

Synthesis report on use of EHIS quality assessment criteria

Final Report

March 2011

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Introduction

Background to the EHIS quality criteria template

A template was prepared by the HIS core group and EUROSTAT to allow those in charge of the national EHIS to report on the quality of the data collection at the member state level. The quality categories and criteria were developed on the basis of two task force reports with the purpose of developing guidelines and quality assessment criteria for surveys contributing to EHIS. In the core group meeting in March 2007 the list was discussed and a set of recommendations was agreed upon as standard guidelines for national implementers of EHIS. The discussion outlined the importance of focusing on criteria that can contribute to cross-national, cross cultural and cross-lingual comparability of EHIS. It was agreed that sampling criteria were to be discussed and recommended by the taskforce group on sampling and implemented in the quality template at a later stage. In the core group meeting in October 2008 the quality assessment criteria document was introduced unmodified since its last version. It was agreed that the recommendations from the taskforce on sampling be integrated in the quality criteria. During this meeting it was suggested that the quality template be drafted by EUROSTAT and piloted on the EHIS data which was available from Latvia and Austria.

Outline of this report

Seventeen member states and Switzerland and Turkey have implemented the EHIS wave 1 during the period of 2006 to 2010. The expert was forwarded 12 quality reports by e-mail (Austria, Estonia, France, Romania, Greece, Poland, Germany, Spain, Turkey, Slovakia, Switzerland and Bulgaria) and accessed 7 quality reports from the CIRCA HIS TG library (Belgium, Cyprus, Czech Republic, Hungary, Latvia, Malta and Slovenia). Norway communicated via e-mail that it is planning a stepwise implementation of EHIS and have not fully implemented the EHIS survey though translations and cognitive testing of some questions have been conducted. They plan to perform the full EHIS in 2014.

The expert would also like to note that since the format of the Belgium and Estonian quality reports does not follow the quality template supplied by EUROSTAT some of the information required for this report is not available or has not been explicitly dealt with in the documents supplied by these countries. Where information is unavailable due to this issue a note has been made. Where possible the information in this report has been compiled into summary tables for ease of reading.

Section 1: Survey Details

Thirteen of the 19 countries being addressed in this report stated that they implemented all the recommended EHIS modules in their entirety. France, Switzerland, Austria, Germany, Turkey and Estonia report partial inclusion of some of the EHIS modules. All the countries, except France and Germany reported that the survey was not part of another survey but a standalone exercise. France included the EHIS modules within their 2008 survey “Enquête Handicap-Santé volet “Ménages” which is a national disability/health survey while Germany includes EHIS modules in their annual German Health Update Survey which is also a health interview survey. Twelve of the 19 countries specified the periodicity of the EHIS survey. France, Malta, Bulgaria, Romania, Belgium, Greece, Switzerland and Poland indicated that the survey is/will be conducted every 5 years while the Czech Republic has previously conducted the survey every 3 years but plan to conduct it every 5 years in the future. Austria reported that in principle the survey should be conducted every 5 years but their next survey will probably be in 2013/2014 which is 7 years after the latest EHIS. Germany conducts their health survey on a yearly basis while Turkey holds their survey every two years. In all countries participation was voluntary except for Cyprus, France, Spain, Greece and Turkey.

Below find summary tables for the section “Survey Details”

	EHSM	EHCM	EHDM	EBM
Modules included in EHIS (Completed)	LV CZ HU RO - BG AT EE CY SI MT BE GR PL - ES TR SK -	LV CZ HU RO - BG AT EE CY SI MT BE GR PL DE ES TR SK -	LV CZ HU RO - BG AT - CY SI MT BE GR PL - ES - SK -	LV CZ HU RO FR BG - - CY SI MT BE GR PL - ES TR SK -
Modules included in EHIS (partial inclusion)	FR - - DE - CH	FR - - - - CH	FR - EE DE TR CH	- AT EE DE - -

	Yes		No		
EHIS part of another survey/questionnaire?	FR (Enquête Handicap-Santé volet "Ménages" 2008; Disability – Health Survey "Households" part). DE (Part of survey "German Health Update Survey - GEDA")		LV HU RO BG CY SI CZ BE EE MT AT GR PL ES TR SK CH		
Type of survey hosting EHIS questionnaire	FR – Health Interview Survey; Disability Survey DE – Health Interview Survey				
	Yearly	Every 5 years	Irregular	Only Once	Other
Periodicity of EHIS/survey hosting EHIS questionnaire	DE	FR MT BG RO BE GR PL CH		SK	CZ (previously conducted every 3 years but planned to be conducted every 5 years in the future) AT(in principle the survey should be carried out every 5 years but the next one will be in 2013/2014 according to the EU implementation regulation) TR (Every 2 years)
Note: The following countries did not specify periodicity of EHIS/survey hosting EHIS in their quality reports: LV, HU, SI, EE, ES and CY					
	Voluntary			Mandatory	
Participation of respondents	AT BE			CY FR	

	LV HU RO BG SI CZ EE MT DE PL SK CH	ES GR TR
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Section 2: Adoption and Development of the Instrument

Eleven of the 19 countries conducted the EHIS questionnaire in one language. Four countries (Latvia, Cyprus, Malta and Estonia) conducted the survey in 2 languages while Switzerland conducted their EHIS in 3 languages and Belgium in four. Greece and Spain catered for regional language differences by supplying regional translations in the case of Spain or translators in the case of Greece. Fourteen of the 19 countries indicated explicitly that they followed the EUROSTAT translation protocols. Due to the fact that the Estonia quality report did not follow the template format the expert could not conclude if the EUROSTAT protocols were followed. Turkey stated it did not follow the protocol but gave no information about the type of protocol used. In the case of Spain, EUROSTAT protocol was followed for the Spanish translation while specialised translations were used for regional language translations. Germany followed EUROSTAT translation protocols only for the EHIS components of their survey.

Fifteen of the countries conducted a pre-test of the EHIS modules while France, Greece and Bulgaria reported no pre-test being conducted while Estonia do not mention any pre-testing being undertaken in their report. Simple testing was the most common technique employed in the pre-testing of the EHIS modules. Austria, Switzerland, Czech Republic, Slovenia, Cyprus, Romania, Malta, Hungary, Turkey, Germany and Latvia made use of this technique. The Czech Republic, Hungary and Latvia also employed cognitive testing along with simple testing while Belgium and Slovakia used cognitive testing for some of the modules and Poland used it for all of its modules. Hungary, Switzerland and Latvia also reported pre-testing by an expert panel along with the other methods used. Austria used behaviour coding though this was only conducted for the EHSM while Spain used behaviour coding for the whole survey along with cognitive testing. Of the fifteen countries reporting pretesting, all except Belgium and Slovakia pre-tested all the modules. Belgium reported cognitive testing on the EHSM, EHCM and EHDM while Slovakia reported cognitive testing on the EHSM and some of the Budapest initiative questions. Thirteen countries (Czech Republic, Slovenia, Cyprus, Romania, Malta, Hungary, Estonia, Belgium, Bulgaria, Turkey, Germany, Switzerland and Poland) conducted field tests of the EHIS with Austria, Slovakia,

Spain and Latvia reporting no field testing. No information was supplied by France or Greece.

Below find summary tables for the section “Adoption and Development of the Instrument”

Language/s in which the survey was carried out

Country Codes		Language 1	Language 2	Language 3	Language 4
	GR	Greek	(in some areas such as Rodopi and Xanthi survey was carried out using translators)		
	LV	Latvian	Russian		
	CY	Greek	English		
	AT	German			
	RO	Romanian			
	BG	Bulgarian			
	BE	German	French	Dutch	English
	MT	Maltese	English		
	EE	Estonian	Russian		
	FR	French			
	HU	Hungarian			
	SI	Slovenian			
	CZ	Czech			
	TR	Turkish			
	ES	Spanish (default language)	Regional official languages (Catalan, Valenciano, Euskera, Gallego)	English	
	PL	Polish			
DE	German				
SK	Slovak				
CH	German	French	Italian		

	Yes	No
Translation protocol proposed by EUROSTAT used for all national languages?	FR CZ SI CY BG RO HU LV AT	TR* ES# CH ¹

	MT BE GR PL SK DE~					
<p>Note: Since EE quality report was not in the format of the quality report template the expert could not conclude explicitly if the EUROSTAT protocols were followed as they were not mentioned in the report.</p> <p>~ EUROSTAT protocol only applied to EHIS modules and not whole of GEDA survey.</p> <p>* No information given on protocol used</p> <p># Protocol for Spanish translation was the one proposed by EUROSTAT. Specialised translation was used for translation into regional official languages.</p> <p>¹Utilization of existing available translations in the respective languages</p>						
	Yes	No				
Pretesting	AT CZ SI CY RO MT HU LV BE TR ES PL DE SK CH	FR BG EE GR				
	Simple Testing	Cognitive Testing	Behaviour Coding	Special Probing	Expert Panel	Other
Pre-testing Methods	AT CZ SI CY RO MT HU LV -	- CZ - - - - HU LV BE	AT (only EHSM) - - - - - - -	- - - - - - - -	- - - - - HU LV -	- - - - - - - -

	TR	-	-	-	-	-
	-	ES	ES	-	-	-
	-	PL	-	-	-	-
	DE	-	-	-	-	-
	-	SK	-	-	-	-
	CH	-	-	CH	CH	-
	All EHIS modules		Some of the modules			
Pretesting conducted on...	AT CZ SI CY RO MT HU LV TR ES PL DE CH		BE (EHSM, EHCM & EHDM) SK (New or changed modules from EHSM and some of the Budapest initiative questions)			
	Yes		No			
Field testing conducted	CZ SI CY RO MT HU EE BE BG TR PL DE CH		AT LV* ES SK			
Note: No information supplied regarding field testing by France or Greece *In 2006 Latvia participated in the project “European Core Health Interview Survey”. Field test for the first version was carried out in September 2006 for the EHSM and December for the EHCM and EHDM with 500 respondents for each.						

Section 3: Questionnaire

The majority of the countries reported following the question sequencing for the modules. From the document supplied by Belgium (HIS 2008 Belgium_EHIS) the expert is assuming that the sequencing was not followed as set by EUROSTAT but this may need to be confirmed by the expert from this country. For Estonia this information cannot be explicitly concluded from the report provided. Romania modified one question in the sequencing of the EHDM while Austria used a preliminary version of EHIS so the sequencing of the questions may vary. Germany reported modifying the sequencing in all the modules except EHCM however no details are given about the sequencing of the modified modules. Switzerland reported modifying the sequencing of all the questions in each module.

Of the 19 countries nine reported that there were no EHIS questions that were not included in the survey. Information for Estonia could not be derived for the reasons mentioned in footnotes in the tables below. No information supplied by Germany. For a list of questions which were not included by Switzerland, France, Latvia, Belgium, Turkey and Poland in their EHIS please refer to table below. The majority of the Swiss questionnaire is not similar to EHIS as it has been implemented since 1992 and questions were maintained to have trend data.

For the countries supplying information; the majority of questions which were included and modified in the country EHIS were related to socio-demographic questions such as employment and morbidity with most countries increasing the list of morbidities in their surveys. Some countries have also modified questions in sections related to alcohol, drug consumption and health care services. All the countries except for Greece reported including questions within their survey which were not covered by EHIS but were of national importance. No information available for Germany. Please see table below for a list of EHIS topics modified or non-EHIS modules included in the respective countries.

Thirteen of the 19 countries supplied information on the minimum, maximum and average duration of the interviews. The average range was between 20mins and 1hour 33mins. Below find a detailed table of all the times supplied in the quality reports.

The most common questions being reported as problematic amongst the 19 countries were questions on physical activity, household income, alcohol consumption and mental/emotional well-being. For a list of the specific problems refer to table below.

Below find summary tables for the section “Questionnaire”

Sequence followed for EHIS questions?	EHSM		EHCM		EHDM		EBM	
	Yes	No	Yes	No	Yes	No	Yes	No
	AT	-	-	AT	-	AT	-	AT
	LV	-	LV	-	LV	-	LV	-
	HU	-	HU	-	HU	-	HU	-
	RO	-	-	RO	RO	-	RO	-
	CY	-	CY	-	CY	-	CY	-
	SI	-	SI	-	SI	-	SI	-
	MT	-	MT	-	MT	-	MT	-
	CZ	-	CZ	-	CZ	-	CZ	-
	GR	-	GR	-	GR	-	GR	-
	-	DE	DE	-	-	DE	-	DE
	PL	-	PL	-	PL	-	PL	-
	ES	-	ES	-	ES	-	ES	-
	TR	-	TR	-	TR	-	TR	-
	SK	-	SK	-	SK	-	SK	-
	-	CH	-	CH	-	CH	-	CH

	EHIS questions included but modified¹
LV	<ul style="list-style-type: none"> • HC8 “When was the last time you visited a dentist or hygienist on your own behalf?” – Orthodontists are called dentists. • PA.10 – PA.12 – “mammography or breast sonography” – in health care system breast sonography can be used as an alternative to mammography
FR	<ul style="list-style-type: none"> • More detailed list of morbidities based on national requirements • Simplified alcohol questions
BG	<ul style="list-style-type: none"> • Household composition matrix
CZ	<ul style="list-style-type: none"> • HH2 (different, more simple concept was used) • HH3 (country of birth was asked and recoded additionally) • HH4 (country of citizenship was asked and recoded additionally) • HH5 (married people were divided into “living with spouse”; “living separately”) • HH6 (asked to those only reporting not living with spouse) • HH10 (Other introduced for temporary workers) • HS4 (more conditions added) • HS7 (“does not relate to me” added) • HS10 (absence from school added) • PA15 (multiple responses allowed) • SA1 (“healthcare in general” added)
AT	<ul style="list-style-type: none"> • Preliminary version of EHIS used
RO	<ul style="list-style-type: none"> • HH10 insertion of two categories “member of agricultural co-operative” and “member of a non-agricultural co-operative” • HH11 inclusion of “other” as employment category for persons having not

	<p>signed any employment agreement and work on the basis of a verbal agreement or on probation.</p> <ul style="list-style-type: none"> • HC15 splitting of item “waiting list, don’t have the referral letter” to “I have made and appointment” and “don’t have the referral letter from the family doctor”
HU	<ul style="list-style-type: none"> • HH5 married split into “married and living together” and “married and living separated” • HH8 economic categories more detailed • HH11 more detailed categories • HH13 ISCO-88 to 4 digits • HH14 NACE to 4 digits • HS4 additional items • MD2 additional items • MD4 additional item • SA1 additional items • EN3 additional items • AL1 difficult for respondents to remember a “typical week” therefore asked alcohol consumption in the last week with the addition of a question on whether this is a typical week. Rather than drink respondent asked amount of alcohol consumed.
SI	<ul style="list-style-type: none"> • For questions with “other” categories, “please specify” was added
CY	<ul style="list-style-type: none"> • HH7 – No formal education subdivided into no formal education and primary education not completed to comply with national education system • HS8 – splitting questions by private and public sectors • SA.1 – Split into public and private hospitals.
MT	<ul style="list-style-type: none"> • 6 conditions added to morbidity list • 1 medication added to medications list • Health care services split into private and public • More detailed questions added to sections on alcohol and drug use
GR	<ul style="list-style-type: none"> • HC08 & HC09 variables separated for dentists and orthodontists • PA.12 and PA.15 extra option (on my own initiative) added for national interest • Morbidity list included extra health conditions for national interest • Variables on out of pocket expenses considerably modified
PL	<ul style="list-style-type: none"> • HH02 • HH09 • HH10 • HH11 • IN01 • HC16 and HC17 were joined together in one questions • OP1 – OP3 , were not included in the self completed questionnaire • OP2 do not include expenses on GP services • AL1 =3, go to section on drugs
EE[#]	N/A
ES	<ul style="list-style-type: none"> • HS1 and HS3 remove “Don’t Know” and “Refusal”

	<ul style="list-style-type: none"> • PL2 split into two questions; PL2A can you see newspaper print with your glasses/contact lenses?, PL2B Can you see newspaper print? • PL3 split as above • PL4 split into two questions; PL5A “Can you hear what is said in a conversation with several people wearing a hearing aid?, PL4B Can you hear what is said in a conversation with several people? • SF0 as filter question for SF1; “Overall during the past four weeks did you have any kind of physical pain or physical discomfort?” • HC8, HC10 and HC12 removal of “Don’t Know” and “Refusal” and inclusion of category “In the last 4 weeks” • PA11 different answer categories • PA12 splitting of answer categories • PA 14 answer categories modified • PA 15 inclusion of answer category “ My GP/family doctor advised it to me” • SK1 inclusion of category “Don’t smoke nowadays, but I have smoked before”
SK	<ul style="list-style-type: none"> • National questions on place and country of permanent residence • We applied our own system in wording of the questions HH.5 and HH.6. • We adapted answers of the HH.7 question according to the national educational system. • The question HH.8 on current labour status was included into the table HH.2 (Eurostat questionnaire) • Members of the Household with wider scale of answers. • PC.2,3,4 and HA.3,4,5 were split into two questions, e.g. PC.2 “Do you usually have help?” PC.2.1 “What type of help do you usually have?” • Adding dental hygienists in question HC.8. • Question AL.2, we divided wine into grape wine and other kind of wine. • Two sizes of drinks for beer and spirits
BE*	N/A
DE	N/A
TR	N/A
CH	<ul style="list-style-type: none"> • Some blocks of the CH questionnaire are very similar to EHIS – chronic diseases, accidents, ADL, IADL, prevention. • Some blocks are partly comparable – physical activity, functional limitations, use of health care, smoking, conditions of work, living conditions.
<p>¹Expert is assuming that the question codes given by the countries submitting the reports are in corresponding with the codes supplied by EUROSTAT</p> <p>#Details not given in report</p> <p>* Not explicitly mentioned in report, expert will need to go through the BE questionnaire and compare it to the EUROSTAT EHIS questions.</p>	

	EHIS questions not included	Reasons for non-inclusion
LV	<ul style="list-style-type: none"> AL.2 (How many drinks containing alcohol do you have each day in a typical week when you are drinking? Start with Monday and take one day at a time) Table HH.2 (Household Matrix) 	Following recommendations from the evaluation group and taking into account the time consuming questionnaire and experience from HIS 2003 these questions were excluded.
FR	<ul style="list-style-type: none"> Absence from work due to health reasons Consumption of medications prescribed by a doctor Satisfaction with healthcare services Out-of-pocket expenses Physical activity Exposure to environmental conditions 	N/A
BG	None	
CZ	None	
AT	<ul style="list-style-type: none"> Preliminary version of EHIS used. 	
RO	None	
HU	None	
SI	None	
CY	None	
MT	None	
GR	None	
EE[#]	N/A	
BE*	<ul style="list-style-type: none"> HH1 – HH6 HH8 – HH14 HS9 PC2.1 HA3.1 PA4, PA5 OP1 – OP3 PE2, PE4, PE6 CN1 – CN3 	N/A
DE	N/A	
PL	<ul style="list-style-type: none"> PL11 SA1 	N/A
TR	<ul style="list-style-type: none"> Questions on drug use (CN1 – CN4) Questions on smoking were used but results were not published 	
SK	None	
CH	<ul style="list-style-type: none"> A large part of the questionnaire is different from EHIS even though some adaptations were made to make questions internationally comparable. Identical sections are the 	<ul style="list-style-type: none"> Swiss health survey has been running since 1992 so questions were maintained to keep the

	MEHM questions and the BMI	trend to compare data.
#This information could not be extracted from the report provided		
*As reported in document “Adoption EHS questions” supplied by Belgium representative		

	Non-EHS topics included within surveys	
RO	<ul style="list-style-type: none"> Private and public distinction in health care utilisation questions EDIM in pre-final version 	
LV	<ul style="list-style-type: none"> Ethnicity and health insurance 	
BG	<ul style="list-style-type: none"> Out-of-pocket payments for medical examinations prescribed or recommended to the respondent by a doctor in the last four weeks. 	
CZ	<ul style="list-style-type: none"> Observation of medication/treatment and degree of limitation for chronic diseases Cognition Out of pocket expenses for health care, health aids and medicines not prescribed by doctors. Quality of life 	
FR	<ul style="list-style-type: none"> Details on Stroke, Diabetes and Cancer 	
HU	<ul style="list-style-type: none"> Unemployment Use of medical aids Under the table payments Details on neighbourhood of respondent 	
SI	<ul style="list-style-type: none"> Vaccination against tick-borne meningoencephalitis Ways of searching for information related to health 	
CY	<ul style="list-style-type: none"> HS.6 – tend diseases included in the morbidity list Question on HIV testing Out-of-pocket expenses on non-prescribed medication Out-of-pocket expenditure of hospitalization 	
EE	<ul style="list-style-type: none"> Depression episode sub-module Questions from Rotter’s locus of control scale 	
BE[#]	<ul style="list-style-type: none"> Knowledge and attitudes towards AIDS Violence Suicide Attitudes towards end of life Dental care 	
AT	<ul style="list-style-type: none"> Quality of life (WHO-QOL) Waiting lists with planned operations Cross border health 	
MT	<ul style="list-style-type: none"> Health insurance General attitudes towards health Sexual health 	
PL	<ul style="list-style-type: none"> PL1 relationship to the person 01 PL2 country of citizenship number 2 PL3 country of residence PL4 period of living in Poland PL5 period of absence in household 	

	<ul style="list-style-type: none"> • PL6 Do you attend school(for persons 6+) • PL7 Type of school where you study (for persons 6+) • PL14 (variable add to IN01) other income • 4 diseases added to morbidity list • B18 on use of mentioned aids/devices • B32 – B33 on legal confirmation of disability • B34 – on mentioned groups of occurring illnesses • B64 – B65 – on vaccination against hepatitis type B • PA12 – “self-screening” category added • B103 – use of contraceptive methods
ES	<ul style="list-style-type: none"> • Stays in hospital to give birth
TR	<ul style="list-style-type: none"> • 0 – 6 age group questionnaire • 7 – 14 age group questionnaire • Some questions were added to the 15+ questionnaire
SK	<ul style="list-style-type: none"> • Out-of-pocket expenses for medicines not prescribed by a doctor • Out-of-pocket expenses for therapeutic appliances and other medical durables prescribed or recommended by a doctor • Selected BI questions (HEAR-2, HEAR-3, WALK1a, WALK1b, WALK-3, PAIN-1, COGN-1, AFFE-1, AFFE-2)
DE	N/A
GR	None
CH	<ul style="list-style-type: none"> • The Alcohol Use Disorders Identification Test • European Working Conditions Survey (EWCS) • Major depression • Sexual behaviour , HIV prevention • Gambling • Contraception • Social Support
#As extracted from document “HIS 2008 Belgium_EHS” supplied by Belgium representative	

	Minimum Time	Maximum Time	Average Time
RO	20mins	2 hours 15mins	1hour 20mins
LV	15mins (CAPI) 20mins (PAPI)	1hour 20mins (CAPI) 1hour 30mins (PAPI)	35mins (CAPI) 50mins (PAPI)
BG	10mins	2hours	45mins
CZ	15mins	2hours 30mins	45mins
FR	30mins	2hours	1hour
HU	20mins	3 hours	1hour 2mins
SI	10mins	2hours 38mins	35mins
CY*	-	-	-
EE	-	-	1hour 33mins
BE	-	-	-
GR	-	-	-
AT	25mins	120mins	40mins

MT	35mins	1hour 15mins	40mins
DE	-	-	-
PL	10mins	150mins	25mins
ES	10mins	90mins	20mins
SK	9mins	150mins	51mins
TR	-	-	-
CH	-	-	-

*Information supplied does not answer the questions as asked but as per below
 Average interview duration – less than 15 years old = 10mins
 Average interview duration – 15 and over with many health problems = 70mins
 Average interview duration – 15 and over without many health problems = 35mins

	Problematic questions and variables
RO	<ul style="list-style-type: none"> • Sensitive questions related to income • Confusion between moderate and vigorous physical activity especially those living in rural areas • Inconsistencies in responses for HS2 longstanding illness and HS6 chronic illness
LV	<ul style="list-style-type: none"> • Questions on physical activity • Alcohol consumption • Home care services • EN4 – interpretation of “serious personal problem” • PA16 Faecal occult tests – patients in Latvia not always informed about the reason for this test
BG	<ul style="list-style-type: none"> • Previous employment when asking the elderly • ADL’s and IADL’s list too long • Emotional status questions confused respondents • Satisfaction with health care services difficult to respond if interviewee has not experienced the service him/herself • Physical activity questions • Monthly household income underestimated
CZ	<ul style="list-style-type: none"> • Physical activity • Out of pocket expenses for healthcare • No clear classification of working students and working retired
FR	<ul style="list-style-type: none"> • Was your condition diagnosed by a doctor?
HU	<ul style="list-style-type: none"> • Income does not give clear indication of household status • No detailed questions on oral health • 4 week period too short for HC9, HC11 and HC13 • Limited questions on social participation • Health expenditure should be split into private and public expenditure and not included in the self-completion form but aided by the interviewer.
SI	<ul style="list-style-type: none"> • Physical activity questions • Reorganization of morbidity questions
CY	<ul style="list-style-type: none"> • Very difficult to distinguish degree of pain or discomfort in past 4 weeks (SF.1)

	<ul style="list-style-type: none"> • Questions on emotional wellbeing considered boring and irrelevant by respondents and difficult to answer with precision. • Question on GP consultation in Cyprus is not appropriate as in Cyprus there is only a small number of GP's and they are mainly within the public sector. People visit specialised doctors instead of GP's even for issues that should be sought at by a GP. • Distinction required between satisfaction of private and public sector services. • Those not having experienced service themselves or by their family members tend to select "don't know" for satisfaction questions. • Physical activity questions difficult to answer and respondents could not distinguish the differences between activities even after explaining guidelines. Overestimation of amount of physical activity conducted. • Difficulty answering questions on alcohol and reluctance to answer questions on drug use.
EE	N/A
BE	N/A
AT	<ul style="list-style-type: none"> • Physical activity
MT	<ul style="list-style-type: none"> • Alcohol consumption • Household matrix • PC2 – PC4 and HA3 – HA5 • Questions on reason for mammography and cervical screening, include check-up as an option
GR	<ul style="list-style-type: none"> • Physical activity questions • Alcohol consumption • Pain, tension, discomfort • Out – of – pocket expenses • Food consumption
DE	N/A
PL	<ul style="list-style-type: none"> • Date of birth – some respondents refused to give their full date of birth and some refused to even give the year only • Income – many refusals • PC and HA questions – long and frustrated healthy and young respondents • SF2 – 10 – questions very similar to each other and difficult to answer • Physical activity module – complicated and difficult to answer • Alcohol consumption – difficult to answer and sensitive
ES	<ul style="list-style-type: none"> • Physical Activity • Satisfaction with health care • Questions requiring a date • Alcohol consumption • Questions asking about technical aids • Income • Occupation • Health care services, distinguish between private-public and hospital services-emergency services

SK	<ul style="list-style-type: none"> • Problems with questions on physical activity. Respondent had problems to determine number of days, hours and minutes spent with vigorous, moderate activities, etc. • The question AL.2 was perceived by respondents as time consuming. Respondents were not so willing to complete this question and to think about daily consumption of alcohol and also by kind of alcoholic drink. They were not able to say the amount, they did not remember it. Provided numbers of drinks were estimates. Respondents, who are drinking alcohol regularly or often, did not have problem to complete table in AL.2 question. • We recommend changing the question IN.1, we suggest removing the answer category No source of income 09. A household must have some kind of income for living.
TR	N/A
CH	N/A

Section 4: Target Population

Ten of the 19 countries had a target population of residents in private homes aged 15 years and over while other countries had slight modifications to the age range. Malta, France, Austria, Germany, Belgium and the Czech Republic included the institutionalised population within their study. In Malta the institutionalised population covered: Homes for the elderly, nursing homes, psychiatric institutions, institutions for the mentally handicapped, convents/monasteries and prisons. Austria covered the former as well as boarding schools/student residences and homes for refugees. The Czech Republic included only nursing homes and convents/monasteries while France included those in institutions dealing with disabilities. Germany listed elderly homes and boarding schools/student residence in there population but do not list these as institutions. The survey for Cyprus only covered the Government controlled area of Cyprus while the survey for France also covered its overseas territories. For details on number of individuals in target and non-target populations for each country, refer to table below.

Below find summary tables for the section “Target Population”

	Target Population
BG	Persons aged 15 years and over living in non-institutionalised households
AT	Residents in Austria aged 15 years and over
HU	General population aged 15 years and over living in private households
SI	Persons aged 15 years and more, non-institutionalised
CY	All persons aged 15 years and over living in the households selected in the sample, non-institutionalised
CZ	Persons with permanent and long-term stay in the CZ aged 15 years and over
BE	Total population residing in Belgium excluding those not officially registered such

	as homeless people.
FR	People of all ages living in private households. The primary purpose of the survey was to have enough people with disabilities, for detailed study, but having a general population survey to determine prevalence. So disabled population was also sampled.
MT	Maltese residents aged 15 years and over
RO	Households covering all residents having Romanian citizenship having permanent residence in the area being researched. Equal distribution given to households in urban and rural areas.
LV	Residents in Latvia aged 15 years and over.
EE	All permanent residents of Estonia aged 15 to 84
GR	Total population aged 15 years and over within private households
DE	German speaking adults above age 18 living in private households in Germany and reachable through landline phones.
PL	All persons with permanent residence in private households in Poland
ES	Persons living in private households and aged 16 and over
TR	All Turkish households
SK	Individuals living in the Slovak Republic at the place of their usual residence in the SR in private households and at time of data collection are 15 years old and over.
CH	Permanent resident population in private households aged 15 years and older with a landline phone line.

	Target Population – Number in target population	Non-Target Population – Number of individuals younger than 15	Non-Target Population – Number of individuals living in institutions
CY	655267	136287	5279
SI	1744785	281081	N/A
HU	8391000	147500	299000
RO	18197 (households)	2640	59395
LV	1893885	312309	64700
FR	51500000	11000000	1200000
BG	6584957	1021594	0.7% of population
CZ	9128427	1372066	100000
AT	6900000	1300000	920000
MT	341746	65558	6483
GR	9305935	812064	222193
DE	70.8 million	11 million	-
PL	31999760	5750197	417372
ES	38442125	7265903	300000
TR	50652270	18896743	-
SK	457618	836069	43207
BE	-	-	-
EE	-	-	-
CH	6186711	1176766	-

Section 5: Sampling Procedure

Sampling Frame

Four of the nineteen countries (FR, CY, LV and BG) used a population census as a sampling frame while eight of the countries (ES, EE, BE, AT, SI, CZ, HU and MT) used population registers. Romania used a master sample of dwellings built on a sample of geographical areas called the Multifunctional Sample of Territorial Zones. Germany and Switzerland made use of a list of phone numbers. Greece, Turkey and Poland made use of a dwelling register for primary units while Slovakia made use of a list of municipalities. For BG, AT, SI, CZ, GR and HU this sampling frame is updated continuously. For Romania, Germany and France the updating is irregular, in Spain, Slovakia and Poland it is yearly, in Latvia it is monthly, in Turkey and Switzerland it is quarterly, Cyprus every 2 years while in Malta it is every 5 years. No information was available for BE and EE.

Sampling Design

Seven countries used individuals as their sampling units while 7 countries used households. Romania, Poland, Spain, Slovakia and Greece reported the use of dwellings as sampling units. All eighteen countries made use of probability sampling with 15 of the countries making use of multi stage sampling (with different sampling techniques applied within each sampling stage) and EE, MT, CY and AT making use of single stage sampling. EE used systematic sampling based on sampling weights; MT used stratified sampling by age, gender and residence, AT used stratified sampling by geographical area while CY used stratified sampling by district and urban-rural area. Five of the eighteen countries used stratified weighting to oversample for specific populations. EE and BE oversampled for the elderly population, FR oversampled for the disabled population, CH allowed the cantons to oversample their population, while AT oversampled for Vienna.

Below find summary tables for “Section 5: Sampling Procedure – Sampling Design

	Sampling Units		
	Dwellings	Households	Individuals
SI			X
CZ			X
CY		X	
HU			X
AT			X
BE		X	
BG		X	
RO	X		

LV			X
FR		X	
MT			X
EE			X
TR		X	
PL	X		
ES*	X		X
GR*	X	X	X
DE		X	
SK	X		
CH		X	
* It is being assumed that the primary sampling units in this instance are dwellings due to multi-stage sampling techniques applied			

	Sampling Stage		
	Stage 1	Stage 2	Stage 3
SI	Probabilities proportional to size (Stratified sampling)	Equal probability	
CZ	Probabilities proportional to size (Stratified sampling)	Equal probability (Simple random sampling)	
CY	Probabilities proportional to size		
HU	Probabilities proportional to size (Stratified sampling)	Equal probability (Stratified sampling)	
AT	Equal probabilities		
BE*	Probabilities proportional to size (Stratified sampling)	Equal probabilities (Simple random sampling)	Probabilities proportional to size (Stratified)
BG	Probabilities proportional to size (Cluster sampling)	Equal probability (Systematic sampling)	
RO	Probabilities proportional to size	Equal probability	
LV	Probabilities proportional to size (Systematic sampling)	Equal probability (Systematic sampling)	
FR	Equal probability	Equal probability (Stratified)	
MT	Probabilities proportional to size		
EE*	Unequal probabilities based on sampling weights		
TR	Probabilities proportional to size	Equal probability	
PL	Probabilities proportional to	Equal probability	

	size		
ES	Probabilities proportional to size	Equal probability	Equal probability
DE	Equal probability	Equal probability	
GR	Probabilities proportional to size	Equal probability	Equal probability
SK	Unequal probabilities	Probabilities proportional to size	Probabilities proportional to size
CH	Equal Probabilities	Unequal Probabilities	
*As could be concluded from the description of the sampling method described in the report provided			

Interview Context

Only Latvia, Belgium, Greece, Slovakia and Spain reported using substitution of sampled people/households/dwellings. Proxy answers were more common amongst the countries with 12 of the countries making use of proxy respondents. The most common reasons for proxy interviewing was because of the health status of the respondent with 9 of the 12 countries choosing this option. Romania, Belgium and France also specified other reasons for proxy interviewing mainly the interviewing of minors. Cyprus and France employed proxy interviewing for all the cases listed in the quality report. Only 4 of the 12 countries followed EUROSTAT guidelines in limiting questions available for proxy interviewing (LV, BG, PL and MT). The highest proportion of proxy interviewing was in Cyprus with 26% of interviews being proxy interviews. Greece had the lowest proportion of proxy interviews at 0.62%.

Below find summary tables for "Section 5: Sampling Procedure: Interview Context"

	Yes	No
Substitution of sampled people/households/dwelling	LV BE ES GR SK	RO BG AT HU SI CY CZ FR EE MT PL TR DE CH

	Yes			No		
Proxy Answers	LV RO BG AT CY BE FR MT GR ES PL CH			HU SI CZ EE DE TR SK		
	Absent due to health problems	Absent for other reason	Difficulties to understand the national language	Because of health status	Other	
Reasons for using proxy interviewing (in countries where proxy interviewing allowed)	LV RO BG - CY - FR - - ES PL CH	- RO - - CY - FR - - - PL CH	LV - - - CY - FR - - - - - CH	- RO BG AT CY - FR MT GR ES PL CH	- RO ¹ - - - BE ² FR ³ - - - - - CH	
¹ Persons under 15 years						
² Selected person unable to answer; selected person refuses to answer but accepts a proxy interview; selected person is under 15 years						
³ Respondents under 18 years						
	Whole questionnaire	Limited number of questions specified by EUROSTAT guidelines	Limited to other questions	Others		
Part of questionnaire using proxy respondents	- RO ¹ - - CY	LV - BG - -	- - - AT -	- - - - -	RO ¹ - - -	

	-	-	-	BE ²
	-	-	-	FR ³
	-	MT	-	-
GR	-	-	-	-
-	-	-	-	ES ⁴
-	-	PL	-	-
-	-	-	CH	-

¹Proxy interviewing was not used for self-completed questionnaires, proxy use for all questions when interviewing children

²Self-completed questionnaire not used for proxy interviews

³Self-completed questionnaire not used for proxy interviews

⁴All questions except for self-completed questionnaire (out-of-pocket payments, tobacco consumption, alcohol consumption, illicit drugs)

	Country Codes											
	CH	GR	PL	ES	LV	RO	BG	AT	CY	BE	FR	MT
% of proxy interviews	4.4%	0.62%	11.8%	2.8%	2.8%	16.3%¹	8.8%	1.6%	26%	N/A	15%	2%

¹100% of those aged less than 15years; 20.6% of total including those under 15 years old

Section 6: Data Collection

General Aspects

Five of the 19 countries made exclusive use of PAPI for data collection with Bulgaria and Latvia making use of both PAPI and CAPI. France, Austria, Spain, Turkey and Cyprus used CAPI for data collection. Slovakia, Slovenia, Romania, France, Bulgaria, Malta and Belgium also made use of a self-administered questionnaire which was filled in by the respondent along with the face-to-face interview method selected. Only Germany and Switzerland made use of CATI as a data collection method. All of the countries supplied information on the period when data collection took place. Details can be found in the table below.

Below find summary tables for the section "Section 6: Data Collection – General Aspects".

	Data Collection Method			
	<i>PAPI</i>	<i>CAPI</i>	<i>CATI</i>	<i>Self-Administered Questionnaire</i>
CZ	X			
CY		X		
SI	X			X
RO	X			X
HU	X			
LV	X	X		
AT		X		
FR		X		X
BG	X			X
MT	X			X
EE	X			
BE	X			X
ES		X		
PL	X			
TR		X		
GR	X			
DE			X	
SK	X			X
CH		X	X	X

Country Codes	Data Collection Period
LV	September – December 2008
RO	May – June 2008
BG	October – November 2008
AT	March 2006 – February 2007
HU	September – October 2009
SI	October – November 2007 (For districts where fieldwork could not be done in the main period of interviewing fieldwork was extended to end December 2007)
CY	September – December 2008
CZ	June – July 2008; September – October 2008
BE	May 2008 – May 2009
FR	April 2008 – June 2008 (October 2008 in some cases)
EE	October 2006 – Autumn 2007
MT	June – September 2008
DE	September 2009 – July 2010
GR	October – December 2009

TR	April 2008
PL	October – December 2009
ES	April 2009 – March 2010
SK	16 th September 2009 – 31 st October 2009
CH	15 th January 2007 – 31 st December 2007

Interviewers

Most countries paid their interviewers per interview conducted. Cyprus and Spain paid their interviewers a fixed monthly salary, Germany and Switzerland paid interviewers per hour while Turkey used their own staff to conduct interviews. No information was available for EE and BE. All of the countries except for CZ and GR reported that their interviewers were not health professionals. CZ, GR, and SK had some of their interviewers who were health professionals recruited as interviewers. All countries offered training to their interviewers about working with the questionnaire and supplied support from supervisors throughout the fieldwork process. Interviewers were supplied with interview protocols, show-cards, presentations, conceptual notes and other information to help them with the interviewing process. The source of interviewer recruitment varied between countries and details can be seen in the table below. Most of the countries found it difficult to fill in details on age, education and employment status of their interviewers with countries using employees from their own institutions or seconded from related organizations being able to provide the information requested. The greatest ratio of respondents to interviewers was in CY with a ratio of 379 to 1 while the smallest ratio was in HU at 18:1.

Below find summary tables for “Section 6: Data Collection – Interviewers”

	Interviewer Recruitment				
	Employees of the institution conducting HIS	Seconded from related organization	Recruited through public selection	Contracted from an external agency	Other
CZ		x	x		
BE			x		
EE				x	
BG	x				
MT				x	
FR	x				
CY		x	x		
SI		x	x		
HU	x				
RO	x				
LV	x			x	
AT					x (self-employed individuals)

PL	x				
ES	x		x		
TR	x				
SK					x (contracted by statistics office)
CH				x	

	Ratio of respondents to interviewers
CZ	28 : 1
BE	N/A
EE	30 : 1
BG	20 : 1
MT	118 : 1
FR	N/A
CY	379 : 1
SI	41 : 1
HU	18 : 1
RO	N/A
LV	N/A
AT	60 : 1
PL	34:1
ES	326:1
TR	3 (households) : 1 (per day)
GR	20:1
DE	160:1
SK	20:1
CH	N/A

Quality Control

All countries used a letter to pre-notify respondents about their selection for the HIS except for Germany who used telephone calls to pre-notify respondents. MT also used a telephone call along with the letter. MT, FR, CH and EE used a phone call as the method for first contact and setting up appointments with respondents while the remaining countries used a combination of phone calls and personal contacts at the door or just a personal contact at the door. Only HU, SK, CH and MT used incentives in their surveys. The majority of countries used a maximum of 3 contacts with respondents before declaring non-participation. All countries used forms of supervision, field logging and questionnaire checks to control interview performance while all countries except BG, DE, ES, CH and CZ contacted respondents after they were interviewed for quality control purposes.

Below find summary tables for “Section 6: Data Collection – Quality Control”

	Letter	Telephone, including mobile	Personal contact at doorstep	Internet/e-mail
Method used for the pre- notification of respondents	LV RO BG AT HU SI CY CZ MT BE FR EE TR ES GR PL SK CH	MT DE		
Method used for the first contact with respondents		LV AT CZ BE MT FR EE DE CH	LV RO BG AT HU SI CY CZ BE PL GR ES TR SK	
Use of incentives	Yes		No	
	HU (health calendar, pen, fridge magnet) MT (gift pack for each respondent as well as a lottery ticket for each respondent for inclusion in a lottery of 100 gifts supplied by sponsors)		LV RO BG AT SI CY CZ BE	

	SK (pens)	FR
	CH (Set of stamps)	TR
		DE
		ES
		GR
		PL

	Minimal number of contacts with respondent before declaring a non participation	Effective (mean) number of contacts really performed before declaring a total non-response
LV	3	N/A
RO	3 (visits)	3
BG	2 - 3	N/A
AT	3 (personal contacts at doorstep)	5
HU	3	N/A
SI	5	N/A
CY	3	4
CZ	3	N/A
BE	N/A	N/A
FR	5 if phone contact not successful, 4 if phone contact successful	N/A
MT	4 phone contacts followed by 2 doorstep contacts if phone is not successful	N/A
EE	N/A	N/A
PL	3	4
GR	3	N/A
ES	6	N/A
DE	15	N/A
TR	3 (visits)	N/A
SK	N/A	
CH	Unlimited	

	Techniques used to control interviewers performance	Ratio interviewers to supervisors	Respondents contacted for quality control
LV	Supervisors check interviewer's progress. Back checks by telephone and visits to respondents. Field workers compile a report on interviewing process.	13:1	Yes
RO	Country co-ordinators and supervisors monitored all field activities. Random back checks by county-level co-ordinators.	6:1	Yes

BG	Review of questionnaires and interviews for all interviewers carried out by project team.	N/A	No
AT	Time measurement, non-response analysis and analysis of error dialogs	60:1	Yes
HU	Interviewers were in constant contact with supervisors. Supervisors checked questionnaires as they arrived weekly.	7:1	Yes
SI	Supervisors used coding and technical manuals to check questionnaires and when errors arose respondents were contacted accordingly	10: 1	Yes
CY	Continuous supervision with back checking via telephone and monitoring of refusals and non-contacts	4:1	Yes
CZ	Interviewers in permanent contact with central office and obliged to provide continuous feedback during fieldwork	30:1	No
BE	Weekly feedback of number of questionnaires completed and refusals. Supervision of interviewers work based on pre-set schedules and rules.	N/A	Yes
FR	Time measurement for CAPI and number of contacts required to complete interview	N/A	Yes
MT	Log sheets maintained by interviewers and supervisors to monitor fieldwork. Back-checking by phone for 15% of interviews.	10:1	Yes
EE	Interviewers were examined after training and selected based on their results. Guidelines were set and co-ordinators monitored fieldwork	N/A	N/A
TR	Interviews were conducted on tablet PC's so that errors could be tracked easily. At the end of each day interviews are	5:1	Yes

	checked by supervisors and errors brought to the attention of the interviewer.		
DE	Quantitative analysis of the performance data and qualitative observation by supervisors	10:1	No
ES	Tracking tables describe number of dwellings collected by interviewer, number of refusals; absences are extracted on a weekly basis and assessed. Supervisor randomly selects interviewers and checks their questionnaires and visits houses.	3:1	No
GR	N/A	105:1	Yes
PL	At the beginning of the survey first completed questionnaires were checked so that initial errors and doubts could be verified. Along the duration of the fieldwork, meetings with supervisors were held to monitor and improve working methods.	4:1	Yes
SK	Supervision by regional coordinators	16:1	No
CH	Weekly progress reports of achieved interviews. Daily control of the interviewers by the field supervisors. Weekly control by the scientific project leader at the external agency contracted to do the data-collection.	20:1	No

Sampling Errors

Fifteen of the 19 countries supplied most of the data requested in relation to sampling errors. Slovenia and Turkey were the only countries not to fill in this section of the quality report. Since the format for the Estonian and Belgian reports did not follow the quality report format, this data was not available.

Below find summary tables for the national data on the indicators and sub-indicators requested. Note that the confidence intervals supplied by Romania and Spain have been placed in brackets as they do not conform to realistic ranges that would fit the estimated proportions quoted. It was unclear to the expert what the data provided represented.

Number of Respondents in Good or Very Good Health (All)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	1248	68.2%	1.0%	66.2 – 70.1	0.896
CY	5393	80.1%	0.5%	79.2 – 81.0	0.989
SI	-	-	-	-	-
RO	11948	65.7%	-	(1.59 – 1.61)	-
HU	5051	54.2%	0.64%	52.9 – 55.4	0.832
LV	2949	49%	0.63%	47.8 – 50.2	1.36
AT	11529	75.5%	0.4%	74.8 – 76.2	1.07
FR	14884	75%	-	-	-
BG	3247	68.3%	0.8%	66.6 – 69.9	1.67
MT	2875	78.3%	0.7%	76.6 – 79.4	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	30957	60.2%	0.4%	59.4 - 61	1.43
GR	(7.009.324)	75.3%	0.7%	74 – 76.6	1.554
DE	16711	71.6%	0.4%	70.8 – 72.5	-
ES	28442	73.98%	(227.54)	(27996.02 – 28887.98)	-
SK	3189	64.2%	0.57%	63.1 – 65.3	0.67
CH	15937	86.7%	0.003074	±0.6%	-
Number of Respondents in Good or Very Good Health (Females)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	601	63.3%	1.4%	60.6 – 66.0	0.806
CY	2715	77.1%	0.7%	75.7 – 78.4	0.992
SI	-	-	-	-	-
RO	5585	61.3	-	(1.62 – 1.64)	-
HU	2753	50%	0.87%	48.3 – 51.8	0.835
LV	1469	55%	0.93%	53.2 – 56.8	1.36
AT	6175	73.4%	0.5%	72.4 – 74.4	1.08
FR	7485	78%	-	-	-
BG	1611	63.9%	1.1%	61.8 - 65.9	1.33
MT	1394	75.6%	1%	73.6 – 77.6	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR					

PL	17574	57.2	0.48%	56.3 – 58.2	1.27
GR	(3.330.048)	69.9%	0.9%	68.1 – 71.1	1.259
DE	9263	68.8%	0.6%	67.6 – 69.9	-
ES	13627.2	69.53%	(164.89)	(13304.02 – 13950.38)	-
SK	1558	60.4%	0.57%	58.8 - 62	0.8
CH	8653	85.4%	0.004347	±0.9%	-
Number of Respondents in Good or Very Good Health (Males)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	647	73.4%	1.3%	70.6 – 75.9	0.883
CY	2678	83.2%	0.6%	81.9 – 84.5	1.131
SI	-	-	-	-	-
RO	6063	70.8%	-	(1.56 – 1.59)	-
HU	2298	58.9%	0.93%	57.1 – 60.8	0.823
LV	1480	44%	0.75%	42.5 – 45.5	1.22
AT	5354	77.8%	0.5%	76.7 – 78.8	1.06
FR	7399	73%	-	-	-
BG	1636	73.3%	0.9%	71.4 – 75.1	1.12
MT	1481	81.6%	0.9%	79.8 – 83.4	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	13383	63.9	0.5%	62.9 – 64.8	1.2
GR	(3.679.276)	81%	0.9%	79.2 – 82.7	1.607
DE	7448	74.6%	0.6%	73.4- 75.8	-
ES	14814.8	78.63%	(188.15)	(1446.03 – 15183.57)	-
SK	1631	68.2%	0.81%	66.6 – 69.8	0.84
CH	7284	88.2%	0.004339	±0.9%	-

Number of Respondents with a long standing illness/health problem (All)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	925	43.8%	1.2%	41.5 – 46.1	1.070
CY	2488	33.3%	0.6%	32.2 – 34.5	1.051
SI	-	-	-	-	-
RO	6223	34.2%	-	-	-
HU	5051	69%	0.68%	67.6 – 70.3	1.100
LV	2733	40%	0.61	38.8 – 41.2	1.28
AT	6059	37.1%	0.4%	36.3 – 37.9	1.09
FR	18234	39%	-	-	-
BG	2441	37.5%	0.8%	35.9 – 39.2	1.71

MT	1286	35.4%	0.9%	33.6 – 37.2	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	35100	47.9%	0.39%	47.1 – 48.6	1.46
GR	(4.030.869)	43.3%	0.8%	41.7 – 45.0	1.773
DE	8129	38.8%	0.4%	38 – 39.7	-
ES	19693.3	51.25%	(204.8)	(19291.88 – 20094.72)	-
SK	2842	57.2%	0.62%	56 – 58.5	0.77
CH	5568	27.28%	0.004064	±0.8%	-
Number of Respondents with a long standing illness/health problem (Females)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	519	47%	1.5%	44.1 – 49.9	0.871
CY	1374	35.2%	0.8%	33.6 – 36.8	1.045
SI	-	-	-	-	-
RO	3742	39%	-	-	-
HU	2753	72.8%	0.87	71.1 – 74.5	1.043
LV	1733	33%	0.87	31.3 – 34.7	1.16
AT	3494	39.8%	0.6%	38.7 – 41.0	1.09
FR	8077	40%	-	-	-
BG	1411	41.7%	1.0	39.6 – 43.7	1.33
MT	741	38.2%	1%	38.0 – 38.4	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	18965	52.5%	0.48%	51.6 – 53.4	1.32
GR	(2.336842)	49%	1.1%	47 – 51.1	1.416
DE	4886	42.2%	0.6%	41 – 43.3	-
ES	10940.4	55.84%	(146.60)	(10653.06 – 11337.74)	-
SK	1598	62.1%	0.85%	60.4 – 63.7	0.87
CH	3189	28.25%	0.005546	±1.09%	-
Number of Respondents with a long standing illness/health problem (Males)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	406	40.3%	1.6%	37.2 – 43.5	1.017
CY	1114	31.4%	0.8%	33.6 – 36.8	1.045
SI	-	-	-	-	-
RO	2481	29%	-	-	-

HU	2298	64.6%	0.98%	62.7 – 66.5	0.968
LV	1000	46%	0.78%	44.5 – 47.5	1.20
AT	2565	34.2%	0.6%	33.0 – 35.4	1.08
FR	10157	37%	-	-	-
BG	1030	33%	1.0%	31.0 – 35.0	1.25
MT	545	32.2%	1.0%	32 – 32.4	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR					
PL	16135	42.8%	0.49%	41.8 – 43.8	1.27
GR	(1.694.026)	37.3%	1.2%	35.0 – 39.7	1.901
DE	3242	35.3%	0.6%	34 – 36.5	-
ES	8752.9	46.47%	(142.67)	(8610.24 – 8895.57)	
SK	1244	52%	0.92%	50.2 – 53.8	0.89
CH	2379	26.27%	0.005962	±1.17%	

Number of respondents that were severely limited in activities people usually do because of health problems for at least the past 6 months (All)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	228	9.8%	0.6%	8.7 – 11	0.776
CY	494	6.3%	0.3%	5.8 – 6.9	0.947
SI	-	-	-	-	-
RO	1261	6.9%	-	-	-
HU	5051	8.6%	0.42%	7.8 – 9.4	1.114
LV	797	11%	0.37%	10.27 – 11.73	1.09
AT	1454	9.1%	0.3%	8.6 – 9.6	1.11
FR	7719	8%	-	-	-
BG	482	7.2%	0.4%	6.4 – 8.0	1.31
MT	241	6.6%	0.4%	5.8 – 7.4	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	35100	8.1%	0.19%	7.8 – 8.5	1.27
GR	(922.253)	9.9%	0.4%	9.1 – 10.8	1.32
DE	1895	10.9%	0.3%	10.3 – 11.5	-
ES	2094.1	5.45%	(70.15)	(1956.61 – 2231.6)	-
SK	327	6.7%	0.36%	6 – 7.4	0.92
CH	1286	7.21%	0.002528	±0.5%	-

Number of respondents that were severely limited in activities people usually do because of health problems for at least the past 6 months (Females)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	137	11.5%	0.9%	9.8 – 13.4	0.8
CY	279	6.7%	0.4%	6.0 – 7.5	0.927
SI	-	-	-	-	-
RO	741	7.7%	-	-	-
HU	2753	8.1%	0.6%	6.9 – 9.2	1.119
LV	533	8%	0.37%	7.27 – 8.73	1.09
AT	847	9.8%	0.4%	9.1 – 10.5	1.09
FR	3445	8%	-	-	-
BG	278	8.0%	0.5%	6.9 – 9.0	1.12
MT	136	7.0%	6%	0 – 18.8	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR					
PL	18965	9%	0.26%	8.5 – 9.5	1.26
GR	(536.985)	11.3%	0.6%	10.2 – 12.4	1.039
DE	1102	11.4%	0.4%	10.6 – 12.3	-
ES	1251.9	6.39%	(52.57)	(1148.86 – 1354.94)	-
SK	185	7.6%	0.53%	6.5 – 8.6	0.96
CH	717	7.58%	0.003487	±0.68%	-
Number of respondents that were severely limited in activities people usually do because of health problems for at least the past 6 months (Males)					
Country Codes	<i>Number of Respondents</i>	<i>Estimated Proportion</i>	<i>Standard Error</i>	<i>95% CI</i>	<i>Design effect deft</i>
CZ	91	8%	0.8%	6.6 – 9.6	0.774
CY	215	5.8%	0.4%	5.1 – 6.7	0.968
SI	-	-	-	-	-
RO	520	6.1%	-	-	-
HU	2298	8.1%	0.6%	6.9 – 9.2	1.119
LV	264	13%	0.52%	11.98 – 14.02	1.03
AT	607	8.4%	0.4%	7.7 – 9.2	1.13
FR	4274	8%	-	-	-
BG	204	6.4%	0.5%	5.4 – 7.3	-
MT	105	6.2%	6%	0 - 18	-
EE	-	-	-	-	-
BE	-	-	-	-	-
TR	-	-	-	-	-
PL	16135	7.2%	0.23%	6.7 – 7.6	1.14

GR	(385.267)	8.5%	0.6%	7.3 – 9.8	1.573
DE	793	10.3%	0.4%	9.5 – 11.2	-
ES	842.2	4.47%	(44.8)	(754.39 – 930.01)	-
SK	142	5.8%	0.47%	4.9 – 6.7	0.96
CH	569	6.83%	0.003669	±0.72%	-

Non-Sampling Errors

Data Processing

Countries using CAPI incorporated data validation rules and coding systems within the questionnaire design. Other countries using PAPI made use of manual questionnaire checking and validation rule settings within their respective databases. Many of the countries made use of BLAISE software to set validation rules for the variables such as minimum and maximum ranges and skip rules. Very few of the countries if any could supply information on the type and number of data errors encountered. When looking at data editing and cleaning, most of the countries applied validation rules for consistency, range and skip checking as requested by EUROSTAT.

Below find summary tables for “Section 6: Data Collection – Non-Sampling Errors – Data Processing”

	Data entry and coding procedures
BG	Preliminary checking of questionnaires which were sent to national statistics institution staff. Data entry through use of BLAISE software and data processing through SPSS
FR	Interviews conducted using CAPI therefore validation rules were already implemented within the questionnaire to reduce errors.
AT	CAPI used therefore data entry during interviews with automated routes and validity checks included within questionnaire.
LV	BLAISE 4 windows system was used and the majority of validation checks applied where appropriate. Data on ethnicity were imputed from the population register in cases where respondents refused to answer. Where questions were open (mainly “others” options, replies were manually inputted.
HU	Data entry programme developed in BLAISE based on EHIS validation rules outlined by EUROSTAT. Data entry programme tested by field workers and field co-ordinators in the Central Statistical Office. Supervisors checked questionnaires manually before sending them out to data entry workers.
RO	Supervisors assigned numeric codes to variables such as occupation, country of birth etc based on codification books such as ISCO-88, NACE Rev.2 etc before data entry. Data entry was conducted by 94 PC operators who are experienced in the field. The operators were also trained also received training for the inputting of

	the EHIS data.
CZ	Initial checking of the questionnaires was conducted by central supervisors. After checking and corrections 2 data entry workers inputted the data within the database.
CY	CAPI method used so data was directed inputted into BLAISE software. Dataset was then transferred to supervisor's laptop for coding of 4 numerical variables. Consistency checks and range and skip checks were conducted.
SI	During the supervision phase numeric variables that needed to be coded were against relevant coding manuals. Data entry programme was set in BLAISE and all questionnaires were entered into the programme. Two databases were created, one for the entry of respondents and one for non-respondents.
MT	Questionnaires were scanned against a pre-set template using OMR software. Validation tools were set within the template to stop scanning when there were errors such as multiple responses. These were checked manually and corrected.
EE	Database created in BLAISE software. Experts in coding from Statistics Estonia coded the numeric variables against relevant coding manuals. Five trained persons conducted the data entry in parallel with the fieldwork phase. When errors occurred the record was compared to the questionnaire. When this could not solve the error the research companies were contacted to resolve the anomalies and they would also contact the respondent to clarify the error.
BE	Data entry conducted in BLAISE. A manual for data entry operators was developed and training undertaken in all the centres. The file was inputted from ASCII format into SAS. A file in SAS dealt with the allocation of data labels, consistency checks and creation of survey weights. Inconsistencies in the data entailed going back to the paper-based questionnaires for verification.
GR	Data entry conducted at regional level. Where problems were encountered the questionnaire was sent to the central office in Athens for data entry. Oracle software was used to input electronic forms and ACCESS was used for data processing.
PL	After interviews had been conducted and the content of questionnaires had been analysed their computer registration, completeness control, formal and logical control of data took place in regional statistical offices.
TR	N/A
DE	Data entry by VOXCO Software. Coding control by data entry limitation and plausibility checks
ES	Inbuilt checks ensured that during the data collection no erroneous data could be inputted. After data entry checks another computer programme was used at the central office to conduct more control processes.
SK	Data entry from paper questionnaires into the IT application prepared together with the regional offices by the Central SO SR was carried out by external staff hired by the regional offices. After typing of each questionnaire IT application gave notice about errors. If these errors were caused by wrong typing from the questionnaire, they were corrected immediately.
CH	CATI – Answers were directly integrated into a database; control of the incoherences. Self-administered questionnaire – Scanning and automatic entry of answers in a database; control of scanning.

	Number of and type of errors detected during data processing
BG	N/A
FR	<ul style="list-style-type: none"> • Errors with skips for questions on health aids
AT	N/A
LV	<ul style="list-style-type: none"> • Most mistakes found in PAPI version
HU	<ul style="list-style-type: none"> • Data entry errors and consistency errors the most common
RO	N/A
CZ	<ul style="list-style-type: none"> • Data entry errors were the most common, approx 300 • For other errors the amount was between 10 - 20
CY	N/A
SI	N/A
MT	N/A
EE	N/A
BE	N/A
PL	N/A
TR	N/A
DE	<ul style="list-style-type: none"> • Coding errors (lower than 1%)
ES	<ul style="list-style-type: none"> • A few coding errors initially due to an error in the electronic questionnaire, after correction, no more errors detected.
GR	N/A
SK	<ul style="list-style-type: none"> • Consistency errors • Data entry errors
CH	<ul style="list-style-type: none"> • Coding and data entry errors

	Data Cleaning and Editing activities
BG	<ul style="list-style-type: none"> • Data checking and cleaning conducted in accordance to EUROSTAT data editing rules.
FR	N/A
AT	N/A
LV	<ul style="list-style-type: none"> • Most validation checks conducted by using BLAISE
HU	<ul style="list-style-type: none"> • Range, skip and consistency checks as set out by EUROSTAT
RO	N/A
CZ	<ul style="list-style-type: none"> • Range checks • Skip checks • Consistency checks
CY	<ul style="list-style-type: none"> • Range checks • Skip checks • Consistency checks • Checks embedded within the questionnaire
SI	<ul style="list-style-type: none"> • Preliminary data editing, for example finding duplicates, conducted in SPSS • Defined variable rules than applied to the data • After data validation a case report with all rule violations was used to revise and correct data entries.

MT	<ul style="list-style-type: none"> • Rounding down when set limits were overshoot. • Deleting when numbers were unrealistic after consulting with experts such as for weight and height ranges. • Final data correction based on EUROSTAT validation rules
EE	N/A
BE	<ul style="list-style-type: none"> • Vertical controls to see that data is available for activated households • Consistency checks
GR	<ul style="list-style-type: none"> • Verification conducted to verify provided information
PL	N/A
TR	N/A
DE	<ul style="list-style-type: none"> • Filter checks • Coding errors • Qualification of missing data • Validation of interviews • Value labelling
ES	<ul style="list-style-type: none"> • Cleaning activities mostly carried out in the background variable modules
SK	<ul style="list-style-type: none"> • Logic checks • Skip checks • Consistency checks
CH	<ul style="list-style-type: none"> • Control of filters • Cross-checking • Control of impossible values

Non-participation and Non-response

Only eight of the 19 countries supplied data on item non-response. None of the countries under being reviewed could completely fill in the detailed non-participation and non-response table requested in the quality assessment report. Unit-response rates were calculated for all countries except Greece, Germany, Turkey, France, Slovenia, Spain and Belgium where the information was not made available in the reports.

Below find summary tables for “Section 6: Data Collection – Non-Sampling Errors: Non-Participation and Non-Response”

	Original Sample Size	Number of Eligible Elements	Final Sample Size
FR	35000 (Households) 39000 (Individuals)	N/A N/A	N/A 29931
SI	3400 (Individuals)	N/A	N/A
BG	3720 (Households) 8199 (Individuals)	3470 7675	2658 5661
EE	15000 (Individuals)	2573	11023
BE	10000 (Individuals)	N/A	N/A

LV	9946 (Individuals)	9032	6458
AT	25130 (Individuals)	24509	15474
HU	7000 (Individuals)	6264	5051
CZ	4000 (Individuals)	3506	1955
RO	10140 (Households) N/A	9963 N/A	8835 20837
CY	4202 (Households)	3583	2925
MT	5500 (Individuals)	N/A	N/A
ES	23004(Dwellings)	20047(dwelling) 20140(individuals)	14755 (households + 7433 substitutions)
DE	-	-	-
TR	7910(Households)	7307	6140
PL	24729(Households)	22766	16295
GR	6325(Households)	-	6172
SK	7530 (Individuals)	7530	4972
CH	30179 (Households)	28332(Households)	18760 (Individuals)

	Unit – Response Rate
FR	N/A
SI	N/A
BG	76.6% (households); 73.8% (individuals)
EE	58.4%
BE	N/A
LV	72%
AT	63.1%
HU	80.6%
CZ	56%
RO	89%
CY	81.6%
MT	72%
GR	N/A
PL	72%
TR	84%
DE	N/A
ES	N/A
SK	66%
CH	66.2%

	Item Non-Response		
	Minimum %	Maximum %	Average %
FR	N/A	N/A	N/A
SI	N/A	N/A	N/A
BG	N/A	N/A	N/A
SI	N/A	N/A	N/A
BE	N/A	N/A	N/A

LV	0.1%	8.5%	N/A
AT	<1%	25%	N/A
HU	0%	63.9%	2.9%
CZ	0%	85%	2.5%
RO	0%	10%	0%
CY	0.02%	2.4%	0%
MT	0.03%	4.16%	1.1%
ES	N/A	N/A	N/A
DE	N/A	N/A	N/A
TR	N/A	N/A	N/A
PL	N/A	N/A	N/A
GR	N/A	N/A	N/A
SK	0%	31%	0.18%
CH	N/A	N/A	N/A

Weighting Factors

Malta and Latvia did not apply weighting factors while there was no data available for SI, BG and BE. Most of the countries applying weights did so to adjust for non-response. Below find details for countries who reported the application of weighting factors.

- EE – Applied non-response calibration weights
- AT – Individual level proportional iterative fitting as a standard procedure in Statistics Austria for survey data to be coherent and consistent with other data sources
- CZ – Correction of non-response and bias due to sampling. Individual level weighting based on sampling weights for each person, correction of weights with reference to non-response, correction of extreme weights and correction of weights in reference to the structure of the population
- HU – Non-response weighting using iterative ranking method.
- FR- Weighting undertaken for disabled population
- RO – Calculation of basic weights, non-response adjustment and calibration and calculation of final weighting co-efficient at dwellings level.
- DE – representativeness of the sample according to basic demographic characteristics
- TR – Weighting procedures implemented to produce estimations about Turkey's Total and Urban – Rural populations, weights calculated by using Integrated Calibration Method.
- PL – Integrated calibration method to weight to adjust response rates
- ES – Adjustment for probability of selection, adjustment for non-response, calibration of sample totals to population benchmarks.
- GR – Weighting adjustments for response and non-response.
- SK- Weighting adjustments for non-participation
- CH – Calibration for non-response at individual level (nationality, marital status, sex, age, geographical region) and household level (household size)

Section 7: Overall Assessment

Only 11 of the 19 countries gave an overall assessment of the survey. The most common strength of EHIS reported was that it generally covers a wide range of health topics and gives a good picture of the health of the national population. The most common weakness expressed by the countries is that the survey is too long.

Below find summary table for “Section 7: Overall Assessment”

	Strengths	Weaknesses
HU	<ul style="list-style-type: none"> EHIS provides internationally comparable data that can fulfil ECHI and data requests from other EU and international organisations. Possible comparisons with previous health surveys. 	<ul style="list-style-type: none"> Interview too long especially for the elderly and those with health problems. PAPI method is not feasible Too many questions requiring recall. Questions on alcohol consumption too complicated Removal of questions not relevant to target population
SI		<ul style="list-style-type: none"> The use of proxy is not suitable especially in relation to subjective questions. Some questions that are put in the self-completed questionnaire should be added to the interview section as some respondents asked to be interviewed on the self-completed questionnaire as well
CY		<ul style="list-style-type: none"> Sample fatigue Questionnaire too long
CZ	<ul style="list-style-type: none"> Wide range of topics covered by the survey 	<ul style="list-style-type: none"> Low response rate Small initial and final sample size which does not enable detailed breakdowns
RO	<ul style="list-style-type: none"> High response rate Wide range of topics covered 	<ul style="list-style-type: none"> Excessive length of the survey especially in households with a lot of members.
LV	<ul style="list-style-type: none"> Wide use of data amongst many health institutions Only national survey available covering issues of population long term disability. 	<ul style="list-style-type: none"> Low response rate
MT	<ul style="list-style-type: none"> Good coverage of many health topics 	<ul style="list-style-type: none"> Survey long but manageable Could be streamlined to avoid certain non-essential parts such as household grid.

		<ul style="list-style-type: none"> Restructuring of questions on unmet needs, physical activity and alcohol consumption
GR	<ul style="list-style-type: none"> High response rate 	<ul style="list-style-type: none"> Questionnaire too long Repetitive meaning of questions
ES	<ul style="list-style-type: none"> Satisfied with the overall quality of the survey 	
PL	<ul style="list-style-type: none"> Possibility of knowing aspects of health in the population in connection with socio-demographic characteristics 	<ul style="list-style-type: none"> Difficult, detailed, complicated, sensitive questions and lack of adequate filter questions. Questionnaire is too long.
SK	<ul style="list-style-type: none"> Overall survey successful 	<ul style="list-style-type: none"> Survey too long

Conclusion and Recommendations

Quality Report

In general the quality report was well designed to gather general information that can compare the EHIS studies across the countries participating. Some areas of the quality report were difficult to complete as countries were filling in the quality assessment criteria after they had conducted their survey and were not aware of what sort of data was required. In future it would be ideal if countries were made aware of the detailed information they would need to collect especially in areas referring to length of interview, non-response, data cleaning, data errors and so forth so that this information can be noted along the duration of the survey. While in some countries collecting this data may be part of the data management system and the information is available especially because of a CAPI system, in others a template of how the process works may be appropriate to help guide and facilitate the procedure.

In areas where information such as proportions, 95% CI's and standard errors were required, it is recommended that the format for the information being requested is explicitly stated with a possible glossary explaining the calculation required as some countries supplied error numbers and intervals that did not correspond to what was being requested. Since the quality report is in English and English is not the main language for most of the countries filling in the quality report could possibly be easier if the report could be translated accordingly to ensure that each country is clear on what is being requested from them as this could also be the reason for some minor differences in calculations.

EHIS WAVE I

The quality reports outline issues that need to be highlighted when comparing the data derived from EHIS between countries. Underlying factors in the methodology used for fieldwork and the extent at which the EHIS questionnaire was adapted in each country can heighten apparent differences between country data; so the following areas must be considered when making comparisons.

1. Length of questionnaire, addition of questions of national interest, modification of questions, removal of questions and problematic areas –

Most countries have commented on the length of the questionnaire and how it is cumbersome to answer especially for respondents who are healthy and young such as for questions relating ADL's and IADL's. Questions that require respondents to remember experiences or events in the past are dependent on the respondent's ability to accurately recall past events and different time frames may confuse them. Countries felt it was difficult to quantify certain variables and lack of examples made it difficult for respondents to relate to the questions. Despite the length of the questionnaire most countries added on more questions that were of national interest. A few of the countries removed questions all together or changed them to reflect their countries health care system. Some countries changed answer categories or included new ones, some questions were split into 2 or more separate questions to make answering easy for respondents or to distinguish between services/sectors such as the private and public health system. While one expects that questions will be modified to ensure that the survey accurately addresses the present status of health in the countries being investigated based on their health system, there must be a limit on how much a question can be modified before it no longer remains comparable. A balance needs to be struck between what questions should remain the core variables in the EHIS and what questions can be removed or modified by countries to adapt their questionnaire accordingly. Possibly a baseline set of indicators that would meet required data requests for ECHIM or other indicators could be used to inform the core questions in EHIS.

2. Methodology

The majority of countries made use of CAPI and PAPI interviews with a few also incorporating a self-completed questionnaire for areas which were considered sensitive. Only DE made use of CATI. While the method used is heavily dependent on the human resources, budget and expertise available in each country and cannot be wholly mandated by EUROSTAT, it must be kept in mind when comparing the length of interviews in the country and the ratio of respondents to interviewers. CAPI and CATI methods may require less human resources to implement and take

less time to complete when compared to PAPI. On the other hand this should not be taken as the only reason for the sometimes large differences in average length of interview seen between countries with some having an average of 20mins and others having an average of 60mins. Possibly length of interview would be more comparable if it was subdivided into broad age groups to distinguish between those who are young and most likely healthy and who quickly go through questions on morbidity, limitations and ADL's. The presence of non-sampling errors may also vary between countries when comparing paper based methods to computer based methods because computer based methods may have inbuilt validation checks which make it easier to avoid data processing errors.

3. Proxy interviewing and substitution

Proxy interviewing limits the number of questions that can be answered as a proxy respondent is answering for someone else and therefore questions that require a subjective answer such as those related to pain, emotional distress, opinion about services or limitations cannot be answered by a proxy interviewer. Twelve of the 19 countries addressed in this report included proxy interviews and while some of the questions in EHIS lend themselves to proxy interviewing, this method should be restricted to as little as possible to ensure that the replies are not biased. Some of the countries had a high percentage of proxy interviews and the reason for this needs to be addressed. While a percentage of proxy interviewing may be justified if institutionalised individuals were interviewed, proxy interviewing was used for cases of mental or health limitations or the EHIS survey was part of a disability survey as was the case for France; inordinately high percentages must be assessed in more depth. Possibly to ensure greater comparability a threshold level of proxy interviews could be set by EUROSTAT with stricter limits on when proxy interviewing would be allowed.

Substitution was less common amongst the countries with only 5 out of the 19 using it in their fieldwork. While substitution should not unreasonably bias results if accurate matching by demographics used for the original sampling are employed, such as matching for age, gender and residential area, substitution that is not matched adequately can bias the results considerably. The quality report asks for details on when proxy interviews were allowed but no details are asked regarding techniques used for substitution. Greater monitoring of substitution techniques would ensure that the population surveyed remains representative and unbiased.

