanding work	**Tasks of heavy physical effort, for example** - Using heavy power tools - Heavy construction work - Mining - Carrying heavy loads - Loading - Stacking or chopping wood - Clearing land - Shovelling or digging - Spading - Filling garden - etc.

SHOWCARD 2

Getting to and from places

10 to 29 minutes per day
30 to 59 minutes per day
1 hour to less than 2 hours per day
2 hours to less than 3 hours per day
3 hours or more per day

SHOWCARD 3

Sports, fitness, recreational (leisure) physical activity

Sports, fitness, recreational (leisure) physical activities	**Leisure-time activities that cause AT LEAST a small increase in breathing or heart rate, for example** - Nordic walking - Brisk walking - Ball games - Jogging - Cycling - Swimming - Aerobics - Rowing - Badminton - etc.

SHOWCARD 4

Muscle-strengthening activities

Muscle-strengthening activities	**Physical activities specifically designed to STRENGTHEN your muscles, for example** - Resistance training - Strength exercises (using weights, elastic band, own body weight ...) - Knee bends (squats) - Push-ups - Sit-ups - etc.

Work-related physical activity

Introduction PE1

Firstly, think about the TIME you spend DOING WORK. Think of work as the things that you have to do such as paid and unpaid work, work around your home, taking care of family, studying or training. [Insert other examples if needed].

PE1: Physical effort of working tasks (both paid and unpaid work activities included)

1) Question

When you are WORKING, which of the following best describes what you do? Would you say …

Interviewer instruction: Respondents should refer their answer to the "main work" they do. If respondents do multiple tasks, they should include all tasks. Respondents should select only one answer.

1. Mostly sitting or standing
2. Mostly walking or tasks of moderate physical effort
3. Mostly heavy labour or physically demanding work

Interviewer instruction: Do not read ([64]):

4. Not performing any working tasks

2) Guidelines

- **General concept**: measurement of the work-related physical activity level – working tasks according to different levels of physical effort which best describe what respondents do when they are working.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The question focuses on work-related physical activity. Respondents should refer their answer to the "**main working task**" they do.

Respondents who do "**paid and unpaid work**" should focus on the working tasks they have to accomplish in the context of their main occupation:

Homemakers should focus on the working tasks they have to do around their home and when they take care of their children and family; **students** should focus on the working tasks they have to accomplish in the framework of their study programme.

The question will be more difficult to answer for people who are retired, unemployed or do more than one working activity. However, **unemployed people** should focus on the tasks they have to do when they are seeking a job, and **retired people** on the tasks they have to do around their home, when they take care of their grandchildren or personally caring for a family member.

People who do not have a clearly defined main working activity and have to fulfil "multiple working tasks"–meaning for example, that they work part-time and take care of the household and the family in the remaining time–they should think of **all activities they** do and provide an average if these activities differ in terms of the degree of physical effort when answering the question.

([64]) In self-completion mode the answer category should be presented to respondent but more guidance on the definition should be provided with it.

If respondents indicate that they do **not have to accomplish any working tasks** for varying reasons, for example, since they are disabled, retired or unemployed, interviewers should tick the answer option 4–"Not performing any working tasks".

In general, respondents should tick **only ONE answer option**, multiple answers are not permitted.

Working: refers to a broad understanding of "work" including all the things that respondents have to do as a part of their daily work activities. "Doing work" includes not only paid and unpaid work, work around the respondent's home, taking care of family, studying or training, but also seeking a job, doing volunteer work or care for the elderly.

Mostly sitting or standing: refers to working tasks involving light physical effort which involve mostly sitting or standing activities. Only standing activities that do not involve extra physical effort should be included.

Examples:

- Sitting at work: light office work, desk work, reading, writing, drawing, using the computer, talking or talking on the phone, studying, driving a car or truck, etc.
- Standing at work not involving extra physical effort: teaching, selling bakery products, hair styling, directing traffic etc.

Mostly walking or tasks of moderate physical effort: refers to working tasks which involve mostly walking or tasks involving moderate physical effort.

Examples:

- Walking at work: delivering letters, carrying light loads, watering the lawn or garden, etc.
- Tasks of moderate physical effort: electrical work, plumbing, automobile repairs, machine tooling, tapping, drilling, painting the house, nursing, multiple household chores involving moderate physical effort such as cleaning the house, vacuuming, shopping or playing with the children, etc.

Mostly heavy labour or physically demanding work: refers to working tasks involving heavy physical effort.

***Examples*:**

- Using heavy power tools, heavy construction work, mining, carrying heavy loads, loading, stacking or chopping wood, clearing land, shovelling or digging, spading, filling garden, etc.

Use of showcards: Showcard 1 "Work-related physical activity".

Getting to and from places (commuting activities)

Introduction PE2 to PE4

The next questions EXCLUDE the WORK-RELATED PHYSICAL ACTIVITIES that you have already mentioned. Now I would like to ask you about the way you usually GET TO AND FROM PLACES; for example, to work, to school, for shopping, or to market. [Insert other examples if needed]

When answering the remaining questions of the questionnaire, the respondents should completely **exclude from their mind ALL the work-related activities** they already mentioned in the first question.

In the question section "**Get to and from places (commuting activities)**" the respondents should focus on the way they get to and from places in a typical week. Travelling for long journeys (irregular travelling) should not be included here.

Adaptation of the questions: Use of term "get to and from places" or "travel" can be confusing and countries should find the national validated translation.

The section about transportation activities is divided into two sections. The first two questions ask about the frequency and duration of **walking for transportation**, the next two questions ask about the frequency and duration of **bicycling for transportation**.

In each first question of the set, respondents should indicate on how many days per week they walk or bicycle for **at least 10 minutes** without interruption in order to get to and from places. Distances shorter than 10 minutes should not be considered.

Respondents should only include distances which they walk or bicycle for the **purpose of travel** to get to and from places. Respondents should NOT include walking or bicycling for pleasure or recreation, such as going for a walk or going on bicycle rides. Respondents should relate their answers to a typical week.

PE2: Number of days in a typical week walking to get to and from places at least 10 minutes continuously

1) Question

In a typical week, on how many days do you WALK for at least 10 minutes continuously in order to get to and from places?

Number of days: |__|(1 – 7) per week
0. I never carry out such physical activities

2) Guidelines

- **General concept**: number of days in a typical week when walking for transportation for at least 10 minutes continuously.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

If the respondent "does walk less than 1 day per week or never walks for at least 10 minutes continuously in order to get to and from places in a typical week", the interviewer should tick the box "**I never carry out such physical activities**" and skip the next question on amount of time spent walking. "I never carry out such physical activities" is equal to "less than 1 day per week or never".

Valid values: 0–7 days.

"Getting to and from places": refers to how a person gets from place to place. All distances a person travels in order to get to and from places should be considered.

Examples:

- From home to work and back home, or from home to work, from work to market, from market to home, etc.

At least 10 minutes continuously: refers to an activity (walking, bicycling) which is performed for at least 10 minutes at a time without interruption.

"Walking": refers to travelling on foot or moving at a moderate pace up or down steps from one place to another.

FILTER

Interviewer: Next question (PE3) is to be asked only for respondents who've walked at least once a week 10 minutes (answer different from "I never carry out such physical activities" in PE2).

PE3: Time spent on walking to get to and from places on a typical day

1) Question

How much time do you spend walking in order to get to and from places on a typical day?

1. 10–29 minutes per day
2. 30–59 minutes per day
3. 1 hour to less than 2 hours per day
4. 2 hours to less than 3 hours per day
5. 3 hours or more per day

2) Guidelines

- **General concept**: time spent walking in order to get to and from places on a typical day.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

When answering the question, the respondents should estimate how much time they **usually spend walking for transportation** to and from places on a typical day.

The respondents should add up only distances which they walk for **at least 10 minutes continuously**.

If respondents indicate that their walking for transportation is **irregular**, that it differs between summer and winter or between weekdays and weekend days, they should estimate an average duration for a typical day in given season.

"Walking in order to get to and from places": refers to a person's walking activities which are performed for the purpose to get from place to place (not for pleasure).

"Typical day": refers to day period in which people behave in a way that they regularly do. The term "typical day" can also be translated as "normal day" or "usual day".

Answer categories: the answer category "1 hour to less than 2 hours per day", resp. "2 hours to less than 3 hours per day" can also be translated as "1 to below 2 hours per day", resp. "2 to below 3 hours per day" if such a wording combination ("to below") is common in a particular language setting.

Use of showcards: Showcard 2 "Getting to and from places".

PE4: Number of days in a typical week bicycling to get to and from places at least 10 minutes continuously

1) Question

In a typical week, on how many days do you BICYCLE for at least 10 minutes continuously to get to and from places?

Number of days: |__| (1 to 7) per week
0. I never carry out such physical activities

2) Guidelines

- **General concept**: number of days in a typical week bicycling to get to and from places for at least 10 minutes continuously.
- **Policy relevance**: ECHI 52.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

If the respondent "does bicycle less than 1 day per week or never bicycle for at least 10 minutes continuously in order to get to and from places in a typical week", the interviewer should tick the box "**I never carry out such physical activities**" and skip the next question on amount of time spent bicycling. "I never carry out such physical activities" is equal to "less than 1 day per week or never".

Valid values: 0–7 days.

"Getting to and from places": refers to how a person gets from place to place. All distances a person travels to get to and from places should be considered.

Examples:

- From home to work and back home, or from home to work, from work to market, from market to home, etc.

At least 10 minutes continuously: refers to an activity (walking, bicycling) which is performed for at least 10 minutes at a time without interruption.

"Bicycling": refers to riding on a bicycle (including **electric bikes**).

If the respondents ask whether they should include also **other means of non-motor-driven means of active transportation** such as scooter, roller or skates, the interviewer should confirm that they should do so. Each country can give its own examples of non-motor-driven vehicles of active transportation.

FILTER

Interviewer: Next question (PE5) is to be asked only for respondents who have bicycled at least once a week 10 minutes (answer different from "I never carry out such physical activities" in PE4).

PE5: Time spent on bicycling to get to and from places on a typical day

1) Question

How much time do you spend bicycling in order to get to and from places on a typical day?

1. 10–29 minutes per day
2. 30–59 minutes per day
3. 1 hour to less than 2 hours per day
4. 2 hours to less than 3 hours per day
5. 3 hours or more per day

2) Guidelines

- **General concept**: time spent with bicycling to get to and from places on a typical day.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

When answering the question, the respondents should estimate how much time they **usually spend bicycling** to get to and from places on a typical day.

The respondents should add up only such occasions which they bicycle **for at least 10 minutes continuously**.

If respondents indicate that their bicycling to get to and from places is **irregular**, that it differs between summer and winter or between weekdays and weekend days, they should estimate an average duration for a typical day in given season.

"Bicycling in order to get to and from places": refers to a person's bicycling activities (use of electric bikes is also considered here).which are performed for the purpose to get from place to place (not for pleasure).

"Typical day": refers to day period in which people behave in a way they regularly do. The term "typical day" can also be translated as "normal day" or "usual day".

Answer categories: the answer category "1 hour to less than 2 hours per day", resp. "2 hours to less than 3 hours per day" can also be translated as "1 to below 2 hours per day", resp. "2 to below 3 hours per day" if such a wording combination ("to below") is common in a particular language setting.

Use of showcards: Showcard 2 "Getting to and from places".

Sports, fitness and recreational (leisure) physical activities

Introduction PE6 to PE8

The next questions EXCLUDE the WORK and TRANSPORTATION ACTIVITIES that you have already mentioned. Now, I would like to ask you about SPORTS, FITNESS and RECREATIONAL (LEISURE) PHYSICAL ACTIVITIES that cause AT LEAST a small increase in breathing or heart rate. For example, brisk walking, ball games, jogging, cycling or swimming. [Insert other examples, if needed]

When answering the remaining two questions on physical activity, the respondents should completely exclude from their mind **ALL the work-related and transportation (travel) activities** they have already mentioned previously.

In the question section "Sports, fitness and recreational activities" the respondents should focus only on the **leisure-time physical activities** they engage in a typical week, which cause at least a small increase in their breathing or heart rate and are performed for at least 10 minutes continuously. The two questions focus on the frequency and duration of sports, fitness and recreational activities in general.

A question on **muscle-strengthening activities** that are specifically designed to strengthen muscles is further added.

PE6: Number of days in a typical week doing sports, fitness or recreational (leisure) physical activities that cause at least a small increase in breathing or heart rate for at least 10 minutes continuously

1) Question

In a typical week, on how many days do you carry out sports, fitness or recreational (leisure) physical activities for at least 10 minutes continuously?

Number of days: |__| (1-7) per week
0. I never carry out such physical activities

2) Guidelines

- **General concept**: number of days in a typical week doing sport, fitness and recreational activity that cause at least a small increase in breathing or heart rate and which are performed for at least 10 minutes continuously.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

If respondents do not do any "sports, fitness or recreational activities" or do it for less than 1 day per week in a typical week, the interviewer should tick the box "**I never carry out such physical activities**", skip question PE7 and continue with question PE8. "I never carry out such physical activities" is equal to "less than 1 day per week or never".

Valid values: 0–7 days.

"Sports": refers to physical activity which is structured, repetitive and usually requires skills. "Sports" are often aerobe physical activities, competitive or performed as a game.

***Examples*:**

- Ball games, athletics, competitive bicycling, running, swimming, etc.

"Fitness": refers to the act or process of retaining or improving physical fitness. "Fitness" often relates to physical exercise.

***Examples*:**

- Endurance training, strength exercise, flexibility training, etc.

"Recreational activity": refers to the act or process of creating regeneration by performing physical activities that cause at least a small increase in breathing or heart rate. "Recreational activities" are physical activities performed in leisure time.

***Examples*:**

- Nordic walking, brisk walking, ball games, jogging, bicycling, swimming, aerobics, rowing, badminton, etc.

"Causing AT LEAST a small increase in breathing or heart rate": refers to moderate- or vigorous-intensity sports, fitness or recreational (leisure) activities which are physically demanding and lead at least to a small increase in breathing or heart rate.

"At least 10 minutes continuously": refers to an activity (brisk walking, ball games or jogging) which is performed for at least 10 minutes at a time without interruption.

Use of showcards: Showcard 3 "Sports, fitness and recreational (leisure) physical activities".

FILTER

Interviewer instruction: Next question (PE7) is to be asked only for respondents who have done sports at least once a week 10 minutes (answer different from "I never carry out such physical activities" in PE6).

PE7: Time spent on doing sports, fitness or recreational (leisure) physical activities in a typical week

1) Question

How much time in total do you spend on sports, fitness or recreational (leisure) physical activities in a typical week?

|__|__|: |__|__| per week
hours minutes

2) Guidelines

- **General concept**: total time in a typical week spent sports, fitness and recreational activity.
- **Policy relevance:** ECHI 52, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The question asks about the **total duration** of sports, fitness and recreational activities in a typical week. Respondents who have done sports at least once a week 10 minutes should add up all the sports, fitness and recreational activities they perform in a typical week.

The respondents choose the **time unit** of the weekly duration themselves. The duration can be minutes or hours, or a combination of hours and minutes. The interviewer should enter the duration in the same way as the respondents answer the question.

It is important to emphasise that WORK and TRANSPORTATION activities should NOT be included in this question. Respondents should refer in their answer ONLY to the **activities they perform in their leisure-time** and they did not already include, when they answered the work-related and transportation physical activity questions.

Valid values: hours and/ or minutes.

"Sports": refers to physical activity which is structured, repetitive and usually requires skills. "Sports" are often aerobe physical activities, competitive or performed as a game.

***Examples*:**

- Ball games, athletics, competitive bicycling, running, swimming, etc.

"Fitness": refers to the act or process of retaining or improving physical fitness. "Fitness" often relates to physical exercise.

***Examples*:**

- Endurance training, strength exercise, flexibility training, etc.

"Recreational activity": refers to the act or process of creating regeneration by performing physical activities that cause at least a small increase in breathing or heart rate. "Recreational activities" are physical activities performed in leisure time.

***Examples*:**

- Nordic walking, brisk walking, ball games, jogging, bicycling, swimming, aerobics, rowing, badminton, etc.

"A typical week": refers to a period, namely a "typical" 7-day week, including weekdays and weekend days in given season. The term "typical week" can also be translated as a "normal week" or "usual week" if such terms are more commonly used in the specific language setting.

PE8: Number of days in a typical week doing muscle-strengthening activities

1) Question

In a typical week, on how many days do you carry out physical activities specifically designed to STRENGTHEN your muscles such as doing resistance training or strength exercises? Include all such activities even if you have mentioned them before.

Number of days: |__| (1-7) per week
0. I never carry out such physical activities

2) Guidelines

- **General concept**: number of days in a typical week spent muscle-strengthening activities.
- **Policy relevance**: ECHI 52.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

Question PE8 on muscle-strengthening activities should be **always raised** even if respondents indicate at question PE6 that they don't do any "sports, fitness or recreational activity".

The respondents should include all muscle-strengthening activities they do even if they **already included** them before under question PE6 or PE7.

Muscle-strengthening activities are not the same as endurance (aerobe) activities such as jogging, swimming or bicycling, since they are usually performed in sets of 8-15 repetitions with an approximate duration of one to two minutes with breaks between the sets, and not performed at least 10 minutes continuously.

"**I never carry out such physical activities**" is equal to "less than 1 day per week or never".

Valid values: 0 – 7 days.

"Physical activities specifically designed to strengthen muscles": refers to physical exercise which is specifically performed to improve or maintain the strength of the major muscles' groups. "Muscle-strengthening activities count if they involve a moderate to high level of effort and work the major muscle groups of the body: legs, hips, back, abdomen, chest, shoulders, and arms".

***Examples*:**

- Resistance training, strength exercises (using weights, elastic band, own body weight, etc.), knee bends (squats), push-ups (press-ups), sit-ups, etc.

"Resistance training": refers to activities causing "the body's muscles to work or hold against an applied force or weight". "Resistance training" can be also translated as "weight training".

"Strength exercises": refer to muscle-strengthening activity involving exercises using your own bodyweight (i.e., knee bends, push-ups, sit-ups) or using training equipment such as weights or resistance bands.

Use of showcards: Showcard 4 "Muscle-strengthening activities".

Sedentary behaviour

Introduction PE9

The last question in this module is about sitting at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television on a typical day; but time spent sleeping should not be included here.

PE9: Time spent sitting on a typical day

1) Question

How much time do you spend sitting and reclining on a typical day? ([65])

|__|__|: |__|__| per day
hours minutes

2) Guidelines

- **General concept**: time spend sitting on a typical day.
- **Policy relevance**: policies related to physical activities (e.g., DG EAC).
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question

"Time spent sitting": When answering the question, the respondents should estimate the **total time** spent sitting at work, in an office, reading, watching television, using a computer, doing hand craft like knitting, resting etc. on a typical day.

The participant should **include** time spent **reclining**, e.g., lying on the sofa when reading, watching TV, etc. But he or she should **exclude** time spent **sleeping**.

If respondents indicate that their sitting is **irregular**, that it differs between summer and winter or between weekdays and weekend days, they should estimate an average duration for a typical day in given season.

"Typical day": refers to day period in which people behave in a way that they regularly do. The term "typical day" can also be translated as "normal day" or "usual day".

Answer categories: the following answer categories could be used instead of asking the number of hours and minutes:

1. **Less than 4 hours**
2. **4 hours to less than 6 hours**
3. **6 hours to less than 8 hours**
4. **8 hours to less than 10 hours**
5. **10 hours to less than 12 hours**
6. **12 hours or more**

"Less than 4 hours", "4 hours to less than 6 hours", etc., can also be translated as "below 4 hours per day", resp. "4 to below 6 hours per day", etc., if such a wording combination ("to below") is common in a particular language setting.

Use of showcards/ examples: Use of showcard/ examples recommended.

([65]) New question is taken from Global Physical Activity Questionnaire (GPAQ) developed by the WHO for physical activity surveillance of populations; The GPAQ is available in Arabic, Chinese, English, French, German, Italian, Russian, and Spanish; see http://www.who.int/chp/steps/GPAQ/en/. But in difference to the original version of the question that asks from respondents to calculate the number of hours and minutes used for sitting, six answer categories as proposed by the TF EHIS of July 2017 are proposed for question PE9. The regulation requests HHMM format, so a description of codes to be sent to Eurostat will be given in the data delivery guidelines.

1.4.3. Dietary habits (DH)

Healthy food intake is a key element for preventing numerous chronic diseases.

Only selected aspects of food habits can be assessed via a general health.

Introduction DH

Next questions concern the consumption of fruits and vegetables.

DH1: Frequency of eating fruit, excluding juice

1) Question

How often do you eat fruit, excluding juice squeezed from fresh fruit or made from concentrate?

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

Interviewer instruction: Frozen, dried, canned, etc. fruits should be included. But any fruit juices should be excluded.

2) Guidelines

- **General concept**: frequency of eating fruits (all juices excluded).
- **Policy relevance:** ECHI 49, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

Frozen, dried, canned, etc., fruits should be included.

Nuts (cashew, almond, walnuts, etc.) should be excluded.

"How often" refers to a typical week, including weekdays and weekend days in given season.

No juices are included (whether from fresh, frozen, canned or dried fruits, whether squeezed, pressed, cut in small pieces, mashed nor puréed, or mix vegetable-fruit juices, excluded as well are juices prepared from concentrate or processed fruits, artificially sweetened juices, or fruit smoothies).

Excluded are any food products including other ingredients than fruit (or vegetables) like fruit pies, or any other cooked meal with fruits included.

Each country can specify **examples**, some common, and some examples more specific to their country.

FILTER

Interviewer: Next question (DH2) is to be asked only for respondents who eat fruit once or more a day (code 1 in DH1).

DH2: Number of portions of fruit a day, excluding juice

1) Question

How many portions of fruit, of any sort, excluding juice, do you eat each day?

Number of portions: |__|__|

2) Guidelines

- **General concept:** quantity of fruits consumed (all juices excluded).
- **Policy relevance:** Nutrition health policy.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

Frozen, dried, canned, etc., fruit should be included; all types of fruit juices should be excluded.

Nuts (cashew, almond, walnuts, etc.) should be excluded.

A **"portion"** of fresh fruit is more or less a handful.

One portion of fresh fruit is:

- One **medium-sized fruit**, such as one apple, banana, pear, orange, nectarine, or a sharon fruit.
- A number of **small-sized fruits**: for example, two plums, two satsumas, three apricots, two kiwi fruit, seven strawberries, a handful (about 14) of cherries, 6 lychees, a handful of blueberries.
- A piece of a **large-sized fruit**: for example, half a grapefruit or avocado, a good slice (two-inch slice) of papaya, melon, pineapple, mango, etc.
- **Fruit salad**: three heaped tablespoons of fresh fruit salad.

Each country can specify **examples**, some common, and some more specific examples to their country.

Use of showcards: A showcard of examples of fruits and standard portions can be used.

DH3: Frequency of eating vegetables or salad, excluding juice and potatoes

1) Question

How often do you eat vegetables or salad, excluding potatoes and fresh juice or juice made from concentrate?

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

Interviewer instruction: Frozen, dried, canned, etc. vegetables should be included. But any kind of vegetable juices or soups (warm and cold) should be excluded.

2) Guidelines

- **General concept:** frequency of eating vegetables or salad (potatoes and all juices excluded).
- **Policy relevance**: ECHI 50, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

Beside fresh (crude) and cooked (boiled, steamed, grilled, etc.) vegetable, also **frozen, dried, canned, etc. vegetables** should be included.

"How often" refers to a typical week, including weekdays and weekend days in given season.

No juices are included (whether from fresh, frozen, canned or dried vegetables, whether squeezed, pressed, cut in small pieces, mashed nor puréed, excluded as well are juices prepared from concentrate or processed vegetables, artificially sweetened juices, or vegetable smoothies.

Excluded are any food products including other ingredients than vegetables (or fruit) like vegetable pies, soups (cold or warm), or any other cooked meal with vegetables included.

Excluded as well are potatoes and similar starchy foods, such as yam, plantain, and cassava. As carbohydrate foods they are included in the bread and cereals food group. These foods cannot be counted as a daily portion of vegetables.

Each country can specify **examples**, some common, and some more specific examples to their country.

FILTER

Interviewer: Next question (DH4) is to be asked only for respondents who eat vegetables once or more a day (code 1 in DH3).

DH4: Number of portions of vegetables or salad, excluding juice and potatoes a day

1) Question

How many portions of vegetables or salad do you eat each day?

Number of portions: |__|__|

2) Guidelines

- **General concept**: quantity of vegetables consumed (potatoes and all juices excluded).
- **Policy relevance:** Nutrition health policy.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

Frozen, dried, canned, etc. vegetables should be included.

All types of vegetable juices should be **excluded** as well as any food products including other ingredients than vegetables (or fruit) like vegetable pies, soups (cold or warm), or any other cooked meal with vegetables.

Potatoes and similar starchy foods, such as yam, plantain, and cassava are carbohydrate foods, and are included in the bread and cereals food group. These foods cannot be counted as a daily portion of vegetables.

One portion of vegetables is:

- **Green vegetables**: Two broccoli spears, eight cauliflower florets, four heaped tablespoons of cabbage, spinach, spring greens or green beans.
- **Cooked vegetables**: Three heaped tablespoons of cooked (e.g., steamed, boiled, microwaved) vegetables such as courgettes, carrots, Brussels sprouts or swede.
- **Salad vegetables**: Three sticks of celery, two-inch piece of cucumber, one medium tomato, seven cherry tomatoes.
- **Pulses and beans**: Three heaped tablespoons of kidney, cannelloni or butter beans or chickpeas. Remember that beans or pulses only count as one of the 5-day portions.

Each country can specify **examples**, some common, and some more specific examples to their country.

Use of showcards: A showcard of examples of vegetables and standard portions can be used.

DH5: Frequency of drinking pure fruit or vegetable juice

1) Question

How often do you drink 100 % pure fruit or vegetable juice, excluding juice made from concentrate or sweetened juice?

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

2) Guidelines

- **General concept**: frequency of drinking 100 % pure fruit or vegetable juice.
- **Policy relevance:** Nutrition health policy.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

"How often" refers to a typical week, including weekdays and weekend days in given season.

As **one occasion** (e.g., once a day) counts if at least one glass or cup (150 ml) of unsweetened freshly squeezed 100 % fruit or vegetable juice is consumed; if a person consumes a larger amount of juice at one single occasion, it counts – regardless the larger amount of juice – as only one occasion.

"**100 % pure fruit or vegetable juice**" means juice from fresh or frozen fruits or vegetables (or mix vegetable-fruit) to which no additives (e.g. sugar, salt, mineral salts, vitamins) are added; also, they can be cut in small pieces or mashed (puréed); fresh fruit pressed at home or in a restaurant, bar or similar facility are included as well as "pure" smoothies not containing other ingredients ([66]).

Excluded are juices prepared from concentrate ([67]) or processed fruits, or artificially sweetened juices, and any kind of soups (cold or warm). All juices made from concentrate – even those without added sugar or without other preservatives – should be excluded here.

Pre-testing of the Eurostat contractor revealed that respondents could easily identify and define 100 % (pure or fresh) fruit or vegetable juice.

Each country can specify examples, some common, and some more specific to their country.

Pre-testing revealed that no answers were provided for categories "Three times or more a day" and "Twice of more a day". The categories start – as for variable DH6 – with category "**1. Once or more a day**".

Included are all juices from fresh or frozen fruits or vegetables – whether pressed at respondents' home or consumed by him/her in a restaurant, a bar or a similar facility.

Each country can specify **examples**, some common, and some examples more specific to their country.

([66]) "Smoothies" may include other ingredients such as water, crushed ice, fruit juice, sweeteners (honey, sugar, syrup), dairy products (milk, yogurt, low fat or cottage cheese, whey powder), plant milk, nuts, nut butter, seeds, tea, chocolate, herbal supplements, or nutritional supplements. In this case, smoothies should not be counted as pure fruit or vegetables juices.

([67]) A concentrate is a form of substance which has had the majority of its base component (in the case of a liquid: the solvent) removed. Typically, this will be the removal of water from a solution or suspension, such as the removal of water from fruit juice. One benefit of producing a concentrate is that of a reduction in weight and volume for transportation, as the concentrate can be reconstituted at the time of usage by the addition of the solvent. [. . .] Most juice and soda concentrates have a long shelf-life due to high sugar content and/or added preservatives.

DH6: Frequency of drinking sugar-sweetened soft drinks

1) Question

How often do you drink sugared soft drinks, for example lemonade or cola? Please, exclude light, diet or artificially sweetened soft drinks.

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

Interviewer instruction: Light, diet or artificially sweetened soft drinks are excluded.

2) Guidelines

- **General concept**: frequency of drinking sugar-sweetened soft drinks.
- **Policy relevance:** Nutrition and obesity policies.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**Sugared soft drinks** aims at the particular drinks characterized as "heavy-sugared, often carbonated lemonades" and at the frequency of people drinking these kinds of beverages ([68]).

Examples for such drinks that should be **included** in the questions are regular soft drinks, whether carbonated or not carbonated – such as Coca-Cola, Sprite, Pepsi- Cola, Fanta, bottled ice tea, energy drinks, syrup-based drinks and similar or any other non-alcoholic soft drinks that contain (a lot of) sugar.

All kinds of **light, diet or artificially sweetened soft drinks** are **excluded** from the question, as well as coffee and tea, even if sweetened with some sugar. Pre-testing of the Eurostat contractor revealed that respondents did often not exclude those light, diet or artificially sweetened soft drinks. As consequence it is proposed to add the remark **"Please, exclude light, diet or artificially sweetened soft drinks"** explicitly to the question.

"How often" refers to a typical week, including weekdays and weekend days in given season.

As **one occasion** (e.g., once a day) counts if at least one glass or cup (150 ml) of sugar-sweetened soft drink is consumed; if a person consumes a larger amount of soft drinks at one single occasion, it counts – regardless the larger amount of soft drinks – as only one occasion.

Pre-testing also revealed that no answers at all were provided for categories "Three times or more a day" and "Twice of more a day". So, the list of categories is started – as for variable DH5 – with category "**1. Once or more a day**".

Each country should specify some **examples** (maximum of three) of very common sugar-sweetened soft drinks in the country.

DH7: Frequency of eating red meat

1) Question

The model question is left to national responsibility.

([68]) Although agreed in the TF EHIS meeting of July 2017 to replace in DH6 "soft drinks" by "beverages", Eurostat proposes to keep the expression "soft drinks". The term "soft drinks" cannot be used in all countries and such countries will need to adapt the wording according to their needs (e.g., carbonated/ sparkling sweetened drinks). Moreover, pre-testing showed that the examples given in the proposed model question "lemonade or cola" seem to be understood well in Europe. Finally, it turned out that including all sugared drinks into the question (e.g., juices, smoothies, ice tea, sugared tea and coffee, energy drinks, etc.) is not feasible and would provide non-comparable data.

The national wording of the question should make clear that meat from beef, veal, pork, lamb, sheep, goat, horse are to be considered by a respondent. Both fresh and frozen meats are to be considered. Also, minced meat and meat preparations are to be included and any processed meat is to be excluded.

Introduction DH7

Next question ([69]) concerns the consumption of fresh and frozen meat from cattle, pork, lamb, mutton, horse, or goat. Minced meat and meat preparations are to be included but any processed meat products should not be considered.

How often do you eat fresh and frozen meat from cattle, pork, lamb, mutton, horse, or goat?

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

2) Guidelines

- **General concept**: frequency of eating red meat.
- **Policy relevance:** Nutrition and obesity policies.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new question in wave 4.

According to WHO ([70]), **red meat** refers to all mammalian muscle meat, including, beef, veal, pork, lamb, mutton, horse, and goat.

Both fresh and frozen meats are to be considered. Also, **minced meat and meat preparations** are to be included.

Meat preparations means fresh meat, including meat that has been reduced to fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes insufficient to modify the internal muscle fibre structure of the meat and thus to eliminate the characteristics of fresh meat. e.g., hamburgers, meatballs, marinated fresh meat,

Meat means edible parts of the animals. It includes not only meat that is on the carcase of an animal but also offal (internal organs and entrails) ([71]).

Carcase means the body of an animal after slaughter and dressing.

Offal means fresh meat other than that of the carcase, including viscera and blood.

Viscera means the organs of the thoracic, abdominal and pelvic cavities, as well as the trachea and oesophagus.

DH8: Frequency of eating processed meat products

1) Question

How often do you eat processed meat products, such as salami, sausages, hot dogs?

1. Once or more a day
2. 4 to 6 times a week
3. 1 to 3 times a week
4. Less than once a week
5. Never

([69]) Although the decision in the 2023 working group meeting on Public Health was to leave the wording of the question to the national authorities, Eurostat considered that it might still be useful for the purpose of the manual to suggest a model question.

([70]) What do you consider as red meat?

([71]) Annex I of the Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin

2) Guidelines

- **General concept**: frequency of eating processed meat products.
- **Policy relevance:** Nutrition and obesity policies.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new question in wave 4.

Processed meat products mean processed products resulting from the processing of meat or from the further processing of such processed products, so that the cut surface shows that the product no longer has the characteristics of fresh meat. Processed meat products could be based on red meat or poultry and include canned meat, foie gras, pâté, ham, bacon, pastrami, salami, sausages, bratwursts, frankfurters, hot dogs, or spam.

Most processed meats contain pork or beef, but processed meats may also contain other red meats, poultry, offal, or meat by-products such as blood. Examples of processed meat include hot dogs (frankfurters), ham, sausages, corned beef, and biltong or beef jerky as well as canned meat and meat-based preparations and sauces ([72]).

1.4.4. Smoking (SK)

Smoking is an important risk factor for lung diseases, lung cancer, some other cancers and diseases of the circulatory system. Important policy activities are developed at national and EU level to limit tobacco consumption. For these reasons it is a major determinant of health outcomes.

The module on smoking may be implemented in self-completion mode. If self-completion mode is applied, the visual ("respondent-friendly") layout of the questionnaire is of greater importance. Specifically, the use of arrows for branching questions or referring to instructions should be carefully considered.

Introduction SK

The following questions are about your smoking habits and exposure to tobacco smoke.

SK1: Type of current tobacco smoking behaviour

1) Question

Do you smoke any tobacco products (excluding heated tobacco products, electronic cigarettes or similar electronic devices)?

1. Yes, daily
2. Yes, occasionally
3. Not at all

2) Guidelines

- **General concept**: occurrence of current tobacco smoking (excluding electronic cigarettes.
- **Policy relevance**: ECHI 15, ECHI 44, OMC HC-S11, Health policy on tobacco, State of Health in the EU.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** slight revision of the coverage: heated tobacco products (HTP)[73] excluded from SK1 in wave 4.

"Do you smoke any tobacco products": asks whether respondent currently/ actual smokes tobacco products, regardless of the amount or kind of tobacco product.

([72]) Q&A on the carcinogenicity of the consumption of red meat and processed meat

([73]) Heated tobacco products are tobacco products that produce aerosols containing nicotine and other chemicals, which are inhaled by users, through the mouth

"(excluding heating tobacco products, electronic cigarettes or similar electronic devices)": Electronic cigarettes had been excluded in EHIS wave 2 guidelines as well; in order to clarify the question to respondents from the beginning, the remark should be added to the question itself in EHIS wave 4.

Smoking: breathing in and out of the smoke of tobacco products (manufactured cigarettes, hand-rolled cigarettes, cigars, pipes, shishas, etc.).

Excluded is – in addition to the use of heated tobacco products, electronic cigarettes or similar electronic devices – smoking of cannabis mixed with tobacco; such a "cigarette" including both substances should not be considered as smoking tobacco; the main purpose of the person hereby is consuming cannabis.

The module on smoking may be implemented in **self-completion mode**. If self-completion mode is applied, the visual ("respondent friendly") layout of the questionnaire is of greater importance. Specifically, the use of arrows for branching questions or referring to instructions should be carefully considered.

FILTER

Interviewer: Next questions (SK2A and SK2B) are to be asked only for respondents who daily smoke tobacco products (code 1 in SK1). Otherwise skip SK2 and go to SK3.

Moreover, if the answer is "1. Yes" in SK2A, go to SK2B. Otherwise skip SK2B and go to SK4.

SK2: Average number of cigarettes a day

1) Question

SK2A:

Do you smoke manufactured or hand-rolled cigarettes each day?

1. Yes
2. No

SK2B:

On average, how many cigarettes do you smoke each day?

Number of cigarettes: |__|__| (1-99) per day.

2) Guidelines

- **General concept**: daily smoking of cigarettes (in particular) and average number of cigarettes a day consumed by daily smokers.
- **Policy relevance**: ECHI 15, ECHI 44, OMC HC-S11, State of Health in the EU; public health policy relevance (WHO indicator on smoking); preventive plan against smoking.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3**: identical questions.

Smoking cigarettes: breathing in and out of the smoke of manufactured cigarettes or hand-rolled cigarettes.

As **"cigarettes"** should be counted all kinds of manufactured tobacco cigarettes and hand-rolled (own made) tobacco cigarettes.

"Each day": Smoking at least one cigarette every day of the week; if a cigarette smoker abstains from smoking at least one day per week, the answer should be "No" in SK2A.

Average number a day: Daily smoking should estimate how many cigarettes she/ he smokes in average during a "normal" day (24 hours) in a "normal" week (7 days).

As the quantity of smoked cigarettes might vary from day to day and from week to week (e.g., between weekdays and weekend days; working weeks and holiday weeks), the respondent should make an **overall estimate** of the number of daily smoked cigarettes.

Excluded in SK2 are all other kinds of tobacco and non-tobacco products (cigars, tobacco pipe, water pipe, other national specific products, heated tobacco products, electronic cigarettes or similar electronic devices, and smoking of cannabis mixed with tobacco).

"Manufactured or hand-rolled cigarettes": Only if daily smokers of tobacco products (SK1 = 1) actually smoke the particular product "**cigarettes**", the answer is "Yes" in in SK2A.

Excluded are occasional (not daily) smokers of cigarettes (SK1 ≠ 1) and daily or occasional smokers of all other kinds of tobacco products then cigarettes (cigars, tobacco pipe, water pipe, other national specific products); the answer should always be "No" in SK2A**.**

FILTER

Interviewer: Next question (SK3) is to be asked only for respondents who are non-daily (occasional) tobacco smokers or not-at-all tobacco smokers (SK1 = 2, 3 or -1). Otherwise go to SK4.

SK3: Former daily tobacco smoking

1) Question

Have you ever smoked tobacco (cigarettes, cigars, pipes, shishas, etc.) daily, or almost daily, for at least one year?

1. Yes
2. No

2) Guidelines

- **General concept**: former daily tobacco (cigarettes, cigars, pipes, shishas, etc.) smoking.
- **Policy relevance:** Health policy on tobacco.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question (but heated tobacco products are excluded in wave 4).

"Have you ever smoked tobacco (cigarettes, cigars, pipes, shishas, etc.)": asks whether respondents who are currently non-daily (occasional) tobacco smokers or not-at-all tobacco smokers whether they have ever smoked daily tobacco products in the past.

"Smoking": breathing in and out of the smoke of tobacco products (cigarettes, cigars, pipes, shishas, etc.).

"Daily, or almost daily": Smoking tobacco regularly, smoking at least one tobacco product every day of the week.

"For at least one year": one year is the duration of approximately 365 days; not the start or end date of the year (calendar year) but the duration of at least 365 days is important.

Excluded is the former daily use of heated tobacco products, electronic cigarettes or similar electronic devices and former daily smoking of cannabis mixed with tobacco.

FILTER

Interviewer instruction:

Next question (SK4) is to be asked to all respondents who are *daily* tobacco smokers (SK1 = 1).

Secondly, SK4 is to be asked to all *occasional* tobacco smokers, to *non-smokers* and to *not-stated* respondents (SK1 = 2, 3, -1), who have confirmed in SK3, though, to have smoked tobacco products daily in the past and for at least one year (SK3 = 1). Otherwise go to SK5.

SK4: Number of years of daily tobacco smoking

1) Question

For how many years have you smoked daily? Count all separate periods of smoking daily. If you don't remember the exact number of years, please give an estimate.

|__|__| Number of years

2) Guidelines

- **General concept**: Number of years of former daily tobacco (cigarettes, cigars, pipes, shishas, etc.) smoking.
- **Policy relevance:** Health policy on tobacco.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question (but heated tobacco products are excluded in wave 4).

"For how many years have you smoked daily?": asks whether respondents who are current tobacco smokers or who are currently non-daily (occasional) smokers or not-at-all smokers (SK1), but indicate that they had smoked tobacco products daily in a former period (SK3), for how many years they have smoked daily tobacco products (cigarettes, cigars, pipes, shishas, etc.) in the past.

"Smoking": breathing in and out of the smoke of tobacco products.

"Daily, or almost daily": Smoking regularly, smoking at least one tobacco product every day of the week.

"For at least one year": one year is the duration of approximately 365 days; not the start or end date of the year (calendar year) but the duration of at least 365 days is important.

Excluded is the former daily use of heated tobacco products, electronic cigarettes or similar electronic devices and former daily smoking of cannabis mixed with tobacco.

"Count all separate periods of smoking daily": respondents are requested to add up either the number of continued years of daily smoking or try to sum up the several (at least yearly periods) of non-continuous smoking in the past.

"If you don't remember the exact number of years, please give an estimate": as the exact number of years of smoking in the past could be difficult to add or sum up precisely, respondents are requested make an estimate of their years of former daily smoking.

SK5: Frequency of exposure to tobacco smoke indoors

1) Question

How often are you exposed to tobacco smoke indoors?

1. Every day, 1 hour or more a day
2. Every day, less than 1 hour per day
3. At least once a week (but not every day)
4. Less than once a week
5. Never or almost never

Interviewer clarification: You can specify that "by indoors we mean at home, at work, at public places, at restaurants, etc."

2) Guidelines

- **General concept**: frequency of exposure to indoor smoke (passive smoking).
- **Policy relevance**: Health policy on tobacco, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3:** identical question.

"How often are you exposed to tobacco smoke": aims to measure whether the respondent is (more or less) frequently in rooms where other people smoke or have smoked.

"Indoors": refers to inside the house where the person lives (at home), at work, at public places, at restaurants etc.

Only smoke produced by **other people** should be considered (the focus is on second-hand smoking).

SK6A: Type of heated tobacco products use behaviour

1) Question

Do you currently use heated tobacco products, for example tobacco sticks or products that use loose-leaf tobacco?

1. Yes, daily
2. Yes, occasionally
3. No, but I have used them in the past
4. Never used them

2) Guidelines

- **General concept**: Current use of heated tobacco products (tobacco sticks such as, glo, IQOS or products that use loose-leaf tobacco such as, Pax vaporizers)
- **Policy relevance:** Health policy on tobacco.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** none: new question in EHIS wave 4.

Heated tobacco products (HTPs) are tobacco products that produce aerosols containing nicotine and other chemicals, inhaled by users through the mouth. These aerosols contain the highly addictive substance nicotine as well as non-tobacco additives and are often flavoured. The tobacco may be in the form of specially designed cigarettes (e.g., "heat sticks" and "Neo sticks") or pods or plugs. Newer heated tobacco products include lower- and higher-temperature variants, hybrid electronic devices with both tobacco and liquid, carbon-tipped devices, devices using a metallic mesh punctured with tiny holes to heat a pre-filled, pre-sealed liquid cap, and others which allow users to customize the temperature and manage the aerosol and flavour output ([74]).

SK6B: Type of electronic cigarettes or similar electronic devices use

1) Question

Do you currently use electronic cigarettes or similar electronic devices (e.g. e-shisha, e-pipe)?

1. Yes, daily vaping
2. Yes, occasionally vaping
3. No, but former vaping
4. Never vaping

2) Guidelines

- **General concept**: Current use electronic cigarettes or similar electronic devices (e.g. e-shisha, e-pipe)

([74]) See WHO Heated tobacco products information sheet

- **Policy relevance:** Health policy on tobacco.
- **Use of proxy interview**: allowed.
- **Comparability with EHIS wave 3:** identical question.

The question ([75]) seems to be suitable for **self-completion mode**.

In accordance with the experts from DG SANTE the wording "use" instead of "behaviour" in the model question is proposed.

The expression "**vaping**" instead of "smoking" in the answer categories and an additional answer category "**3. No, but former vaping**" are proposed.

"Electronic cigarettes" or "e-cigarettes" are handheld electronic devices that try to create the feeling of tobacco smoking. It works by heating a liquid to generate an aerosol, commonly called a "vapor" that the user inhales. Using e-cigarettes is sometimes called vaping. The liquid in the e-cigarette, called e-liquid, is usually made of nicotine, propylene glycol, glycerine, and flavourings. Not all e-liquids contain nicotine ([76]).

"Similar electronic devices" are electronic devices called e-shisha, e-pipe or e-hookah. These electronic devices are available in many different shapes and sizes and their vapor mostly contain different flavourings ([77]).

1.4.5. Alcohol consumption (AL)

Alcohol is an important factor for numerous chronic diseases (liver cirrhosis, diseases of the circulatory system, etc.). The pattern of alcohol consumption has changed in various Member States during the last decades, but in total alcohol consumption remains high and at individual level excessive drinking involves high health-related risks.

General purpose of the sub-module is to gather data on drinking status, volume of intake and pattern of alcohol consumption ([78]).

Introduction AL

The following questions are about your use of alcoholic beverages during the past 12 months.

Each country should define its own **national standard drink** and develop respective showcards in case of face to face interviews. The data will then be post-harmonized to get comparable data on EU level.

The module on alcohol consumption may be implemented in self-completion mode. If self-completion mode is applied, the visual ("respondent-friendly") layout of the questionnaire is of greater importance. Specifically, the use of arrows for branching questions or referring to instructions should be carefully considered.

AL1: Frequency of consumption of an alcoholic drink of any kind (beer, wine, cider, spirits, cocktails, premixes, liqueurs, homemade alcohol…) in the past 12 months

1) Question

In the past 12 months, how often have you had an alcoholic drink of any kind [beer, wine, cider, spirits, cocktails, premixes, liquor, homemade alcohol…]?

([75]) Pre-testing by the Eurostat contractor revealed that the question was clear and understandable for respondents. However, few of them could refer to specific types of e-cigarettes, or other e-devices, because of either never smoking or no experience with such products. So, also the use of examples seemed not important.

([76]) Electronic cigarette (website access on 24/10/2017).

([77]) E-Hookah: What is it? (website access on 24/10/2017).

([78]) For more information on the sub-module, especially if other modes of data collection are to be applied and some other language versions see the Final Report of the Eurostat grant on Improvement of the European Health Interview Survey (EHIS) modules on alcohol consumption, physical activity and mental health, pages 376-413 (CIRCABC access on 24/10/2017)

Interviewer instruction: Here, country-specific alcoholic beverages should appear in the listed examples. Home-made alcohol should also be explicitly cited.

Interviewer instruction: Hand showcard on country-specific standard drinks and containers.

1. Every day or almost
2. 5–6 days a week
3. 3–4 days a week
4. 1–2 days a week
5. 2–3 days in a month
6. Once a month
7. Less than once a month
8. Not in the past 12 months, as I no longer drink alcohol
9. Never, or only a few sips or tries, in my whole life

2) Guidelines

- **General concept**: overall frequency of alcohol intake during the past 12 months. The question enables to ascertain respondent's current drinking status.
- **Policy relevance:** ECHI 16, ECHI 47, OMC HC-S12, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**In the past 12 months**" stands for "a period of 12 months that started one year before the date of the interview (e.g., the time period between 15 April N-1 and the 14 April N for an interview carried out on 15 April N)".

The term "**alcoholic drink**" refers to all drinks that contain "alcohol" (or more specifically "ethanol"), regardless of the kind of drink (strong or light beer, wine, spirits, etc.), or the quantity consumed.

"**(beer, wine, cider, spirits, cocktails, premixes, liquor, home-made alcohol…)**": here, country-specific alcoholic beverages should appear in the list of examples, i.e., the list should be adapted in order to mention kinds of alcoholic drinks (or specific denominations, such as "long drink" or "alcopops") that are more popular in a specific country.

"**Home-made alcohol**" should be explicitly cited in the list of examples.

"**Never…**" to "**every day…**" 9 response categories that are mutually exclusive and describe the continuum from "never" to "daily consumption":

- The meaning of "every day or almost" should be explicitly conceived in view of a 12-month timeframe. In this context, the category applies to a respondent who did drink on 365 days during the past 12 months, but not only. Indeed, a respondent may not have drunk every single day during the past 12 months but may have nevertheless consumed alcoholic beverages more often than 6 days a week (than is, more than 312 days during the past 12 months) ([79]).
- "Not in the past 12 months, as I no longer drink alcohol": stands for a person who NEVER had a "drink" over the past 12 months, but at least one drink in his/ her whole life that was not just perceived as a trial. Here respondent's subjective definition of what has to be considered a "trial" is key.
- "Never, or only a few sips or tries, in my whole life": stands for a person who has NEVER had a "drink" in his/ her whole life, or at the most, a few sips or trial drinks for the purpose of testing. Here respondent's subjective definition of what has to be considered a "trial" is key.

Use of showcards: A showcard on country-specific standard drinks and containers on response categories (in face-to-face interview).

([79]) Respondents who changed their alcohol consumption dramatically over the past 12 months should refer to the predominant situation in the past 12 months.

FILTER

Interviewer: Next questions (AL2 to AL5) are to be asked only for respondents who drink at least 1-2 days a week (codes 1, 2, 3 or 4 in AL1). Otherwise go to AL6.

AL2: Frequency of consumption of an alcoholic drink for Monday-Thursday

1) Question

Thinking of Monday to Thursday, on how many of these 4 days do you usually drink alcohol?

1. On all 4 days
2. On 3 of the 4 days
3. On 2 of the 4 days
4. On 1 of the 4 days
5. On none of the 4 days

2) Guidelines

- **General concept**: frequency of alcohol intake (usual number of drinking days) on weekdays (Monday to Thursday). The question aims to determine the number of days on which the person drinks alcohol in a way that is representative or characteristic of the respondent's usual behaviour on weekdays.
- **Policy relevance:** ECHI 47, OMC HC-S12, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**On how many of these 4 days …?**" The question inquires about the respondent's usual number of drinking days respectively over weekdays. In this context, the respondents are asked to add up the number of days (out of 4 for weekdays) when drinking usually occurs.

"**Do you usually drink alcohol?**" The term "usually" means that we are primarily interested in finding out the number of days when the subject effectively drinks alcohol, representative or characteristic of the respondent's behaviour on weekdays. In other words, we want to determine a number of days exemplifying the way the respondent commonly drinks on weekdays.

A "**day**" must not be understood as a "24-hour period". The term is defined as a period ranging from respondent's waking up till the moment he/ she goes to sleep. In this context, if, for example, a respondent spends the evening out until 3:00 am, the period considered should account for one day. Of course, if a respondent does an all-nighter and continues drinking during the next day (two consecutive days are envisaged here), then the period considered should reasonably be two days.

FILTER

Interviewer: Next question (AL3) is to be asked only for respondents who drink at least 1 to 2 days a week (codes 1, 2, 3, 4 in AL1) and who drink at least on 1 of the four week days (AL2 = 1, 2, 3 or 4). Otherwise go to AL4.

AL3: Number of alcoholic (standard) drinks on average on one of the days (Monday to Thursday)

1) Question

From Monday to Thursday, how many drinks do you have on average on such a day when you drink alcohol?

Interviewer instruction: Please refer to the showcard of standard drinks.

1. 16 or more drinks a day
2. 10-15 drinks a day
3. 6–9 drinks a day
4. 4–5 drinks a day
5. 3 drinks a day
6. 2 drinks a day
7. 1 drink a day
8. 0 drink a day

2) Guidelines

- **General concept**: quantity of alcohol consumed on weekdays (Monday to Thursday) when drinking occurs. The question aims to measure the number of drinks that is representative or characteristic of the respondent's usual behaviour on a drinking day during weekdays.
- **Policy relevance:** ECHI 47, OMC HC-S12, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The term "**drinks**" could be replaced by "glasses" or "units" [or any other word with a "neutral" connotation that has a similar meaning] if there is no national term for it.

"**How many drinks…?**" respondents are requested to estimate the average number of drinks they usually consume on a drinking day for weekdays. The overall aim of the two questions AL2 and AL3 is thus to determine the number of drinks exemplifying the way the respondent commonly drinks on a drinking day for weekdays. If the respondent drinks less than 1 standard drink a day or the average number per day of alcohol consumption is less than 1, category "0" drinks should be reported.

"**On average**": Note that although literature shows that respondents tend to report modal rather than mean frequencies and quantities, it was decided to use the term "on average", which was perceived as more being meaningful than the terms "usually" or "on a typical day" for respondents who drink variable quantities; it suggests respondents can take an average across the different drinking days, an exact mean is not requested here, though.

When estimating the average number of drinks they usually consume, respondents are asked to consider **all types of alcoholic drinks** they may have on such drinking days (beer, wine, spirits, etc.).

Specific units of alcohol are measured at this stage. Indeed, in the context of the present exercise, the term "drink(s)" stands literally for "standard drink(s)" or "standard unit(s)" which adhere to government issued standards. As can be inferred, these "standards" vary from one country to another.

The drinks or the glasses have to be defined by **container sizes** on a showcard for each country separately (for example, 0,33 l beer, 0,125 l wine, 4 cl spirits, etc.). The country will then convert them to grams of pure alcohol per day according to volume percentages based on country specific sales data ([80]).

Each member state will be requested to provide **metadata** on the content (in grams of alcohol) of each of the "national standard" drinks.

Use of showcards: A showcard on response categories (in face-to-face mode) and on country-specific standard drinks and containers.

([80]) To estimate the pure alcohol content of a drink, one must multiply the (standard) size of the container of a specific beverage (e.g., beer: 250 ml) x the proportion of volume of pure alcohol (e.g., 5 % = 0.05 ml) and by the conversion factor (0.79, i.e., the density of ethanol, that is 0.79 g/cm^3) to obtain grams of pure ethanol.

AL4: Frequency of consumption of an alcoholic drink for Friday-Sunday

1) Question

Thinking of Friday to Sunday, on how many of these 3 days do you usually drink alcohol?

1. On all 3 days
2. On 2 of the 3 days
3. On 1 of the 3 days
4. On none of the 3 days

2) Guidelines

- **General concept**: frequency of alcohol intake (usual number of drinking days) on weekend days (Friday to Sunday). The question aims to determine the number of days on which the person drinks alcohol in a way that is representative or characteristic of the respondent's usual behaviour on weekend days.
- **Policy relevance:** ECHI 47, OMC HC-S12, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**On how many of these 3 days…?**" The question inquires about the respondent's usual number of drinking days respectively over weekend days. In this context, the respondents are asked to add up the number of days (out of 3 for weekend days) when drinking usually occurs.

"**Do you usually drink alcohol?**" the term "usually" means that we are primarily interested in finding out the number of days when the subject effectively drinks alcohol, representative or characteristic of the respondent's behaviour on weekend days. In other words, we want to determine a number of days exemplifying the way the respondent commonly drinks on weekend days.

A "**day**" must not be understood as a "24-hour period". The term is defined as a period ranging from respondent's waking up till the moment he/ she goes to sleep. In this context, if, for example, a respondent spends the evening out until 3:00 am, the period considered should account for one day. Of course, if a respondent does an all-nighter and continues drinking during the next day (two consecutive days are envisaged here), then the period considered should reasonably be two days.

FILTER

Interviewer: Next question (AL5) is to be asked only for respondents who drink at least 1 to 2 days a week (codes 1, 2, 3, 4 in AL1) and who drink at least on 1 of the 3 weekend days (AL4 = 1, 2 or 3). Otherwise go to AL6.

AL5: Number of alcoholic (standard) drinks on average on one of the days (Friday-Sunday)

1) Question

From Friday to Sunday, how many drinks do you have on average on such a day when you drink alcohol?

Interviewer instruction: Please refer to the showcard of standard drinks.

1. 16 or more drinks a day
2. 10-15 drinks a day
3. 6–9 drinks a day
4. 4–5 drinks a day

5. 3 drinks a day
6. 2 drinks a day
7. 1 drink a day
8. 0 drink a day

2) Guidelines

- **General concept**: quantity of alcohol consumed on weekend days (Friday to Sunday) when drinking occurs. The question aims to measure the number of drinks that is representative or characteristic of the respondent's usual behaviour on a drinking day during weekend days.
- **Policy relevance:** ECHI 47, OMC HC-S12, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The term "**drinks**" could be replaced by "glasses" or "units" [or any other word with a "neutral" connotation that has a similar meaning] if there is no national term for it.

"**How many drinks…?**" respondents are requested to estimate the average number of drinks they usually consume on a drinking day for the weekend. The overall aim of the two questions AL4 and AL5 is thus to determine the number of drinks exemplifying the way the respondent commonly drinks on a drinking day for weekends.

"**On average**": Note that although literature shows that respondents tend to report modal rather than mean frequencies and quantities, it was decided to use the term "on average", which was perceived as more being meaningful than the terms "usually" or "on a typical day" for respondents who drink variable quantities; it suggests respondents can take an average across the different drinking days, an exact mean is not requested here, though.

When estimating the **average** number of drinks they usually consume, respondents are asked to consider all types of alcoholic drinks they may have on such drinking days (beer, wine, spirits, etc.).

Specific units of alcohol are measured at this stage. Indeed, in the context of the present exercise, the term "drink(s)" stands literally for "standard drink(s)" or "standard unit(s)" which adhere to government issued standards. As can be inferred, these "standards" vary from one country to another.

The drinks or the glasses have to be defined by **container sizes** on a showcard for each country separately (for example, 0,33 l beer, 0,125 l wine, 4 cl spirits, etc.). The country will then convert them to grams of pure alcohol per day according to volume percentages based on country specific sales data ([81]).

Each member state will be requested to provide **metadata** on the content (in grams of alcohol) of each of the "national standard" drinks.

Use of showcards: A showcard on response categories (in face-to-face mode) and on country-specific standard drinks and containers.

FILTER

Interviewer: Next question (AL6) is to be asked only for respondents who drink at least once in the past 12 months (codes 1, 2, 3, 4, 5, 6, 7 in AL1).

([81]) To estimate the pure alcohol content of a drink, one must multiply the (standard) size of the container of a specific beverage (e.g. beer: 250 ml) x the proportion of volume of pure alcohol (e.g., 5 % = 0.05 ml) and by the conversion factor (0.79, i.e., the density of ethanol, that is 0.79 g/cm^3) to obtain grams of pure ethanol.

AL6: Frequency of risky single-occasion drinking (equivalent of 60g of pure ethanol or more) during the past 12 months

1) Question

In the past 12 months, how often have you had [6 or more] ([82]) drinks containing alcohol on one occasion? For instance, during a party, a meal, an evening out with friends, alone at home, …

1. Every day or almost
2. 5–6 days a week
3. 3–4 days a week
4. 1–2 days a week
5. 2–3 days in a month
6. Once a month
7. Less than once a month
8. Not in the past 12 months
9. Never in my whole life

2) Guidelines

- **General concept**: frequency of risky single-occasion drinking (RSOD), or binge drinking. The question aims to measure the "prevalence of days of high alcohol intake", or to assess the occurrence of episodes involving heavy drinking behaviours (that is consumption of large amount of alcohol).
- **Policy relevance:** ECHI 47, State of Health in the EU.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**In the past 12 months**" stands for a period of 12 months that started one year before the date of the interview (e.g., the time period between 15 April N-1 and the 14 April N for an interview carried out on 15 April N).

"**How often have you had 6 or more drinks …?**": the term "drinks" could be replaced by "glasses" or "units" [or any other word with a "neutral" connotation that has a similar meaning] if there is no national term for it.

"**6 or more drinks ...**" that should be understood as the sum of alcoholic beverages of any kind, including mixed drinks. The threshold should be the same for everyone (men and women).

"**6 or more drinks …**" the term "drink(s)" stands literally for "standard drink(s)" or "standard unit(s)". In view of this, the number of drinks mentioned here must add up to 60g of pure ethanol so it should be necessarily adapted in order to reflect countries measures or "standard drink".

If the **standard serving/ container size or strength of beverages** is higher or lower in a given country, it is advised that the number of drinks stated in the question should be changed in order to meet the cut-off of 60g of ethanol per occasion. Accordingly, the "6 or more drinks" mentioned in this question should be replaced by:

- "4 or more drinks" in the case of a standard drink that contains 14g of pure alcohol;
- "5 or more drinks" in the case of a standard drink that contains 12g of pure alcohol;
- "6 or more drinks" in the case of a standard drink that contains 10g of pure alcohol;
- "7 or more drinks" in the case of a standard drink that contains 8g of pure alcohol.

The term "**occasion**" ([83]) strongly relies on respondent's interpretation and should thus not be conceived as necessarily referring to a full day. In this context, an "occasion" can be broadly described as any drinking episode (an event of

([82]) The number of 6 drinks in the model question presumes that 1 drink = 10 g of pure alcohol. The number of drinks used in the question by each country should be adapted to refer to equivalent of 60 g of pure ethanol.

([83]) Also situations like:
(-) having six or more drinks during a meal that lasts all day long or
(-) a person meets several other people during one evening and consumes six drinks or more in different places
(s)hould be considered as "occasions.

undetermined duration, although expected to cover a short period of time) such as a party, a meal, an evening out with friends, alone at home, etc.

Use of showcards: A showcard on response categories in face-to-face interview.

1.4.6. Social support (SS)

The concept of social support is defined as the belief that one is cared for and loved, esteemed and valued. It is a consequence of the interplay between individual factors and the social environment. It is a strategic concept in not only giving understanding to the maintenance of health and the development of (mental and somatic) health problems, but also their prevention.

Introduction SS

In the following, I will ask three questions about your social relationships.

The **Oslo Social Support Scale (OSS-3)** was selected to measure social support. It includes 3 questions on primary support group, interest and concern shown by others, and easiness of obtaining practical help. The sequence of the questions must be respected.

The respondent should select for each question only one answer category. Make sure that all the three questions are answered (information on all the three question items are needed to calculate a social support sum score).

SS1: Number of close people to count on in case of serious personal problems

1) Question

How many people are so close to you that you can count on them if you have serious personal problems?

1. None
2. 1 or 2
3. 3 to 5
4. 6 or more

2) Guidelines

- **General concept**: Number of persons to count on if in serious trouble.
- **Policy relevance**: ECHI 54.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The question focuses on the **quality of social network**. The respondents should indicate the amount of people they can rely on or trust in difficult life situations.

Many people cover both family and non-family members (friends, colleagues, social and religious groups, etc…).

Serious personal problems: the respondent can count on for help, advice, understanding, money.

SS2: Degree of concern shown by other people in what the person is doing

1) Question

How much concern do people show in what you are doing?

1. A lot of concern and interest
2. Some concern and interest
3. Uncertain
4. Little concern and interest
5. No concern and interest

2) Guidelines

- **General concept**: Perceived positive interest and concern from other people.
- **Policy relevance:** Social mental health policies.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The question focuses on **perceived social support**. The respondents should indicate based on a five-point Likert scale ([84]) how much concern or interest other people show in what they are doing based on their own perception.

People cover both family and non-family members (friends, colleagues, social and religious groups, etc.).

Adaptation of the question: For some countries this question may have a negative meaning, which concerns translation of the term "concern", and this should be avoided. The concept of "positive interest" should be considered when translating the question.

The category "**uncertain**" should represent a middle category in the sense of "neither little nor much concern." It may be used in cases when respondents have the information to judge but it is ambiguous (they come across both some but also little interest depending on situation) and they are not sure about the appropriate answer.

SS3: How easy is it to get practical help from neighbours in case of need

1) Question

How easy is it to get practical help from neighbours if you should need it?

1. Very easy
2. Easy
3. Possible
4. Difficult
5. Very difficult

2) Guidelines

- **General concept**: Available help from neighbours if necessary.
- **Policy relevance:** Social mental health policies.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

The question focuses also on **perceived social support**. The respondents should indicate based on a five-point Likert scale ([85]) how easy is for them to get practical help from neighbours according to their own perception.

"Practical help" is a help with ordinary affairs like personal support, advice, money.

1.4.7. Provision of informal care or assistance (IC)

The section should allow the assessment of long-term care activities provided by non-professional carers and provide data on possible lack in LTC care and on barriers for people in exercising their "normal" job.

Introduction IC

The next questions are about the provision of care or assistance to other people with health problems.

([84]) When responding to a Likert item, respondents specify their level of agreement or disagreement on a symmetric [. . .] scale for a series of statements. [. . .] In so doing, Likert scaling assumes distances between each item are equal (website access on 24/10/2017)

([85]) When responding to a Likert item, respondents specify their level of agreement or disagreement on a symmetric [. . .] scale for a series of statements. [. . .] In so doing, Likert scaling assumes distances between each item are equal (website access on 24/10/2017)

IC12: Providing care or assistance to one or more persons suffering from any chronic health condition or infirmity or due to old age, at least once a week

1) Question

Do you provide care or assistance to one or more persons suffering from some age problem, chronic health condition or infirmity, at least once a week?

Interviewer clarification: add: "Exclude any care provided as part of your profession".

1. Yes
2. No

2) Guidelines

- **General concept**: care/ assistance provided by the respondent to people suffering from long-term health problems.
- **Policy relevance:** Barriers in employment, need for long term care services.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"At least once a week" should be asked as cases of irregular or occasional help should be excluded.

"Care or assistance" means help to other person with personal care or activities of household care. This **includes** also activities like accompanying a person – **except your partner or your child** – to a doctor, to a bank or offices, for shopping or for a walk or other types of leisure time activities ([86]).

Therefore, a situation as described in the question would correspond to providing care or assistance.

The care or assistance of **un-paid volunteers working for NGOs** should be **excluded** as well as any care provided as part of the **respondent's profession**.

Only care or assistance related to **long-term (chronic) health condition**, infirmity (congenital or acquired physical defect) or old age should be included.

FILTER

Interviewer: Next questions (IC2 and IC3) are to be asked only for respondents who provide care or assistance at least once a week to other people (code 1 in IC1).

1) Question

Is this person or are these persons

1. Member(s) of your family
2. Non-member(s) of your family (someone else)?

Interviewer instruction: Only one answer allowed. In case multiple persons are involved say: "S*elect the one to whom you are providing the most care***."**

([86]) Example: A person visits for two hours every week an elderly person suffering from long-term health problems in order to "just" talk to that elderly person corresponds to the activity described here as 'providing care or assistance'.

2) Guidelines

- **General concept**: relationship with the people to whom the respondent provides care/ assistance.
- **Policy relevance:** Barriers in employment, need for long term care services.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question.

"**Member(s) of your family**" that is relatives living either in or outside your household.

Only one answer allowed: in case multiple persons are involved, selection of one whom the respondent provides the most care ([87]).

IC3: Number of hours per week the respondent provides care or assistance to the person(s) suffering from any chronic condition or infirmity or due to old age

1) Question

For how many hours per week do you provide care or assistance?

1. less than 5 hours per week
2. 5 hours to less than 10 hours per week
3. 10 hours to less than 20 hours per week
4. 20 hours to less than 30 hours per week
5. 30 hours to less than 40 hours per week
6. 40 hours per week or more

Interviewer instruction: sum the time spent during one week by providing care or assistance to all people – this is a difference compared to the second question of IC12 (see footnote). If the number of hours per week differs substantially from week to week, an average should be reported.

2) Guidelines

- **General concept**: number of hours during one week dedicated to take care of or provide assistance to other people.
- **Policy relevance:** Barriers in employment, need for long term care services.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: identical question but more detailed answer categories are included in wave 4.

How many hours per week: sum the time spent during one week by providing care or assistance to all people. That is not only to a person whom the respondent provides the most care, but to all persons, either inside or outside the family, to whom care is provided. This is a difference compared to the second question of IC12 (see also footnote).

If the number of hours per week differs substantially from week to week, an average should be reported. If the respondent doesn't know exactly, he/ she should be asked to give an **estimate** for the whole week.

All days in the week should be considered for the number of hours per week, even Saturdays and Sundays.

1.5. Optional topic: Suicide

Considering that this topic is optional and the proposed questions are sensitive, it is highly recommended to introduce them at the end of the individual questionnaire.

([87]) The motivation for the limitation to request only one type of persons receiving help in question IC2 is not to create an additional variable for cases where respondents provide help inside *and* outside their families. This is a difference compared to question IC3 where all hours provided – to all types of persons receiving help – should be counted.

Introduction SU

Next questions are about your personal experiences with suicidal behaviour. For some individuals, these questions can be upsetting. Please note that you can skip these questions if you don't want to answer.

SU1: Having had thoughts about committing suicide (optional variable)

1) Question

In the past 12 months, have you had thoughts about committing suicide/dying by suicide ([88])?

1. Yes
2. No

2) Guidelines

- **General concept**: whether the respondent had thoughts about committing suicide in the past 12 months.
- **Policy relevance:** Health policies on mental health, avoidable deaths.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new variable.

This question aims to identify and get information about persons presenting a suicidal risk. Suicide is death caused by an act of self-harm that is intended to be lethal. Suicidal behaviour includes completed suicide, attempted suicide, and suicidal ideation (thoughts and ideas) ([89]).

Research shows that questions about suicide do not induce any risk for interrogated people. Concretely:

- People that are not concerned by the subject have no risk to develop any risk because of such questions;
- People who are indeed subject to suicidal thoughts have no additional risk of actually taking action, but can actually be greatly helped by directing them towards actual health professionals that might help them to deal with these thoughts;
- Finally, people who are not personally at risk but who have been exposed to the subject through relatives, the question can possibly cause some unease, but no actual risk per se.

It might be useful that appropriate prevention material is included inside the questionnaire itself (in case of a self-completion form) and a good formation of the interviewers is conducted beforehand.

Points that could be covered by the **formation of the interviewers** on this topic:

- One European out of five [figure can be adapted with national figure if available] will at some point in their life suffer from psychological disorder (e.g., depression, anxiety disorder, etc.), and suicidal ideations[90] occur at some point in life for almost 9.2 % of the population ([91]).
- Suicidal ideation, suicide attempts and actual deaths by suicide differ greatly in frequency ([92]), therefore someone manifesting suicidal ideation in the questionnaire is not necessarily someone who will actually (try to) commit suicide;
- What the reactions of the respondents could be when asked this question and the following one, and how these questions could actually serve as a good prevention material;
- How to ask this question and the following one, and notably not to insist in case the respondent is indeed notably at unease.
- Remind the interviewers that they are not psychologists or psychiatrists and that they do not need to take up this role and help them to direct someone who would need help towards appropriate professionals.

([88]) The expression "committing suicide" might be considered inappropriate in some languages; for such situations, the alternative "dying by suicide" is proposed.

([89]) Suicidal Behavior, Christine Moutier, MD, American Foundation For Suicide Prevention

([90]) Thoughts about and plans and preparatory acts for suicide.

([91]) Nock and al 2008, based on WHO World Mental Health Survey Initiative between, data collected between 2001 and 2003

([92]) e.g., Figure 1 in Turecki and Brent 2016

Ideally, the questionnaire should include some prevention resources for respondents: telephone numbers to get help to deal with suicidal thoughts or with relatives experiencing such thoughts, associations coordinates, health professionals, etc. It could be useful promoting such resources in all cases, even if the person does not mention having dealt with such problems himself/herself, since this can also be useful for someone whose friends or family does.

SU2: Having ever made a suicide attempt (optional variable)

1) Question

Have you ever made a suicide attempt?

1. Yes, in the past 12 months
2. Yes, but not in the past 12 months
3. No

2) Guidelines

- **General concept**: whether the respondent ever tried to suicide.
- **Policy relevance:** Health policies on mental health, avoidable deaths.
- **Use of proxy interview**: not allowed.
- **Comparability with EHIS wave 3**: new variable.

Suicide is death caused by an act of self-harm that is intended to be lethal. Suicidal behaviour includes completed suicide, attempted suicide, and suicidal ideation (thoughts and ideas).

Attempted suicide: An act of self-harm that is intended to result in death but does not (unsuccessful attempt). A suicide attempt may or may not result in injury ([93]).

([93]) Suicidal Behavior, Christine Moutier, MD, American Foundation For Suicide Prevention

2 Statistical survey guidelines

2.1. General definitions

"Year of survey" means the year in which the survey data collection, or most of the collection, is carried out.

"Fieldwork period" means the period of time in which the data is collected.

"Private household" means a person living alone or a group of persons who live together, providing oneself or themselves with the essentials of living.

- **a one-person private household** means a private household where a person usually resides alone in a separate housing unit or occupies, as a lodger, a separate room or rooms of a housing unit but does not join with any of the other occupants of the housing unit to form a multi-person household[94]; or
- **a multi-person private household** means a private household where a group of two or more persons usually reside together in a housing unit or part of a housing unit and share income or household expenses with the other household members[95];

This definition does not cover collective households or institutions, such as hospitals, care or residential homes, prisons, military barracks, religious institutions, boarding houses or hostels.

"Usual residence" means the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. The following persons alone are considered to be usual residents of a specific geographical area:

- those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference date; or
- those who arrived in their place of usual residence in the 12 months before the reference date with the intention of staying there for at least one year.

Where the circumstances described above cannot be established, "usual residence" shall mean the place of legal or registered residence.

([94]) Commission implementing regulation (EU) 2019/2181 of 16 December 2019 specifying technical characteristics as regards items common to several datasets pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council

([95]) idem

Dwelling or 'housing unit' means a building, part thereof, other premises or living quarters used for human habitation and includes 'conventional dwellings' and 'other housing units' as defined in the Annex to Commission Regulation (EC) No 1201/2009 ([96]).

"Institution" means a legal body or establishment providing a group of people with long-term housing and the amenities and services needed for daily life. The majority of institutions fall under the following categories:

- hospitals, hospices, convalescent homes, establishments for people with disabilities, psychiatric institutions, old people's homes and nursing homes;
- assisted living facilities and social welfare institutions, including those for the homeless, asylum seekers or refugees;
- military camps and barracks;
- correctional and penal institutions, retention and remand centres, prisons;
- religious institutions;
- tertiary student dormitories (depending on specific arrangements).

"Age" refers to the age of the person at his or her last birthday before the reference date of the data collection or interview, namely the interval of time between the date of birth and the reference date, expressed in completed years.

"Microdata" means non-aggregated observations or measurements of characteristics of individual units, without direct identifier.

"Pre-checked microdata" means microdata without direct identifiers, verified by Member States, on the basis of agreed validation rules.

"Valid answer" means an answer that is among the proposed answers for a specific question (variable) but excluding the codes for specific situations (missing answer or not applicable).

"Metadata" means data defining and describing other data, the methodology used and statistical business processes.

"Target population" is the population the survey is interested in.

"Frame population" is the set of units that can be reached by means of the sampling frame used.

"Survey population" is the intersection of the target and frame population that is the subset of units that belong to the target population and can be reached via the sampling frame.

"Sampling unit" is a unit considered for selection in some stage of sampling procedure. In multistage sampling procedure the first-stage sampling units are often municipalities, villages or census enumeration areas. The second-stage sampling units are again addresses, houses or dwelling units, and the ultimate sampling units consist of individual persons.

"Statistical unit" means an identifiable entity about which data can be obtained (unit of observation) and for which statistics are ultimately compiled (unit of data analysis). The statistical units in EHIS are individual persons.

2.2. Target population

The target (reference) population shall be, according to the Commission implementing Regulation on EHIS (article 4, par. 1): "*persons aged 15 and over usually residing in private households in the territory of the Member State concerned at the time of the data collection.*".

Persons living in **collective households and in institutions** are generally excluded from the target population.

National authorities may **expand the surveyed population** to younger age groups or persons living in collective households and in institutions, but these respondents are not to be considered in calculating the respective effective sample sizes.

([96]) Commission Regulation (EC) No 1201/2009 of 30 November 2009 implementing Regulation (EC) No 763/2008 of the European Parliament and of the Council on population and housing censuses as regards the technical specifications of the topics and of their breakdowns (OJ L 329, 15.12.2009, p. 29

National territories that are excluded from the survey

According to the Commission implementing Regulation on EHIS, article 4, par. 2: "*The national territories listed in Annex III shall be excluded from the sample. Small parts of the national territory amounting to no more than 2 % of the national population may also be excluded from the sample. Information on those national territories shall be provided in the reference metadata.*"

The territories listed are as follows:

Country	National territories
France	French Overseas Departments and Territories
Cyprus	The non-government-controlled area
Netherlands	Caribbean Islands (Bonaire, St. Eustatius and Saba)
Ireland	All offshore islands with the exception of Achill, Bull, Cruit, Gorumna, Inishnee, Lettermore, Lettermullan and Valentia

2.3. Data collection period

The **data collection period (reference year)** shall be, according to the Commission delegated regulation (EU) 2020/256 of 16 December 2019 supplementing Regulation (EU) 2019/1700 of the European Parliament and of the Council by establishing a multiannual rolling planning (annex I), **2025**.

The data collection should ideally be **spread over the whole year** to take account of seasonal variation. The minimum requirement in the EHIS implementing regulation states (article 7, par. 1) that: "*the collection of data shall be spread over at least 3 months including at least 1 month of the period from September to December*".

Expanding a survey to cover the full year is also more practical for the management of a large sample size. A potential negative aspect of a long data collection period is the deterioration of the quality of the sampling frame throughout this period: selected persons can die, can move, household compositions can change. Bearing this in mind, it can be recommended to **divide the year in consecutive phases** (for example trimesters). At the beginning of every phase an actualized sampling frame can be used to select respondents but overlap of sampled respondents should be avoided.

Recommendation on data collection period:
The data collection should ideally be spread over the whole year.

2.4. Data collection mode

The most important choice that must be made before selecting the **mode of administration** is based on the answer to the question whether verbal interactions between interviewers and respondents are necessary to collect the data (interviewer-administered questionnaires) or whether one can rely on the respondent to provide responses without the interference of interviewers (self-administered questionnaires).

Interviewer-administered questionnaires are questionnaires administered in face-to-face (personal) interviews and in telephone interviews. In a face-to-face interview an interviewer administers, within a limited period of time, a structured or partly structured survey instrument in the presence of the respondent. In a telephone interview the respondent is contacted by phone and hence receives assistance from an interviewer who administers the questions by telephone.

When using **self-administered questionnaires**, a respondent receives a structured questionnaire and an introductory letter, answers the questions in his/ her own time without any assistance from the interviewer except for any written instructions in the questionnaire or in the accompanying letter. Self-administered questionnaires can be handed over, sent by mail, by electronic mail or by Internet.

In all these cases, the administration of the questionnaires can be based on paper-and-pencil procedures (PAPI) or be assisted by computer. The role of the computer may differ considerably:

- **Computer-assisted personal interviewing (CAPI)** refers to the use of the computer to assist in face-to-face personal interviewing and hence is typically applied in personal interviews;
- **Computer-assisted telephone interviewing (CATI)** refers to the use of computers in telephone interviewing;
- Rather than sending a copy of a questionnaire, respondents can also be sent a CD/ USB stick with the questionnaire and instructions. This is known as **computer administered questioning (CA(SA)Q)**. Sometimes, this is also referred to as CASI (self-administered computer interviewing);
- **Computer-assisted web interviewing (CAWI)** is a form of self-administered questionnaires, in which a computer administers a questionnaire to respondents on a web site. The responses are transferred through the Internet to the server.

Mixed-mode forms for data collection are also possible:

- Respondents can be contacted by phone while the purpose of the study and instructions on how to fill the questionnaire are explained at home. The questionnaire is then left behind for respondents to fill out and be picked up the following day (or the questionnaire can be mailed back). In case of problems when completing the questionnaires, respondents can contact the interviewers by phone.

Other data sources like administrative registers might be used to obtain data if record linkage on individual level can be done.

One reason for collecting data on the mode of data collection is to enable an **analysis of the possible impact of the mode(s) of data collection on results**. If mixing up different modes for different sub-modules for different respondents is envisaged, the reporting on respective modes of data collection would ideally need to be specified in more details which is not foreseen in the variable specifications of the Regulation. In that case it is recommended that countries should report on the use of methods for data collection in detail in the **metadata**.

One of the following interview modes are to be reported via the INTMETHOD variable:

- Paper assisted personal interview (PAPI)
- Computer assisted personal interview (CAPI)
- Computer assisted telephone interview (CATI)
- Computer assisted web-interview (CAWI)
- Other

Detailed instructions on coding the interview mode are provided in the document **Implementing guidelines of the standardised key social variables** (page 90).

Recommandations for data collection mode:
Personal (face-to-face) interviews are preferred mode of data collection to be used and the model questionnaire refers to this mode.
If other modes of data collection are used the questionnaire should be adapted accordingly to better serve the respective type of interview.
Detailed reporting on the use of modes of data collection is recommended to enable an analysis of possible impacts of different modes on results.

2.5. Sampling frame

According to the Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples, article 12 par. 1: "*Data collected under this Regulation shall be based on representative samples drawn from sampling frames set up at national level that allow persons or households to be selected at random, with a known probability of selection.*"

This requirement can only be achieved if a good source of data on population is used for the selection of respondents.

The **sampling frame** is the list of the target population units from which the sample is drawn or the list of households or dwellings extracted from a master sample built on the basis of census results or other sources. It is any material or device used to obtain observational access to the finite population of interest. It can be any list that delimits, identifies and allow access to the elements of the target population. The frame should contain all the units belonging to the population, reporting information about address and localization, together with other variables (age, sex, etc.) useful for the designing of the sample. In some cases, a unique and complete list may not exist or can be built only by means of a laborious work.

Coverage

The **characteristics of the sampling frame** are an important issue. It is important to consider the type of sampling units listed in the frame, the extent of coverage of the target population, the accuracy and completeness as well as the amount and quality of auxiliary information. The extent to which a frame includes all the elements of the target population is referred to as coverage.

There are **three types of frame imperfections**, giving rise to three different types of frame errors. Loss of coverage can be due both to under-coverage, which is failure to include some units, to over-coverage, which is inclusion of some foreign elements into the sampling frame or to multiple listings, which is inclusion of the same element more than one time into the sampling frame.

Under-coverage occurs when target population units are not accessible via the frame. The sampling frame is incomplete, some units are omitted and potential respondents cannot be selected to participate in the survey. Under-coverage is different from deliberate exclusion of sections of the target population. Usually, survey objectives and practical difficulties determine such deliberate exclusions. For example, in a national survey certain segments may be excluded because the survey objectives are confined to the other segments of the target population (e.g., institutional households, etc.). Such exclusions are not errors of non-coverage, but they must be emphasized in the survey report that the results apply only to the groups of target population included to the sample.

Over-coverage is when some selected units do not belong to the population. Just as some units may not be represented in the frame other units belonging to the frame might not belong to the target population. They might for example have died recently, moved abroad or do not belong for other reasons to the target population.

Multiple listings occur when some units that belong to the target population appear in the frame more than once, giving them a larger probability of selection than intended. This needs to be known and considered when selecting the sample by using different sampling probabilities for different units. A good sampling frame should also provide sufficient information based on which the selected units can be contacted and uniquely identified on the territory (precise and up-to-date address). Failure to do so can result in distortions in probabilities of selection and in the sample structure because some units cannot be contacted and their inclusion probability becomes equal to zero.

Ideally, the **sampling frame should be complete, unduplicated and unambiguous**. Therefore, initial preparation of the frame may be required to ensure that the most ideal conditions are met. A relevant issue is the evaluation of the coverage level of the frame with respect to the target population; that is to estimate the percentage of excluded population members, which gives rise to under-coverage.

Sometimes it is possible to **evaluate the impact of under-coverage on the resulting sample**. A key factor is how the under-coverage is distributed across the various sub-populations in the country, for example if a large proportion of under-coverage is related to one or two small sub-populations or if there is a uniform under-coverage across many sub-populations.

Frame imperfections, not only coverage errors but also out-of-date information, are likely to bias or reduce the reliability of the survey estimates and to increase data collection costs. For example, over-coverage generally increases variance because it results in a reduced sample (elements which do not belong to the target population are excluded) as compared to what would have been obtained under no over-coverage. The random size of the final sample will also bring more variance. Multiple listings can increase variance. One of the main reasons is that multiple listings reduce the size of the final effective sample (population elements that appear in the sample more than once are excluded from it).

Types of sampling frame

For health surveys **the most complete register** including the target population units can be chosen among population registers, electoral lists, census lists or public health registers.

In some countries there exist **population registers** containing the names and addresses of all persons in the population, as well as additional auxiliary information, such as age, sex, education, etc.

Another example of a list commonly used for sampling is the **telephone directory**. This list is usually not complete because of unlisted number of households without telephone (and because of the increasing number of mobile phones often not included in directories). This is an example of under-coverage. A telephone directory can allow for inclusion of some households (household with more than one number). This is an example of multiple listings.

When one of these **two kinds of list of individuals** is to be used for the sample, a one-stage sample design can be drawn, in which each final sampling unit is directly selected from the list. Of course, even when a population register is available, also a two-stage sampling design can be defined.

In many countries, however, a complete list of all the persons in the target population may not exist. In this case an **area frame** can be defined as a geographical frame consisting of area unit; every population element belongs to an area unit and can be identified after inspection of the area unit. In these situations, the total number of population units is often unknown. The sets of elements drawn using an area frame are usually called clusters. The selected clusters can be sub-sampled in a secondary selection step.

Recommendations for the sampling frame:
The sampling frame should adequately cover the target population.
The information used from the sampling frame should be up to date with respect to the survey's reference period.
The accuracy of the frame's data should be assessed in means of coverage errors and classification errors (see also 2.7 Sample Size).

2.6. Sampling design and sampling method

According to the Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples, article 12 par. 1: "Data collected under this Regulation shall be based on representative samples … " that should be drawn from sampling frames set up at national level that allow persons or households to **be selected at random, with a known probability of selection**. This means that only the use of probability sampling methods is acceptable.

Member States shall provide to Eurostat only information on **primary strata** (PRIMSTRAT) and **primary sampling units** (PSU).

Two important aspects of a **survey design** are the choices of sampling design and estimation procedure to be used. The **sampling design** is a theoretical concept, directly related to the probabilistic method used for sample selection. By using a specific sample selection technique (sampling method), a certain sampling design is implemented. The **estimation procedure** concerns the methods used for numerical processing of data, to allow drawing conclusions on the target population based on the sample. The choices of sampling design and estimation procedure should not be made independently. On the contrary, they are to be chosen as a combination, and the latter must reflect the former as closely as possible.

Many **sampling methods** can be found in the literature and this chapter will not present all of them. It focuses on the main sampling techniques and stresses the consequences of using one method rather than another. The typical sampling design used in practice consists of a combination of various sample selection techniques. As the sampling design is only one of many aspects that governs the quality of statistics, there exists no such thing as a uniformly best sampling design.

To define the **sampling strategy**, it is essential that the main parameters of which the estimates are required are precisely defined. The parameters are defined with regards to the variables to be collected with the questionnaire: for categorical variables the parameters are absolute or relative frequencies, for continuous variables the parameters usually are means or totals. The domains of estimate are the levels for which estimate are to be produced, like regions or sex and age groups. The domains are considered planned in the sampling design if they can be obtained by means of aggregation of sampling strata, unplanned if they are not (or cannot be) considered when designing the sample.

The **sample design** must consider what has been previously fixed in terms of objectives and constraints of the survey and consists of defining:

- the sampling scheme, characterized by:
- - selection stages;
- - stratification criteria: stratification variables, number of strata;
- - unit selection probabilistic method: equal or unequal probabilities;
- - total sample size and its allocation among strata.

It is considered good survey practice to use a sampling design which yields a **probability sample**. Under such a design, each member of the sample frame has a non-zero probability of being selected (also named inclusion probability). It does not necessarily require that every person has the same probability of being selected, but simply that each person has a chance of being included. The probability of an individual to be selected should be known or estimable (consistently) but does not have to be constant.

Only **probability sample designs** are based on accepted sampling distribution theory, allowing the estimates derived from the survey data to be legitimately generalized to the population from which the sample is drawn, and permitting the estimation of measures of precision of the survey estimates.

2.6.1. Probability sampling methods

The first step of a sampling design is to decide the **number of sampling stages**, which usually is defined by the availability of sampling frames, the type of interview and the possible need to concentrate the fieldwork geographically.

A **one-stage design** can be chosen only if a list of the population units is available, so that each unit can be directly selected from the list. In this case the final sampling units (individuals or households) can be drawn from the list by simple random sample or, better, by a stratified random sample, if the frame contains some variables (such as sex, age, or other) that can be used to stratify the population units. The selection process can be either via a simple random sampling or a systematic sampling within each stratum.

Probability sampling methods often used in practice are as follows:

- **Simple random sampling** (without replacement) (SRS)
- Systematic sampling (SYS)
- Probability proportional to size sampling (PPS).

In a **multi-stage sampling**, a hierarchy of units is selected: we start with primary sampling units (PSU), within which secondary sampling units (SSU) are sub-selected, within which tertiary sampling units (TSU) are sub-selected, etc. The different samplings (PSU, SSU, TSU) can be drawn by using different sampling techniques (PPS in a first stage, SRS or SYS in the others). Indeed, multi-stage sampling goes hand in hand with weighting, since primary and secondary units may have different sizes and/ or sub-units may be selected with unequal probability.

Clustering refers to the fact that several non-independent units (stemming from a "cluster") are simultaneously selected. Multi-stage sampling can be seen as a complex form of cluster sampling. Using all the sample elements in all the selected clusters may be prohibitively expensive or not necessary. Under these circumstances, multi-stage cluster sampling becomes useful. Instead of using all the elements contained in the selected clusters, the researcher randomly selects elements from each cluster. Constructing the clusters is the first stage. Deciding what elements within the cluster to use is the second stage. Both concepts go hand in hand but are not the same. For instance, selecting only one household in a town and only one individual within a household is a multi-stage sampling but not a cluster sampling. Conversely, selecting households from a

list of households, and then include all household members is a cluster sampling without multi-stage sampling. Because there is no sub-selection taking place, this is a one-stage procedure.

An important advantage in **multi-stage sampling** is that a sampling frame at the element level is not needed for the whole population. The only requirements are for cluster-level sampling frames and, in two-stage sampling, frames for sampling of elements from the sampled clusters. For instance, while there is no list of all pupils, there is a list of all schools and every school has got a list of its pupils. A second benefit to resort to multi-stage sampling is that it facilitates fieldwork. This is especially true for populations that have a large regional spread. When multi-stage sampling leads to clusters, often geographically close, interviewers will be able to organize their work more efficiently.

The main drawbacks of multi-stage sampling deal with **statistical efficiency**. When multi-stage sampling induces clustering and the within-cluster correlation is positive (that is clusters tend to be internally homogeneous) the precision will go down. This typically is the situation that happens in practice. This clustering effect can be reduced by stratifying the population of clusters, tending to improve efficiency. Auxiliary information in cluster sampling therefore concerns not only the grouping of the population elements into clusters but also the properties of the clusters needed if stratification is used.

Multi-stage sampling is aimed for to counterbalance the statistical precision loss by a stronger increase in **fieldwork efficiency**, so that overall there is a gain.

Oversampling

Oversampling is selecting more people from certain groups than would typically be done if everyone in the sample had an equal chance of being selected. Oversampling is usually used when the sample size does not allow reaching specified precision targets over certain sub-populations and it leads to more accurate estimates for those groups.

The technique has proven particularly suitable to:

- **Small** sub-populations;
- Sub-populations suffering from severe **non-response** problems;
- Sub-populations with large **internal variability** on the key variables.

When oversampling is applied to certain population groups then appropriate method of **re-weighting** must be applied on data to avoid bias in national estimates (see subchapter on Weighting).

2.6.2. Stratification

The **stratification process** involves dividing the population into groups (strata) before the selection of a sample within each of these subsets. The aim is to gain precision by creating strata that are internally homogenous with respect to the characteristic to be estimated. The stratification is usually defined in such a way that the planned domains for the estimates are obtainable by aggregating strata.

Two **main reasons justify stratification**. It increases precision and it enables inferences about the strata population (that is drawing conclusions on the target population of strata based on the sample), provided that the strata sample sizes are not too low. Even if stratification is intended for increasing precision, it is technically possible the reverse effect occurs and this should be avoided. The condition for stratification to work better than SRS is that the correlation between stratifying variable and survey variable should be high. Clearly, such stratifying variables need to be known prior to the sampling process starts. Typical candidates for stratification are age, sex, geographical information, size of units, socio-economic status, educational level, occupational status and type of activity/ occupation.

The **number of stratifying variables** and the number of categories per stratifying variable should not be too large otherwise the number of units per stratum will be reduced. Very small strata affected by severe non-response can lead to one respondent per stratum which makes impossible to estimate the variance of any statistics, unless strata are collapsed.

The **general principle for estimation** follows a 2 stages rationale: first construct an estimator for each stratum separately and then combine the stratum-specific estimators to a population-level estimator. In stratified sampling the target population is divided into non-overlapping subpopulations called strata. These are regarded as separate populations in which sampling of elements can be performed independently. Within the strata, some of the basic sampling techniques,

SRS, SYS or PPS, are used for drawing the sample of elements. Stratification involves flexibility because it enables the application of different sampling techniques for each stratum. In general, there are several reasons for the popularity of stratified sampling:

- For administrative reasons, many frame populations are readily divided into **natural subpopulations** that can be used in stratification. For example, strata are identified if a country is divided into regional administrative areas that are non-overlapping.
- Stratification allows for flexible stratum-wise use of **auxiliary information** for both sampling and estimation. For example, PPS technique can be used in sampling within the stratum, and ratio or regression estimation can be used for the selected sample, depending on the availability of additional auxiliary information in the stratum.
- Stratification can involve improved efficiency if each stratum is **homogeneous** with respect to the variation of the study variables. Hence, the within-stratum variation will be small, which is beneficial for efficiency.
- Stratification can guarantee **representation** of small subpopulations or domains in the sample if desired. This means that inclusion probabilities can vary between strata. The variation is controlled by the so-called allocation techniques.

The **information needed for the stratification** has to be available in advance on the selection frame; therefore, when an individual register is available for the survey it will be possible to define a stratification relative to individual characteristic, otherwise only geographical variables can be used.

2.6.3. Selection of individuals in selected households / dwellings

Statistical (observation and analysis) units are individuals in EHIS. When households or dwellings are used as sample frame, the member state has to provide information on the method chosen to select individuals and explain their rationales for selecting the number of individuals.

When **households** are the sampling units, the issue on the method to select individuals for the final sample arises. When dwellings are the sampling units, it should be noted that in a dwelling it is possible to find more than one household. One possibility is retaining in the sample all eligible individuals in a selected household (in case of dwellings sample, all individuals in all the households that compose the dwelling should be included). Including in the sample every eligible member within the household may be a statistically inefficient procedure, unless one of these two conditions is met:

- Households are often formed by only **one individual**;
- **Intra-class correlation** within the household of the variables measured is of negligible size. If intra-class correlation is low for the studied characteristics, we can assume the random assignment of individuals to households from those characteristics' perspective. But homogeneity within households often occurs and it increases the variance of estimations. For this reason, statisticians recommend selecting in the sample only one eligible member per household.

If not retaining in the sample all eligible individuals in the selected households, **methods to select individuals** must be defined. The implemented within-household sampling rule must be random and probabilistic and must avoid the introduction of bias in total coverage of the target population. A list of possible methods is given bellow:

- Kish grid method
- Troldahl and Carter method
- "quota selection within a household" method
- "birthday" method.

Selection of methods depends, among other aspects, on the **data collection mode**. For instance, Kish is generally used in door-to-door interviews, while Troldahl – Carter or birthday method is generally used in telephone or mail surveys.

In case dwellings are selected it is necessary that when more than one household live in the dwelling, one of them is selected at random. Each country must **provide documentation of the methods used to select household and individuals**. Besides, the inclusion probabilities must be calculated considering all these stages of selection.

Recommendations for sampling design and sampling method:
No specific recommendations for the type of sampling design and sampling method is provided.
Stratification and oversampling are recommended if it can improve the quality of the survey; if applied they must be tackled in an appropriate way in further phases of processing of data.
Direct sampling of individuals or sampling of one person per household is recommended.
Only limited information on sampling is required by Eurostat but keeping all of it in the records (especially in multi-stage sampling) and microdata files for possible further use is recommended.

2.7. Sample size

Annex II of the Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from sample indicates the precision requirements to be achieved by each Member State as follows:

- These precision requirements for all data sets of EHIS wave are expressed in standard errors and are defined as continuous functions of the actual estimates and of the size of the statistical population in a country.
- The estimated standard error of a particular estimate SÊ(p̂) shall not be bigger than the following amount:
- $\sqrt{\frac{\hat{p}(1-\hat{p})}{f(N)}}$
- The function f(N) shall have the form of $f(N) = a\sqrt{N} + b$

The following values for parameters N, a and b shall be used:

p̂	N	a	b
Percentage of population severely limited in usual activities because of health problems (age 15 years or over)	*Country population aged 15 years or over residing in private households, in million persons and rounded to 3 decimal digits*	*1200*	*2800*

Recommendation for sample size:
Each member state assures that the national sample size chosen fulfils the precision desired under the estimation strategy used.

2.8. Participation and non-participation

In most surveys efforts should be established to **"convert" non-participants in the first round into participants**. Increasing the sample size does not remove the non-response bias; it just increases the precision of obtained estimates.

Interviewers should be asked to **continue to try to contact the selected persons** to establish a contact. In the case of an interview survey, **at least three attempts**[97] should be made before a household or individual is accepted as non-responding, unless there are conclusive reasons (such as a definite refusal to co-operate, circumstances endangering the safety of the interviewer, etc.) why this cannot be done[98].

All **contact attempts** with the households/ individuals must be recorded by the interviewer: the date, the mode of contact (contacted by telephone / contact at doorstep), when the attempt took place (before noon / in the afternoon / during evening time) and the result of contact.

(97) In case of a telephone interview, this implies making 3 attempts to reach the respondent by telephone; for a web interview, it would mean sending 3 email reminders.

(98) See article 6, par. 1 of the EHIS implementing regulation for wave 4.

Survey participants (respondents) are those who take part to the interview and answer either all or part of the questions relevant for them (relevant means considering filtered questions).

Reporting on sample cases

1	Total released sample cases The households/ individuals initially selected from the sampling frame. ▶ [1] = [2] + [3] + [6]
2	Ineligible sample cases / out-of-scope units The unit does not belong to the population of interest for the survey although it is included in the sampling frame.
2.1	Non-existent units The unit does not exist although it was included in the frame due to errors (house/ building not existing, no one living in the building/ on the address)
2.2	Changes in status The unit has changed its status becoming out of scope for the survey (e.g. change of residence for a household, selected individual died between the reference data of the sampling frame and the moment of the interview, etc.).
2.3	Out of target units The unit has never been in-scope although it was included in the frame due to an inclusion error.
2.4	Other ineligible Other types of ineligibility encountered. It should be specified what are the reasons for this kind of ineligibility.
3	Eligible sample cases / in-scope units The unit belongs to the population of interest for the survey (both non-response and response cases). ▶ [3] = [4] + [5]
4	Non-response cases / Non-participation Units for which it has not been able to obtain information.
4.1	Non-contact A unit which has not been possible to contact (e.g., no one was at home or wrong address).
4.2	Refusal e.g., selected household or individual was contacted but refused to take part in the survey.
4.3	Inability to respond e.g., selected household or individual was unable to participate due to language barriers or cognitive or physical incapacity to respond (and no proxy interview was conducted).
4.4	Rejected interviews e.g., the selected household/ individual did take part but the survey form cannot be used (poor quality–e.g. strong inconsistencies; unacceptable item-response – e.g. individual left most of the questions unanswered; survey form got lost and interview cannot be repeated; etc.).
4.5	Other non-response Other types of non-response encountered. It should be specified what are the reasons for this kind of non-response.
5	Response cases / Participation Units for which it has been possible to obtain information.

5.1	A fully completed interview All relevant questions answered by the respondent.
5.2	A partly completed interview Not all relevant but at least some technical variables (PID, HHID, PRIMSTRAT, PSU, WGT, PROXY, REFDATE, INTMETHOD), country, sex and age and at least 50 % of all other variables (to be answered) answered by the respondent or by a proxy interview.
6	Unknown eligibility Selected units with unresolved eligibility.

2.8.1. Response rate

A formula for calculation of **response rate**:

$$response\ rate = \frac{number\ of\ completed\ interviews\ [5]}{number\ of\ eligible\ sample\ population\ [3] + unresolved\ selected\ units\ [6]}$$

Where:

- Numerator = number of fully completed interviews [5.1] + number of partly completed interviews [5.2]
- Denominator = original sample size [1]–number of ineligible sample population [2].

Analogically, the **non-response rate** is calculated as 1–response rate. The non-response rate can be weighted (considering design weights) or un-weighted. It can be calculated for individuals or households. Where substitutions are made in cases of unit non-response, non-response rates is to be calculated before and after substitutions.

Requested **reporting on non-response** will consist of data on the structure of the reached survey population and of the overall reference population. The data will be requested for sex and ten-year age groups structure; and also for household size, region (NUTS 2 level), education and labour status. Data on the whole survey population and non-response population for the same breakdown can be provided if data is available.

Computing the non-response rate for each mode of data collection shall not be done when a mixed mode of data collection has been used.

2.8.2. Proxy interviews

Proxy interview is conducted when another person responds on behalf of the selected respondent. Use of proxies may be cost-effective if the interviewer can obtain information from the proxy during the first contact and does not have to come back later to do the interview with actual respondent. Saving the time and money by using proxies on all occasions is not allowed, since answers provided by proxy are not necessarily the same that the selected respondent might have provided.

In general, proxy interviews are **not recommended** in cases if less reliable or accurate results can be expected that is in cases:

- the topic is **very subjective** (for example for general self-perceived health)
- the topic is **too sensitive** (such as less accepted behaviour like alcohol consumption)
- data is probably **less known** to proxy respondents (physical activity).

Proxy answers shall only be **allowed** in cases where the respondent is unable to answer for one of the following reasons:[99]

- Suffering from long-term **cognitive impairment**;
- Suffering from long-term severe **debilitation**;
- Suffering from a long-term **sensory impairment** that prevents the interaction between interviewer and interviewee;

([99]) See article 7, par. 2 of the EHIS implementing regulation for wave 4

- In **hospital/ health or social care facility** for the entire period of the fieldwork;

Any **other proxy interviews** are to be excluded from the dataset (for example, for people not contacted because they are absent at the time of the interview due to working or studying matters).

A **person responding on behalf of the respondent** should be close and knowing very well the selected respondent. It should be another household member or someone who takes care of the selected respondent. If a respondent has difficulties to understand the national language and there is a person helping the respondent with translation, he/ she is not considered as proxy respondent and all questions are allowed to be answered.

When more than one person per household is to be interviewed the rules on proxy interviewer must be even more strictly checked.

When a proxy interview has been conducted, it must be **identifiable in the dataset** (via the "proxy" variable taking a value equal to 2 or 3). For quality assessment it is useful to have a more detailed overview on the reasons for conducting the proxy interview.

If the information is carried out with a proxy interviewee and there is a possibility to contact the sampled respondent later, the interviewer should use the opportunity to **check the answers** provided by the proxy in the questionnaire.

The use of proxy interview should conform to **national data protection requirements**.

2.8.3. Substitution

Substitution is a **replacement of non-respondents** (eligible non-response cases) with new, additional survey responding units.

The method is **not recommended** since there is no guarantee that it would actually reduce the non-response bias. The other reported disadvantage of the substitution is a decrease of the interviewer's efforts to contact people and persuade them to participate when they know that substitution is used for non-respondents. Substitution also increases the required time to conduct the survey. A general recommendation is to use resources better on other methods to increase the response rate of the original sample – anything from how to improve contact rates to how to persuade people to participate.

It is recommended not to use substitution of non-respondents in EHIS. However, in duly justified cases, and only to the extent necessary, controlled substitution could be used for the situation listed below or if the sample unit has not been reached after three attempts for contact[100]:

- the address was impossible to locate
- the address was non-residential or unoccupied
- the person was not found at the address
- the person was unable to respond, including for reasons of incapacity
- a definite refusal of the person to cooperate was received
- the circumstances were endangering the interviewer's safety

Procedures shall be followed to ensure that the process of substitution is controlled to the maximum extent possible. Such procedures shall include using a design which ensures that the selected substitutes closely match the persons they replace in terms of their significant characteristics. The set of sample persons for substitution shall be defined prior to data collection. There shall be no substitution with persons not belonging to that set.

Member States allowing the use of **substitution methods** should:

- specify after how many attempts the unit is considered as "lost" and the interviewer can use another unit. This information should be provided at the time of data dissemination. Additional information should also be provided on the procedure used to select the additional matching units.

([100]) Article 6, par. 2 of the EHIS implementing regulation for wave 4

- be able to identify the additional matching cases in their dataset to be able if needed to report results only with original units.

In case of a dwelling-based sample where all the household members are interviewed, the household should not be substituted when a household member answers the questionnaire and another member does not answer. Substitution should only be done if all household members refuse to participate.

Recommendations related to participation:
No recommendation on the response rate to be achieved is given but Member States shall follow appropriate procedures to maximize the response rates achieved.
It is recommended not to use substitution of non-respondents. However, controlled substitution could be used in justified cases and described in detail.
Records on type of participation and non-participation should be kept and delivered to Eurostat.
The proxy rate shall be kept as limited as possible. The proxy interview can be conducted only in specific cases and only for specific variables and need to be justified and reported on.

2.9. Weighting

The present section outlines a unified structure for the whole **weighting procedure**. According to the Commission implementing Regulation on EHIS, article 8, par. 5: "Weighting factors shall be calculated to take into account the unit's probability of selection, non-response and, as appropriate, to adjust the sample to external data relating to the distribution of persons in the target population."

Member States will **provide to Eurostat the value** of the corresponding weighting factor for each individual (variable WGT–Final individual weight). They will document how they have been constructing these factors in the quality reports. This information shall be included in the **Metadata** at the time of data dissemination. The minimum request for adjustment of the sample to external data should be done with respect to the distribution of persons in the target population according to sex and ten-year age groups.

The **purpose of the use of weighting factors** is to consider the chosen design features as well as to reduce biases caused by the non-response. Sample weights indicate the number of units in the survey target population that are represented by the sample unit.

Weights (or weighting factors) take into account:

- unit's probability of selection;
- correct non-response (NR);
- oversampling/ under-sampling of certain population groups;
- adjust/ calibrate the sample to external data relating to distribution of persons in the target population.

2.9.1. Use of auxiliary information at the estimation stage

The most obvious reasons for using **auxiliary information** at the estimation stage are reduction of the sampling and non-response errors, it may also be used for reducing other types of non-sampling errors (for example frame errors).

Efficient use of auxiliary information in the estimation may, for example, allow for the use of a less complex sampling design without loss of efficiency. This might be a wise approach to use in practice, as the task of variance estimation typically is simplified using a less complex sampling design (calculations are easier).

In addition, incorporating auxiliary information at the **estimation stage** rather than the sampling design stage typically requires less a priori knowledge about the auxiliary information. Indeed, when including auxiliary information at the design stage, unit-level auxiliary data are needed for the sampled elements whereas only aggregated data are required when

integrating auxiliary information at the estimation stage. Another strong argument for using auxiliary information is that it may improve the efficiency.

The idea is that the **design weights are adjusted** using auxiliary information in order to improve the overall accuracy of estimators.

The **standard methods** for using auxiliary information at the estimation stage are:

- ratio estimation
- regression estimation
- post-stratification.

2.9.2. Reweighting to adjust for unit non-response

Unit non-response occurs when not all elements (households and/ or individuals) of the original sample (i.e. the initial sample drawn from the reference sampling frame) participate in the survey and then no data on the vector of study variables is recorded for a unit.

If some of the data missing are available in other data sources like administrative registers, **record linkage** might be used to obtain additional information for non-respondents.

In general, however, the **missing information** is not available in other data sources. Non-respondents are typically not a random sample of the total sample. In household surveys, for instance, there is strong evidence that non-respondents are younger than respondents, and that men are harder to persuade to take part than women. Response rates also tend to be lower than average in cities and in deprived areas. Numerous studies show that respondents and non-respondents differ in socio-economic status as well as in their health profiles. Consequently, missing data stemming from non-response will cause population level estimators to be biased unless appropriate action is taken. Hence, choice of methods for treatment of missing data is an important aspect of the survey design.

Due to **differences between respondents and non-respondents**, it is likely that the respondent set will not reflect the population in the same way as it would, had full response been attained. Rather than accept a poor match, it is common to use weights to bring the two more closely into line. This is known as non-response weighting.

The literature on **non-response weighting** is vast and varying in perspective. In modern survey literature, however, the response behaviour is typically seen as stochastic process governed by an unknown probabilistic model, sometimes referred to as the response distribution. In practice the response distribution is unknown. Nevertheless, it can be of great help for the survey statistician in the search for a weight system. In the planning of a survey, different weight systems, corresponding to different assumptions about the response distribution, should be considered and evaluated. The goal is to select a weight system which provides estimate of acceptable quality for all parameters of interest for all domains of interest. Such weight systems ordinarily require strong auxiliary information. A model is of course never a perfect image of the real world, but using a good response model is a large step in the direction of unbiasedness and valid inferences can be taken.

Two different **approaches** for deriving weights under non-response leading to linear weighting estimators can be mentioned:

- Explicit modelling of the response distribution
- Implicit modelling of the response distribution.

Because of the difficulties associated with proper variance estimation, Eurostat does **not recommend imputation for unit non-response**. Eurostat recommends using auxiliary information at design stage and estimation stage since sampling and non-response errors can be reduced.

To be able to estimate the potential bias caused by non-response, Eurostat recommends MS to **provide an analysis of non-response**, i.e., some key information, like age, sex, socio-economic status and if possible, some health indicators, about the non-respondents should be collected. This can be done either through the sampling frame, a separate short questionnaire specially designed for non-respondents or record linkage. However, as the availability to additional data

sources and linkage possibilities vary considerably between Member States, it is not possible to set a fixed list of data items desirable to have from non-respondents.

2.9.3. Calculation of weighting factors

Step 1: Calculation of initial weights (design weights)

Initial (design) weight = 1 / unit's probability of selection

- The calculation of unit's probability of selection depends on the sampling procedure. In case of multi-stage sampling, the unit's probability of selection is the product of the probabilities of selection at each stage. If the sampling procedure includes the selection of households (HH) and individuals, then both probabilities of selection of households and individuals (individual respondents) can be computed.

Step 2: Correction for non-response (NR)

General idea is that the design weights have to be inflated by the inverse of the response probabilities in order to compensate for the loss of units in the sample. These probabilities have to be estimated.

One of the possible methods[101], Stratum-specific response rate method, is presented here[102]. The procedure consists in modifying the design weights by a factor inversely proportional to the response rate within each "homogeneous group", wherein the response probabilities are assumed to be equal:

$$weight\ (corrected\ for\ NR) = \frac{Design\ weight}{R_K}$$

Where R_k denotes the (weighted) response rate in the group k the individual belongs to:

$$Rk = \frac{sum\ of\ design\ \text{weights}\ of\ responding\ units\ in\ cell\ k}{sum\ of\ design\ \text{weights}\ of\ selected\ \ units\ in\ cell\ k}$$

Numerous, very small weighting cells can result in a large variation in R_k values and should be avoided. On the other hand, if only a few broad classes are used, little variation in the response rates across the sample may be captured – making the whole re-weighting process ineffective. On practical ground, cells of average size 100-300 units may be recommended.

In dealing with the effect of **non-response**, it is of crucial importance to identify responding and non-responding units correctly:

- Selected units which turn out to be non-eligible must be excluded and not counted as **non-responding**.
- For the units with **unknown status**, it is recommended to consider that all of them are eligible because this gives a conservative (upper bound) non-response rate. This approach is in line with the formula of the response rate presented before in this manual. Since all units with unknown status should be treated as eligible, therefore they cannot be considered other than non-respondents. Thus, they contribute to the overall unit non-response which should be accounted for in the weighting process by correction (readjustment) of weights.

Step 3: Calibration with auxiliary information

In this step the modification of the individual/ household weights is to be done to **reproduce from the sample population characteristics**, namely totals and category frequencies. The distribution of the population characteristics is often known from other statistical sources and by proper modification of the survey weights, the population structure may be exactly reproduced by the sample. For variables in the survey correlated with the auxiliary information, higher precision in estimates is usually obtained on application of the new calibrated weights. Examples of the auxiliary information on individual level: age, sex, level of education or type of profession; and at household/ dwelling level: household size and household composition. Regions (NUTS 2) can be used on individual and household level.

([101]) Used in EU-SILC

([102]) Another alternative method to estimate response probabilities is to use the regression-based approach.

More precisely, suppose that there exist J auxiliary variables $x_1 \ldots x_j \ldots x_J$, called **calibration variables**, with known population totals (for the numerical variables) or marginal counts (for the categorical variables). Without loss of generality, we can assume that all the calibration variables are numerical (otherwise, we consider the 0/1 variables for each category).

We seek new **individual weights** that are "as close as possible" (as determined by a certain distance function) to the non-response-corrected weights. These new weights are calibrated on the totals X_j of the J auxiliary variables; in other words, they verify the calibration equations:

$$\forall\, j = 1 \ldots J \qquad \sum weight\,(calibrated) \cdot x_j = X_j$$

The distance function D: $Min \sum D\big(weight\,(calibrated), weight\,(corrected\ for\ NR)\big)$

Where for each unit: $weight\,(calibrated) = g \times weight\,(corrected\ for\ NR)$

In practise, it is recommended to use a **bounded method** and to impose lower and upper bounds on the weight adjustment factors g, usually referred to as g-weights. Putting calibration bounds prevents from negative and extreme weights. Extreme weights can lead to unexpected values especially for domain estimates. Negative weights are not acceptable from a practical point of view.

Calibration can also be used as a standard method for **treatment of non-response**. This allows calculating sample weights which are both adjusted for non-response and calibrated to external sources by using a single-step calibration.

For calculation of calibrated weights different **software applications** can be used.

For countries using **households as sampling units** and interviewing all adult population within the households an "integrative" calibration is recommended. The idea is to use both household and individual external information in a single-shot calibration at household level. The individual variables are aggregated at household level by calculating household totals such as the number of males/females in the household, the number of adult persons… The calibration is done then at household level using household variables and the individual variables in their aggregated form. This technique ensures "consistency" between household and individual estimates by making the household and the individual weights equal.

In the framework of calibration, it is critical that the external control variables are strictly comparable to the corresponding survey variables, the distribution of which is being adjusted.

A remark on trimming

Trimming refers to **recoding of extreme weights** to more acceptable values. The objective of trimming is to avoid excessive increase in variance due to weighting, and possibly give rise to influential data, even though the process introduces some bias. The aim is to seek a trimming procedure which reduces the mean squared error. Basically, at each step of the weighting procedure, the distribution of the resulting weight adjustments should be checked.

There is **no rigorous procedure** for general use for determining the limits for trimming. While more sophisticated approaches are possible, it is desirable to have a simple and practical approach. Such an approach may be quite adequate for the purpose if the permitted limits are wide enough.

The following simple procedure is recommended with:

- wi(1) = weight before adjustment (non-response, calibration…)
- wi(2) = weight determined after adjustment
- $\varpi(1)$, ϖ (2) their respective mean values,

Any computed adjusted weights outside the following limits should be recoded to the boundary of these limits:

$$\frac{1}{C} \le \frac{w_i(2)/\varpi(2)}{w_i(1)/\varpi(1)} \le C$$

A reasonable value for the parameter is C=3. Since trimming alters the mean value of the weights, the above adjustment may be applied iteratively, with the mean re-determined after each cycle. A very small number of cycles should suffice

normally. Information on variability of the weights and method of treatment of extreme weights will be asked via quality report.

Recommendations for weighting:
Eurostat does not recommend imputation for unit non-response.
Three-step weighting procedure described above which consider the sample design, non-response and possible over-sampling of certain population groups is recommended.
Adjustment of the sample to external data should be done at least according to sex and ten-year age groups (15-24, 25-34, …, 75+); but is recommended to be done for five-year age groups or for ten-year age groups with a top category 75+ but given the sample size and the quality and availability of the data, larger aggregations for the upper age group are allowed only to the necessary extent; and also adjustment according to region (preferably NUTS 2 level; or any aggregation of NUTS 2 or NUTS 1) and education (ISCED 2011 levels: 0-2, 3-4, 5-8) if data is available and respective strata representative enough.
Outlier detection and treatment should be considered in estimation since outliers can lead to large variability in the estimates.
Only final individual weights (WGT) are to be delivered to Eurostat (referring to all "response cases"–full and partial interviews) but all weights (design weights, weights corrected for non-response and if relevant also all household weights) are recommended to be kept for possible further use.

2.10. Imputation

2.10.1. Imputation methodology in general

In general, imputation can be described as the process used to **determine plausible values for replacing missing, invalid or inconsistent data**. Here we consider it as a method for dealing with non-response only.

Unit non-response refers to absence of information on whole units (persons) selected into the sample. Normally the impact of unit non-response is reduced by attaching appropriate weights to the responding cases (see the previous chapter on weighting).

Item non-response refers to the situation when a sample unit has been successfully enumerated, but not all the required information has been obtained.

In certain situations, such as when the incidence of item non-response is low and the indicators are means or proportions (not totals), it may be a reasonable option to ignore the problem and confine the analysis **only to cases with complete information**.

There are reasons to impute missing data:

- **statistical reasons**: to minimise the mean squared error of survey estimates non-response bias component that arises when the pattern of missing data is not random;
- **practical reasons**: consistency between the results from different analysis and convenience of not having to deal with missing data problem at the analysis stage.

Imputation implies **assigning artificial substitute values to the missing values**. For imputation to be successful, imputed values should show close resemblance to the missing values. There are two principal uses of imputation:

- Imputation for **both item and unit non-response**. The resulting data matrix contains numerical information for all study variables for all units in the sample. No weighting adjustment for unit non-response is needed;
- Imputation for the **item non-response only**. The resulting data matrix contains numerical information for all study variables for all units in the unit response set. Weights need to be adjusted for unit non-response.

Both approaches result in **complete data matrices**, albeit of different dimensions. This is one of the virtues of imputation, as it is a considerable advantage at the estimation stage to be able to work on a complete data matrix.

A set of **rules** is needed as a guide to generate acceptable imputation results. The quality of the results always requires considerable amounts of good judgement during the imputation process, in the identification of patterns, in the selection of the appropriate techniques, choice of auxiliary variables, etc.

The **literature** suggests several imputation methods for item non-response, which can generally be grouped into three categories:

- **Deductive methods**: The imputed value is deduced from known information or relations. A deductive method is connected with editing of data. Often, it takes place as a part of data entry program, such as a computer assisted interview program or a data extract program from administrative sources, equipped with a set of logical checking routines which can detect errors and also give either right or "best guess" imputed values for the missing or incorrect ones.
- **Deterministic methods**: Repeating the imputation process for units with the same characteristics would produce the same imputed values. If the missing value is borrowed from a neighbouring unit – physically the next or previous observation – the method is referred to as hot-deck imputation. Traditional hot-decking often leads to implausible situations and therefore it is improved with some nearest neighbour imputation method, where similar units are sought with some metrics or by choosing sub-populations. The value may be taken directly from the closest unit or taken as lottery from a pool of similar units.
- **Stochastic methods**: Repeating the imputation process for units with the same characteristics would produce different imputed values. Stochastic methods are characterized by the presence of a random component (residual), corresponding to a probabilistic scheme associated with the chosen imputation method. Using a stochastic method is one way to make sure that at least some of variance increase caused by imputation for item non-response is reflected in the variance estimates.

There are clearly some **desirable properties** which the procedure used should have, and some procedures are better than other in terms of those properties. The procedure applied to the data shall preserve the variation in and the correlation between variables. Methods that incorporate 'error components' into the imputed values shall be preferable to those that simply impute a predicted value.

Methods which consider the correlation structure (or other characteristics of the joint distribution of the variables) shall be preferable to the marginal or univariate approach. On the other hand, it is also desirable to limit the complexity or the computational work involved in the construction of the imputations.

2.10.2. Imputation methodology for income

Across countries "Income" seems to be the most problematic variable within EHIS with respect to item non-response.

A **two-step sequential imputation procedure** for income is suggested:

Firstly, household income band is imputed by a **logistic regression model**. It is then used as a strong auxiliary variable for the household income amount.

Secondly, the amount variable is imputed by a **generalised linear regression model**. The income amount variable should be distributed normally for that, but usually it has a skew distribution. Therefore, a Box-Cox transformation can be used to achieve normalization of the income amount ([103]).

Covariates used for the income imputation are variables characterizing the household: its size; number of household members belonging to the corresponding age group; household type; number of active household members; some variable with urban/ rural meaning of the household's residence place.

([103]) If SAS is used as software, the SAS procedure "proc mi" can be used for the implementation of both steps. The procedure is devoted for multiple imputation, but indicating only one imputation for this procedure, the complete data set with randomly imputed values for two income variables will be obtained. Moreover, the procedure "proc mi" has a statement which lists all the variables used in this procedure. The last variables named in this statement show the monotone missing pattern: the last variable has the highest level of missing values, the next-to-last variable has missing values in the subset of observations, missed for the last variable. The sampling design weights should be included in the frequency statement.

Recommendations for imputation:
Imputation could be used to adjust only for item non-response.
No method on dealing with item non-response is recommended but a method from the group of stochastic methods is recommended to be applied to make sure that at least some of variance increase caused by imputation is reflected in the variance estimates.
If an imputation is applied the method should be chosen carefully taking into account the type of data to be imputed and to preserve relationships between variables as much as possible. In case of proxy interviews, imputations should be avoided for variables which are not to be completed by proxy respondent.
When the imputation is carried out, countries should be able to provide both un-imputed and imputed data and provide data on imputation rates for all imputed variables. The imputation method should be clearly described.

2.11. Technical survey variables

This part gives an overview and short description of technical survey variables that are to be delivered in the microdata file.

Variable name	Description
PID	Identification number of respondent

Codes:

10-digit number

The identification number should be a meaningless unique identifier for each respondent. It must NOT contain any information that conflicts with confidentiality rules.

Variable name	Description
HHID	Identification number of household

Codes:

10-digit number

-1 Not stated

The identification number (a meaningless unique identifier) should be the same for respondents belonging to the same household. It must NOT contain any information that conflicts with confidentiality rules.

For countries selecting individuals the HHID is supposed to be the same as the Identification number of respondent (PID).

This variable is needed for analysing a cluster effect and family health patterns in countries that will interview more respondents within one household.

Variable name	Description
WGT	Final individual weight ([104])

Codes:

Number (format 5.3–8 digits in total – maximum 5 digits for the integer part and 3 digits for the fractional part)

Variable name	Description
PROXY	Nature of participation in the survey

([104]) For more information: see sub-chapter 2.9 Weighting.

Codes:

1 direct participation

2 other member of the household

3 someone else outside the household

-1 not stated

REFDATE	Reference date of the interview

Codes:

YYYY-MM-DD

INTLANG	**Language used for interview**

Codes:

3-digit code (Standard Code List Eurostat)

-1 Not stated

The codes should conform to Eurostat standard code list (SCL) – Languages (3-letter code) ([105]):

For the other technical variables **PRIMSTRAT**, **PSU** and **INTMETHOD** see the *Commission implementing regulation (EU) 2019/2181 of 16 December 2019 specifying technical characteristics as regards items common to several datasets pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council* and the *Implementation guidelines for the standardised key social variables*.

([105]) Eurostat code lists

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Annex 1: EHIS wave 4 model questionnaire

Question code	Question, answer categories and instructions
EHSM	**European Health Status Module**
HS	**Minimum European Health Module – Health Status**
Introduction HS	I now would like to talk to you about your health.
HS1	How is your health in general? Is it… 1. very good 2. good 3. fair 4. bad 5. very bad?
HS2	Do you have any long-standing illness or [long-standing] health problem? Long-standing means illnesses or health problems which have lasted, or are expected to last, for 6 months or more.] 1. Yes 2. No
HS3A	Are you limited because of a health problem in activities people usually do? Would you say you are … 1. severely limited 2. limited but not severely or 3. not limited at all? FILTER INTERVIEWER: Next question HS3B is to be asked only for respondents having replied "severely limited" or "limited but not severely" (codes 1 or 2 in HS3A).
Filter	If HS3A=1 or HS3A=2 GO TO HS3B Otherwise GO TO next sub-module
HS3B	Have you been limited at least the past 6 months? 1. Yes 2. No
CD	**Diseases and chronic conditions**
Introduction CD2	Next question is about the health of your teeth and gums.

Question code	Question, answer categories and instructions
CD2	How would you describe the state of your teeth and gums? Would you say it is … INTERVIEWER INSTRUCTION: Read response categories 1. very good 2. good 3. fair 4. bad 5. very bad?
Introduction CD1	Here is a list of chronic diseases or conditions.
CD1	During the past 12 months, have you had any of the following diseases or conditions? 1. Yes 2. No INTERVIEWER INSTRUCTION: Tick "Yes" or "No" for each chronic disease.
	A. Asthma (allergic asthma included)
	B. Chronic bronchitis, chronic obstructive pulmonary disease, emphysema
	C. A myocardial infarction (heart attack) or chronic consequences of myocardial infarction
	D. A coronary heart disease or angina pectoris
	E. High blood pressure (hypertension)
	F. A stroke (cerebral haemorrhage, cerebral ischaemia) or chronic consequences of stroke
	G. Arthrosis (arthritis excluded)
	H. A low back disorder or other chronic back defect
	I. A neck disorder or other chronic neck defect
	J. Diabetes
	K. An allergy, such as rhinitis, hay fever, eye inflammation, dermatitis, food allergy or other allergy (allergic asthma excluded)
	M. Urinary incontinence, problems in controlling the bladder
	N. Kidney problems
	O. Depression
	P: High cholesterol or high blood lipids
	R: cancer (i.e., received cancer diagnosis, cancer treatment, living with cancer)
AC	**Accidents and injuries**
AC1	In the past 12 months, have you had any home or leisure accident resulting in injury? INTERVIEWER CLARIFICATION: "Injuries resulting from poisoning or inflicted by animals or insects are also included. Injuries caused by wilful acts of other persons are excluded."
	1. Yes 2. No
AW	**Temporary limitation in activity (due to health problems)**
Filter	Question AW1 is to be asked only for respondents currently working (MAINSTAT=10).

Question code	Question, answer categories and instructions
AW1	In the past 12 months, have you been absent from work for reasons of health problems? Take into account all kind of diseases, injuries and other health problems that you had and which resulted in your absence from work. 1. Yes 2. No
Filter	If AW1 = 1 GO TO AW2 Otherwise GO TO next sub-module
AW2	In the past 12 months, how many days in total were you absent from work for reasons of health problems? |__|__|__| Number of days
PN	**Pain**
Introduction PN	Next questions are about any physical pain you have had during the past 4 weeks.
PN1	How much bodily pain have you had during the past 4 weeks? 1. None 2. Very mild 3. Mild 4. Moderate 5. Severe 6. Very severe
Filter	If PN1 = 2 or 3 or 4 or 5 or 6 GO TO PN2 Otherwise GO TO next sub-module
PN2	During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? 1. Not at all 2. A little bit 3. Moderately 4. Quite a bit 5. Extremely
MH	**Mental health**
Introduction MH1	Next questions are about how you feel and how things have been with you during the past 2 weeks. For each question, please give the answer that come closest to the way you have been feeling.
MH1	Over the last 2 weeks, how often have you been bothered by any of the following problems? 1. Not at all 2. Several days 3. More than half the days 4. Nearly every day INTERVIEWER INSTRUCTION: Tick an answer for each of the questions. Ensure that complete information is obtained for all of the questions; otherwise, the output indicators can't be calculated.
	A. Little interest or pleasure in doing things

Question code	Question, answer categories and instructions
	B. Feeling down, depressed or hopeless
	C. Trouble falling or staying asleep, or sleeping too much
	D. Feeling tired or having little energy
	E. Poor appetite or overeating
	F. Feeling negative ([106]) about yourself or that you are a failure or have let yourself or your family down.
	G. Trouble concentrating on things, such as reading the newspaper or watching television
	H. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual
PL	**Functional limitations**
Introduction PL	Now, I am going to ask you some further questions about your general physical and mental health. These questions deal with your ability to do different basic activities. Please ignore any temporary problems.
PL1	INTERVIEWER INSTRUCTION: If the respondent is completely blind do not ask the question, mark with code 3 in PL1 and then go to PL3. For the others, ask PL1. Do you wear glasses or contact lenses? 1. Yes 2. No 3. I am blind or cannot see at all
Filter	If PL1 = 1, 2 or -1 GO TO PL2 Otherwise GO TO PL3
PL2	Phrasing if PL1 = 1 Do you have difficulty seeing even when wearing your glasses or contact lenses? Would you say … [showcard] Phrasing if PL1 = 2 or -1 Do you have difficulty seeing? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PL3	INTERVIEWER INSTRUCTION: If the respondent is completely deaf do not ask the question, mark with code 3 in PL3 and then go to PL6. For the others, ask PL3. Do you use a hearing aid? 1. Yes 2. No 3. I am profoundly deaf
Filter	If PL3 = 1, 2 or -1 GO TO PL4 Otherwise GO TO PL6

([106]) The countries are free to choose the official version of PHQ-9 and change the wording from "negative" to "bad".

Question code	Question, answer categories and instructions
PL4	Phrasing if PL3 = 1 Do you have difficulty hearing what is said in a conversation with one other person in a *quiet* room, even when using your hearing aid? Would you say … [showcard] Phrasing if PL3 = 2 or -1 Do you have difficulty hearing what is said in a conversation with one other person in a *quiet* room? Would you say… [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PL5	Phrasing if PL3 = 1 Do you have difficulty hearing what is said in a conversation with one other person in a *noisier* room, even when using your hearing aid? Would you say … [showcard] Phrasing if PL3 = 2 or -1 Do you have difficulty hearing what is said in a conversation with one other person in a *noisier* room? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PL6	Do you have difficulty walking half a km on level ground, that would be the length of […] ([107]) without the use of any aid? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PL7	Do you have difficulty walking up or down 12 steps? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do

([107]) The question has to be completed with an example fitting the national context. For example: "five football fields" or "one city block."

Question code	Question, answer categories and instructions
PL8	Do you have difficulties remembering or concentrating? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PL8A	Using your usual (customary) language, do you have difficulty communicating, for example understanding or being understood? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
Filter	If AGE is 55 years or more GO TO PL9. Otherwise GO TO next sub-module.
PL9	Do you have difficulty biting and chewing on hard foods such as a firm apple? Would you say … [showcard] 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do
PC	**Personal care activities**
Filter	If (AGE < 55 and HS3 = 1 or 2) or AGE is 55 years or more GO TO Introduction PC1. Otherwise GO TO next sub-module.
Introduction PC1	Now, I would like you to think about some everyday personal care activities. Here is a list of activities [showcard]. Please ignore temporary problems.
PC1	Do you usually have difficulty doing any of these activities without help? 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do INTERVIEWER INSTRUCTION: Tick an answer for each of the personal care activities.
	A. Feeding yourself
	B. Getting in and out of a bed or chair
	C. Dressing and undressing
	D. Using toilets
	E. Bathing or showering
Filter	If PC1A = 2, 3, 4 or PC1B = 2, 3, 4 or PC1C = 2, 3, 4 or PC1D = 2, 3, 4 or PC1E = 2, 3, 4 GO TO Introduction PC2. Otherwise GO TO next sub-module.

Question code	Question, answer categories and instructions
Introduction PC2	Thinking about all personal care activities where you have difficulty in doing them without help…
PC2	Do you usually have help with any of these activities? 1. Yes, with at least one activity 2. No
PC3	Phrasing if PC2 = 1 Would you need more help? Phrasing if PC2 = 2 Would you need help? 1. Yes, with at least one activity 2. No
HA	**Household activities**
Filter	If (AGE < 55 and HS3 = 1 or 2) or AGE is 55 years or more GO TO Introduction HA1. Otherwise GO TO next sub-module.
Introduction HA1	Now, I would like you to think about some household activities. Here is a list of activities [showcard]. Please ignore any temporary problems.
HA1	Do you usually have difficulty doing any of these activities without help? 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do 5. Not applicable (never tried it or do not need to do it) INTERVIEWER INSTRUCTION: Tick an answer for each of the household activities. INTERVIEWER INSTRUCTION: If the spontaneous answer is "NO DIFFICULTY" or you are not sure about the answer you should probe if the respondent does the activity or cannot do the activity by himself/ herself but for other reasons than his/ her health state. In these cases, answer "Not applicable" should be recorded.
	A. Preparing meals
	B. Using the telephone
	C. Shopping
	D. Managing medication
	E. Light housework
	F. Occasional heavy housework
	G. Taking care of finances and everyday administrative tasks
Filter	If HA1A = 2, 3, 4 or HA1B = 2, 3, 4 or HA1C = 2, 3, 4 or HA1D= 2, 3, 4 or HA1E = 2, 3, 4 or HA1F = 2, 3, 4 or HA1G = 2, 3, 4 GO TO Introduction HA2. Otherwise GO TO next sub-module.
Introduction HA2	Thinking about all household activities where you have difficulty in doing them without help ...
HA2	Do you usually have help with any of these activities? 1. Yes, with at least one activity 2. No

Question code	Question, answer categories and instructions
HA3	Phrasing if HA2= 1 Would you need more help? Phrasing if HA2= 2 Would you need help? 1. Yes, with at least one activity 2. No
BA	**Barriers to participation in specific life domains**
Introduction BA1	Next questions are about the opportunities that people could have in participating in everyday life activities as much as they want to. We will start with questions asking about your ability to move from one place to another either by walking or by using various forms of transportation.
BA1	Do you usually have difficulty leaving your home (that is going out on the street) because of a long-standing health problem? Would you say having… 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do 5. No interest in this activity / Do not want to do it INTERVIEWER INSTRUCTION: Uses of mobility aids such as, canes, crutches, wheelchairs as well as personal help are to be considered when answering the question.
BA2	Do you usually have difficulty using various forms of transportation (such as a car, bus, train, coach, taxi) because of a long-standing health problem? Would you say having… 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do 5. No interest in this activity / Do not want to do it INTERVIEWER INSTRUCTION: Uses of mobility aids such as, canes, crutches, wheelchairs as well as personal help are to be considered when answering the question.
BA3	Do you usually have difficulty accessing the buildings you want or need to use, including moving about once inside and using indoor building facilities because of a long-standing health problem? Would you say having… 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all/ Unable to do 5. No interest in this activity / Do not want to do it INTERVIEWER INSTRUCTION: Uses of mobility aids such as, canes, crutches, wheelchairs as well as personal help are to be considered when answering the question.

Question code	Question, answer categories and instructions
Filter	If BA1 = 2 or 3 or 4 or BA2 = 2 or 3 or 4 or BA3 = 2 or 3 or 4 GO TO BA4. Otherwise GO TO question BA5.
BA4 (optional)	You have previously stated that you have a certain degree of difficulty. Is any of the following reasons also contributing to the difficulty experienced? Please indicate the main reason contributing to the difficulty experienced. 1. Lack of money, can't afford it 2. Lack of self-confidence 3. Attitudes of other people 4. Lack of convenient or available transport 5. Difficulties travelling on transport (such as getting on or off transport, no seats available, too uncomfortable) 6. Difficulties parking (such as not enough spaces) 7. Poor buildings' infrastructure and accessibility (lack of elevators, ramps, signs, doors too narrow, toilets not adapted, etc.) 8. Other reasons 9. None
BA5	Do you usually have difficulty attending social activities such as getting together with family or friends, going to dinner, going to social events (either alone or accompanied) because of a long-standing health problem? Would you say having… 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all / Unable to do 5. No interest in this activity / Do not want to do it INTERVIEWER INSTRUCTION: Uses of mobility aids such as, canes, crutches, wheelchairs as well as personal help are to be considered when answering the question.
Filter	If BA5 = 2 or 3 GO TO BA6. Otherwise GO TO question BA7.
BA6 (optional)	Is any of the following reasons also contributing to the difficulty experienced? Please indicate the main reason contributing to the difficulty experienced. 1. Too busy (with work, family, caring or other responsibilities) 2. Lack of money, can't afford it 3. Lack of self-confidence 4. Attitudes of other people 5. Lack of knowledge or information 6. Environmental barriers/no friendly environment (for instance, difficulties with access and use of public transportation, accessing or using buildings, shops, easy movement along streets, parking, etc.) 7. Other reasons 8. None

Question code	Question, answer categories and instructions
BA7	Do you usually have difficulty using the internet because of a long-standing health problem? Would you say having… 1. No difficulty 2. Some difficulty 3. A lot of difficulty 4. Cannot do at all / Unable to do 5. No interest in this activity / Do not want to do it
MH	**Mental health**
Introduction MH2	Please indicate for each of the following five statements which is closest to how you have been feeling over the last two weeks.
MH2	How much of the time over the last 2 weeks …? 1. All of the time 2. Most of the time 3. More than half of the time 4. Less than half of the time 5. Some of the time 6. At no time INTERVIEWER INSTRUCTION: Tick an answer for each of the questions.
	I have felt cheerful and in good spirits
	I have felt calm and relaxed
	I have felt active and vigorous
	I woke up feeling fresh and rested
	My daily life has been filled with things that interest me
EHCM	**European Health Care Module**
HO	**Use of inpatient and day care**
Introduction HO	The next set of questions is about time spent in hospital. All types of hospitals are included. INTERVIEWER clarification: For women up to age 50 years, add: "The time spent in hospital for giving birth should not be included".
HO1A	In the past 12 months have you been in hospital as an inpatient that is overnight or longer? 1. Yes 2. No INTERVIEWER clarification: "Visits to emergency departments only (without overnight stay) or as outpatient only should not be included".
Filter	If HO1A = 1 GO TO HO1B. Otherwise GO TO HO2A.
HO1B	Thinking of all these occasions you have been an inpatient, how many nights in total did you spend in hospital? |__|__|__| Number of nights

Question code	Question, answer categories and instructions
HO2A	In the past 12 months, have you been admitted to hospital as a day patient, that is admitted to hospital for diagnosis, treatment or other types of health care, but not required to remain overnight? 1. Yes 2. No
Filter	If HO2A = 1 GO TO HO2B. Otherwise GO TO next sub-module.
HO2B	In the past 12 months how many times have you been admitted to hospital as a day patient? |__|__|__| Number of times
AM	**Use of ambulatory and home care**
Introduction AM1	The next question is about visits to dentists, orthodontists or other dental care specialist.
AM1	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.)? Would you say … 1. Less than 6 months 2. 6 to less than 12 months 3. 12 months or longer 4. Never
Introduction AM2	The next questions are about consultations with your general practitioner or family doctor. Please include visits to your doctor's office as well as home visits and consultations by telephone.
AM2	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
Filter	If AM2 = 1 GO TO AM3. Otherwise GO TO AM4.
AM3	During the past four weeks, how many times did you consult a GP (general practitioner) or family doctor on your own behalf? |__|__| Number of times (NOT AT ALL = 0)
Introduction AM4	Next questions are about consultations with medical or surgical specialists. Include visits to doctors as outpatient or emergency departments only, but do not include contacts while in hospital as an in-patient or day-patient.
AM4	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 INTERVIEWER clarification: "Do not include visits to general dentists". ONLY FOR COUNTRIES WHERE THIS MAY CAUSE CONFUSION, ADD: "Visits to dental surgeons should be included."

Question code	Question, answer categories and instructions
Filter	If AM4 = 1 GO TO AM5. Otherwise GO TO AM6.
AM5	During the past four weeks, how many times did you consult a specialist on your own behalf? |__|__| Number of times (NOT AT ALL = 0)
AM6	In the past 12 months have you visited on your own behalf a…? INTERVIEWER INSTRUCTION: Tick "Yes" or "No" for each of the professions.
	A. Physiotherapist, kinesitherapist, chiropractor or osteopath ([108]) 1. Yes 2. No
	B. Psychologist, psychotherapist or psychiatrist 1. Yes 2. No
Introduction LT1	The next question is about regularly receiving any unpaid care or assistance from family members, friends or neighbours for a wide spectrum of personal care or household care activities (for instance, house cleaning or shopping but also receiving companionship and emotional support) due to a long-standing health problem or old age.
LT1	In the past 12 months, have you received any unpaid care or assistance from a family member (within or outside your household), partner, friend or neighbour because of a long-standing health problem or old age, at least once a week? Please include any help or assistance with personal care and household activities, as well as companionship and emotional support. 1. Yes, mainly from a family member 2. Yes, mainly from a non-family member 2. No
Introduction LT2	The next question is about home care services that cover a wide range of health and social services provided to people with long-standing health problems or who are old, at their homes. These services comprise for example, [home care service provided by a nurse or midwife, home help for the housework or for elderly people, meals on wheels or transportation service] ([109]). Only services provided by professional health or social workers on a regular basis (that is, at least once a week) because of a chronic health condition or infirmity or old age should be considered.
LT2	In the past 12 months, have you used or received for yourself any home care services provided by professional health or care workers, at least once a week? 1. Yes 2. No
Filter	If LT2 = 1 GO TO LT3. Otherwise GO TO next sub-module.

([108]) Countries can include in question AM6A those professional groups that are existing in their health system.

([109]) Kinds of services according to national organization of the services should be presented to respondents.

Question code	Question, answer categories and instructions
LT3	How many hours per week do you receive care or assistance from a professional health or care workers? 1. Less than 5 hours per week 2. 5 hours to less than 10 hours per week 3. 10 hours to less than 20 hours per week 4. 20 hours to less than 30 hours per week 5. 30 hours to less than 40 hours per week 6. 40 hours per week or more
MD	**Medicine use**
Introduction MD	I'd now like to ask about your use of medicines in the past 2 weeks.
MD1	During the past two weeks, have you used any medicines that were prescribed for you by a doctor? INTERVIEWER clarification: For women, also add: "Exclude contraceptive pills or hormones used solely for contraception". 1. Yes 2. No
MD2	During the past two weeks, have you used any medicines or herbal medicines or vitamins not prescribed by a doctor? INTERVIEWER clarification: For women, also add: "Exclude contraceptive pills or hormones used solely for contraception". 1. Yes 2. No
PA	**Preventive services**
Introduction PA1	Now I would like to ask you about flu vaccination.
PA1	When was the last time you've been vaccinated against flu? |__|__|/|__|__|__|__| Month / Year 1. Too long ago (before last year) 2. Never
Introduction PA2	Now I would like to ask you about your blood pressure, blood cholesterol and blood sugar (glycaemia).
PA2	When was the last time that your blood pressure was measured by a health professional? 1. Within the past 12 months 2. 1 to less than 3 years 3. 3 to less than 5 years 4. 5 years or more 5. Never

Question code	Question, answer categories and instructions
PA3	When was the last time that your blood cholesterol was measured by a health professional? 1. Within the past 12 months 2. 1 to less than 3 years 3. 3 to less than 5 years 4. 5 years or more 5. Never
PA4	When was the last time that your blood sugar was measured by a health professional? 1. Within the past 12 months 2. 1 to less than 3 years 3. 3 to less than 5 years 4. 5 years or more 5. Never
Introduction PA5	The next questions are about faecal occult blood test and colonoscopy examination.
PA5	When was the last time you had a faecal occult blood test? 1. Within the past 12 months 2. 1 to less than 2 years 3. 2 to less than 3 years 4. 3 years or more 5. Never INTERVIEWER clarification: You can add: "The aim of the test is to detect minor blood loss in the gastrointestinal tract, anywhere from the mouth to the colon".
PA6	When was the last time you had a colonoscopy? 1. Within the past 12 months 2. 1 to less than 5 years 3. 5 to less than 10 years 4. 10 years or more 5. Never INTERVIEWER clarification: You can add: "It is visual examination of the colon (with a colonoscope) from the cecum to the rectum".
Filter	If SEX = 2 (woman) GO TO PA7. Otherwise GO TO next sub-module.
Introduction PA7	The next questions are about mammography and cervical smear tests.
PA7	When was the last time you had a mammography (breast X-ray)? 1. Within the past 12 months 2. 1 to less than 2 years 3. 2 to less than 3 years 4. 3 years or more 5. Never

Question code	Question, answer categories and instructions
PA8	When was the last time you had a cervical smear test? 1. Within the past 12 months 2. 1 to less than 2 years 3. 2 to less than 3 years 4. 3 years or more 5. Never
UN	**Unmet needs for health care**
Introduction UN	There are many reasons why people experience some delay in getting health care or do not get it at all.
UN1A	Have you experienced delay in getting health care in the past 12 months because the time needed to obtain an appointment was too long? 1. Yes 2. No 3. No need for health care INTERVIEWER INSTRUCTION: If the spontaneous answer is "NO" you should probe if the respondent needed health care or not. In case no care was needed answer "3. No need for health care" should be coded.
UN2A1	Was there any time in the past 12 months when you needed a mental health consultation or treatment (by a psychologist, psychotherapist or a psychiatrist, for example) for yourself? 1. Yes (I really needed at least on one occasion mental health consultation or treatment) 2. No (I did not need any mental health consultation or treatment)
Filter	If UN2A1 = 1 GO TO UN2A2. Otherwise GO TO next sub-module.
UN2A2	Did you have a mental health consultation or treatment each time you really needed? 1. Yes (I had a mental health consultation or treatment each time I needed) 2. No (there was at least one occasion when I did not have a mental health consultation or treatment)
Filter	If UN2A2 = 2 GO TO UN2B. Otherwise GO TO next sub-module.
UN2B	What was the main reason for not having a mental health consultation or treatment? 1. Could not afford to (too expensive or not covered by the insurance fund) 2. Waiting list, don't have the referral letter 3. Could not take time because of work, care for children or for others 4. Too far to travel/no means of transportation 5. Having concerns about confidentiality and trust 6. Being afraid of negative reaction or comments from family, friends or colleagues 7. Fear about the consultation or treatment (for instance, fear of negative outcome or fear of side effects of medication) 8. Not knowing where to seek help 9. Other reason
EHDM	**European Health Determinants Module**

Question code	Question, answer categories and instructions
BM	**Weight and height**
Introduction BM	Now I'm going to ask you about your height and weight.
BM1	How tall are you without shoes? in [cm] |__|__|__| [cm] ([110])
BM2	How much do you weigh without clothes and shoes? in [kg] |__|__|__| [kg] ([111]) INTERVIEWER INSTRUCTION: Check for women aged 50 or younger whether they are pregnant and ask for weight before pregnancy.
PE	**Physical activity/ exercise**
Introduction PE	Next, I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.
Introduction PE1	Firstly, think about the TIME you spend DOING WORK. Think of work as the things that you have to do such as paid and unpaid work, work around your home, taking care of family, studying or training [Insert other examples if needed].
PE1	When you are WORKING, which of the following best describes what you do? Would you say … INTERVIEWER INSTRUCTION: Respondents should refer their answer to the "main work" they do. If respondents do multiple tasks, they should include all tasks. Respondents should select only one answer. 1. Mostly sitting or standing 2. Mostly walking or tasks of moderate physical effort 3. Mostly heavy labour or physically demanding work INTERVIEWER INSTRUCTION: Do not read: 4. Not performing any working tasks
Introduction PE2	The next questions EXCLUDE the WORK-RELATED PHYSICAL ACTIVITIES that you have already mentioned. Now I would like to ask you about the way you usually GET TO AND FROM PLACES. For example, to work, to school, for shopping, or to market. [Insert other examples if needed]
PE2	In a typical week, on how many days do you WALK for at least 10 minutes continuously in order to get to and from places? Number of days: |__| 0. I never carry out such physical activities
Filter	If PE2 > 0 ASK PE3 Otherwise (PE2 = 0 ("Never") or MISSING) GO TO PE4.

([110]) National measuring units can be used but the variable needs to be transformed into cm.

([111]) National measuring units can be used but the variable needs to be transformed into kg.

Question code	Question, answer categories and instructions
PE3	How much time do you spend walking in order to get to and from places on a typical day? 1. 10–29 minutes per day 2. 30–59 minutes per day 3. 1 hour to less than 2 hours per day 4. 2 hours to less than 3 hours per day 5. 3 hours or more per day
PE4	In a typical week, on how many days do you BICYCLE for at least 10 minutes continuously to get to and from places? Number of days: |__| 0. I never carry out such physical activities
Filter	If PE4 > 0 ASK PE5 Otherwise (PE4 = 0 ("Never") or MISSING) GO TO PE6.
PE5	How much time do you spend bicycling in order to get to and from places on a typical day? 1. 10–29 minutes per day 2. 30–59 minutes per day 3. 1 hour to less than 2 hours per day 4. 2 hours to less than 3 hours per day 5. 3 hours or more per day
Introduction PE6	The next questions EXCLUDE the WORK and TRANSPORTATION ACTIVITIES that you have already mentioned. Now I would like to ask you about SPORTS, FITNESS and RECREATIONAL (LEISURE) PHYSICAL ACTIVITIES that cause AT LEAST a small increase in breathing or heart rate. For example, brisk walking, ball games, jogging, cycling or swimming. [Insert other examples if needed]
PE6	In a typical week, on how many days do you carry out sports, fitness or recreational (leisure) physical activities for at least 10 minutes continuously? Number of days: |__| 0. I never carry out such physical activities
Filter	If PE6 > 0 ASK PE7 Otherwise (PE6 = 0 ("Never") or MISSING) GO TO PE8.
PE7	How much time in total do you spend on sports, fitness or recreational (leisure) physical activities in a typical week? |__|__|: |__|__| per week hours minutes
PE8	In a typical week, on how many days do you carry out activities specifically designed to STRENGTHEN your muscles such as doing resistance training or strength exercises? Include all such activities even if you have mentioned them before. Number of days: |__| (1-7 days) per week 0. I never carry out such physical activities
Introduction PE9	The last question in this module is about sitting at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television on a typical day; but time spent sleeping should not be included here.

Question code	Question, answer categories and instructions
PE9	How much time do you usually spend sitting and reclining on a typical day? |__|__|: |__|__| per day hours minutes
DH	**Dietary habits**
Introduction DH	Next questions concern the consumption of fruits and vegetables.
DH1	How often do you eat fruits, excluding juice squeezed from fresh fruit or made from concentrate? 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never INTERVIEWER INSTRUCTION: Frozen, dried, canned, etc. fruits should be included. But any fruit juices should be excluded.
Filter	If DH1 = 1 THEN GO TO DH2. Otherwise go to DH3.
DH2	How many portions of fruit, of any sort, excluding juice, do you eat each day? Number of portions: |__|__|
DH3	How often do you eat vegetables or salad, excluding potatoes and fresh juice or juice made from concentrate? 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never INTERVIEWER INSTRUCTION: Frozen, dried, canned, etc. vegetables should be included. But any kind of vegetable juices or soups (warm and cold) should be excluded.
Filter	If DH3 = 1 THEN GO TO DH4. Otherwise GO TO DH5.
DH4	How many portions of vegetables or salad do you eat each day? Number of portions: |__|__|
DH5	How often do you drink 100 % pure fruit or vegetable juice, excluding juice made from concentrate or sweetened juice? 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never

Question code	Question, answer categories and instructions
DH6	How often do you drink sugared soft drinks, for example lemonade or cola? Please, exclude light, diet or artificially sweetened soft drinks. 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never INTERVIEWER INSTRUCTION: Light, diet or artificially sweetened soft drinks are excluded.
DH7	Frequency of eating red meat: the model question is left to national responsibility
Introduction DH7	ESTAT proposal: Next question concerns the consumption of fresh and frozen meat from cattle, pork, lamb, mutton, horse, or goat. Minced meat and meat preparations are to be included but any processed meat products should not be considered.
DH7	ESTAT proposal: How often do you eat fresh and frozen meat from cattle, pork, lamb, mutton, horse, or goat? 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never
DH8	How often do you eat processed meat products, such as salami, sausages, hot dogs? 1. Once or more a day 2. 4 to 6 times a week 3. 1 to 3 times a week 4. Less than once a week 5. Never
SK	**Smoking**
Introduction SK	The following questions are about your smoking habits and exposure to tobacco smoke.
SK1	Do you smoke any tobacco products (excluding heated tobacco products, electronic cigarettes or similar electronic devices)? 1. Yes, daily 2. Yes, occasionally 3. Not at all
Filter	If SK1 = 1 GO TO SK2A. Otherwise GO TO SK3.
SK2A	Do you smoke manufactured or hand-rolled cigarettes each day? 1. Yes 2. No
Filter	If SK2A = 1 GO TO SK2B. Otherwise GO TO SK4.

Question code	Question, answer categories and instructions
SK2B	On average, how many cigarettes do you smoke each day? Number of cigarettes: |__|__| (1-99) per day.
Filter	If SK1 =2, 3 or -1 GO TO SK3. Otherwise GO TO SK4.
SK3	Have you ever smoked tobacco (cigarettes, cigars, pipes, shishas, etc.) daily, or almost daily, for at least one year? 1. Yes 2. No
Filter	If SK1 =1 or (SK1 = 2, 3 or -1 and SK3 = 1) GO TO SK4. Otherwise GO TO SK5.
SK4	For how many years have you smoked tobacco daily? Count all separate periods of smoking daily. If you don't remember the exact number of years, please give an estimate. |__|__| (Number of) years.
SK5	How often are you exposed to tobacco smoke indoors? 1. Every day, 1 hour or more a day 2. Every day, less than 1 hour per day 3. At least once a week (but not every day) 4. Less than once a week 5. Never or almost never INTERVIEWER CLARIFICATION: You can specify that "by indoors we mean at home, at work, at public places, at restaurants, etc."
SK6A	Do you currently use heated tobacco products, for example tobacco sticks or products that use loose-leaf tobacco? 1. Yes, daily 2. Yes, occasionally 3. No, but I have used them in the past 4. Never used them
SK6B	Do you currently use electronic cigarettes or similar electronic devices (e.g. e-shisha, e-pipe)? 1. Yes, daily vaping 2. Yes, occasionally vaping 3. No, but former vaping 4. Never vaping
AL	**Alcohol consumption**
Introduction AL	The following questions are about your use of alcoholic beverages during the past 12 months.

Question code	Question, answer categories and instructions
AL1	In the past 12 months, how often have you had an alcoholic drink of any kind [beer, wine, cider, spirits, cocktails, premixes, liquor, homemade alcohol…]? INTERVIEWER INSTRUCTION: Here, country-specific alcoholic beverages should appear in the listed examples. Home-made alcohol should also be explicitly cited. Hand showcard on county-specific standard drinks and containers. 1. Every day or almost every day 2. 5–6 days a week 3. 3–4 days a week 4. 1–2 days a week 5. 2–3 days in a month 6. Once a month 7. Less than once a month 8. Not in the past 12 months, as I no longer drink alcohol 9. Never, or only a few sips or trials, in my whole life
Filter	If AL1 = 1, 2, 3 or 4 GO TO AL2. If AL1 = 5, 6 or 7 GO TO AL6. If AL1 = 8 or 9 or MISSING GO TO next sub-module.
AL2	Thinking of Monday to Thursday, on how many of these 4 days do you usually drink alcohol? 1. On all 4 days 2. On 3 of the 4 days 3. On 2 of the 4 days 4. On 1 of the 4 days 5. On none of the 4 days
Filter	If AL2 = 1, 2, 3 or 4 GO TO AL3. Otherwise GO TO AL4.
AL3	From Monday to Thursday, how many drinks do you have on average on such a day when you drink alcohol? 1. 16 or more drinks a day 2. 10-15 drinks a day 3. 6–9 drinks a day 4. 4–5 drinks a day 5. 3 drinks a day 6. 2 drinks a day 7. 1 drink a day 8. 0 drink a day
AL4	Thinking of Friday to Sunday, on how many of these 3 days do you usually drink alcohol? 1. On all 3 days 2. On 2 of the 3 days 3. On 1 of the 3 days 4. On none of the 3 days

Question code	Question, answer categories and instructions
Filter	If AL4 = 1, 2 or 3 GO TO AL5. Otherwise GO TO AL6.
AL5	From Friday to Sunday, how many drinks do you have on average on such a day when you drink alcohol? 1. 16 or more drinks a day 2. 10-15 drinks a day 3. 6–9 drinks a day 4. 4–5 drinks a day 5. 3 drinks a day 6. 2 drinks a day 7. 1 drink a day 8. 0 drink a day
AL6	In the past 12 months, how often have you had [6 or more] ([112]) drinks containing alcohol on one occasion? For instance, during a party, a meal, an evening out with friends, alone at home, … 1. Every day or almost 2. 5 to 6 days a week 3. 3 to 4 days a week 4. 1 to 2 days a week 5. 2 to 3 days in a month 6. Once a month 7. Less than once a month 8. Not in the past 12 months 9. Never in my whole life
SS	**Social support**
Introduction SS	In the following, I will ask three questions about your social relationships.
SS1	How many people are so close to you that you can count on them if you have serious personal problems? 1. None 2. 1 or 2 3. 3 to 5 4. 6 or more
SS2	How much concern do people show in what you are doing? 1. A lot of concern and interest 2. Some concern and interest 3. Uncertain 4. Little concern and interest 5. No concern and interest

([112]) The number of 6 drinks in the model question presumes that 1 drink = 10 g of pure alcohol. The number of drinks used in the question by each country should be adapted to refer to equivalent of 60 g of pure ethanol.

Question code	Question, answer categories and instructions
SS3	How easy is it to get practical help from neighbours if you should need it? 1. Very easy 2. Easy 3. Possible 4. Difficult 5. Very difficult
IC	**Provision of informal care or assistance**
Introduction IC	The next questions are about the provision of care or assistance to other people with health problems.
IC1	Do you provide care or assistance to one or more persons suffering from some age problem, chronic health condition or infirmity, at least once a week? 1. Yes 2. No INTERVIEWER clarification: Please add: "Exclude any care provided as part of your profession".
Filter	If IC1 = 1 THEN GO TO IC2. Otherwise, GO TO next sub-module.
IC2	Is this person or are these persons 1. Members of your family 2. Non-member(s) of your family (someone else)? INTERVIEWER INSTRUCTION: Only one answer allowed. In case multiple persons are involved say: "Select the one to whom you are providing the most care."
IC3	For how many hours per week do you provide care or assistance? 1. less than 5 hours per week 2. 5 hours to less than 10 hours per week 3. 10 hours to less than 20 hours per week 4. 20 hours to less than 30 hours per week 5. 30 hours to less than 40 hours per week 6. 40 hours per week or more INTERVIEWER INSTRUCTION: Sum the time spent during one week by providing care or assistance to all people (a difference compared to IC2). If the number of hours per week differs substantially from week to week, an average should be reported.
SU (optional)	**Suicide**
Introduction SU	Next questions are about your personal experiences with suicidal behaviour. For some individuals, these questions can be upsetting. Please note that you can skip these questions if you don't want to answer.
SU1 (optional)	In the past 12 months, have you had thoughts about committing suicide/dying by suicide? 1. Yes 2. No

Question code	Question, answer categories and instructions
SU2 (optional)	Have you ever made a suicide attempt? 1. Yes, in the past 12 months 2. Yes, but not in the past 12 months 3. No

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European Health Interview Survey wave 4

This publication primarily aims at providing methodological guidance and practical information to national health and survey experts in planning and implementing EHIS 2025 wave. Conducting the survey according to the rules and recommendations described in this handbook is crucial for ensuring harmonized and high-quality data on health across Europe.

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