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COVERAGE OF HEALTH TOPICS BY SURVEYS IN THE EUROPEAN UNION

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1 Introduction

1.1 Aims of the present study

As part of the statistical framework programme 1993-1997 and in view of several Community programmes on health, like on health promotion and on health monitoring Eurostat is developing a system of health statistics for the EU on the health status of the population, and on determinants, services and resources related to health. The present report describes one of the projects executed in order to support this elaboration.

The general aim of this project is to make a detailed inventory of data on health and health-related domains that are gathered by population surveys in each of the 15 MS. In order to get a more extensive picture of the surveys performed in Western Europe, also the main national health surveys of Norway, Iceland and Switzerland are included.

The specific aims of the project are the following:

1 Inventory of recent national health interview surveys and similar surveys with a substantial health component in the 15 MS of the EU and in 3 additional countries (1994-1996),
2 Inventory of future plans with regard to national health interview and similar surveys in these countries (1997-1999),
3 Overview of the coverage of health and health related areas, as mentioned in the EU programmes, by these surveys,
4 Overview of how these health and health related areas are measured: study of the wording of the national questions, inter-survey comparisons and comparisons with recommended instruments (if available).

The purpose of the detailed inventory is: to collect information on how health and health related areas are already measured in MS by means of population surveys, to facilitate harmonisation activities in order to improve comparability and to explore the possibilities for adequate collection of data from these national surveys by Eurostat.

1.2 Linkage with existing harmonisation activities

The European Community Household Panel (ECHP) is a harmonised EU-wide survey developed by Eurostat in co-operation with the National Statistical Institutes (NSIs); sample size is 5,000 households on average per country. The first wave in 1994 was carried out in all MS at that time; 126,000 persons of 16 years and older were interviewed in 60,000 households. Each year until 1999 one wave will be executed, and thus in total 6 waves will be carried out. The survey contains a small health section (5 topics) and some health related indicators in other sections. In an annex to this report (which will be added later) this section will be discussed, with the aim to complete the information on data availability. Given the limited space for a health component in the ECHP, covering the wide area of social events in a birds' eye view, it can of course by no means provide all information on health which could best be collected by means of national surveys.

The Eurobarometer is a half-yearly opinion survey funded by the Commission of the European Communities. It is EU-wide fielded via market research organisations; sample size is 1,000 persons for most countries. The main survey is on opinions regarding the European Union, but 'supplements' have been added to the survey, among others on questions that cover parts of the information needs for some of the EU health programmes (cancer, drugs, aids). In an annex (which will be added later to this report) recent health-related modules in the Eurobarometer will be discussed. The inclusion of health related topics in the Eurobarometer can only partially fulfil the information needs (relatively small sample size, quality aspects).

Another very important international activity is the WHO Health For All indicators project (HFA, only the 'survey indicators') and in particular the WHO-Euro HIS project. In the following paragraphs the items related to these HFA indicators are presented separately in the list of areas/topics extracted from the EU public health programmes. The recommended instruments in the WHO/NCBS publication 'Health Interview Surveys. Towards international harmonisation of methods and instruments' (WHO, 1996) are used as a reference for evaluating the national questions on the items for which common instruments exist. The results of a WHO-Euro enquiry on items in health interview surveys conducted in 1995, the so-called survey of surveys, could not yet be

included in this study (WHO, 1997a, Fourth Consultation to develop common methods and instruments for health interview surveys in Europe, Copenhagen, 26-28 February 1997, INFO020305/26).

2 Health and health related areas

2.1 EU action programmes in the field of public health

As mentioned above, in the present report an inventory is made of the coverage by surveys of health and health related areas as mentioned in EU action programmes. Within the framework for action in the field of public health (COM (93) 559 final) diseases or health threats are identified, that have a large impact on the health status of the Community population and that can be prevented by appropriate actions taken at Community level. Based on these arguments, priority areas for Community action in the field of public health have been specified, covering both horizontal programmes dealing with several topics or diseases, and vertical programmes dealing with one topic or disease group. The following priority areas have been distinguished:

1 Health promotion, education, information and training
2 Health data and indicators, and monitoring and surveillance of diseases
3 Cancer
4 Drugs
5 AIDS and other communicable diseases
6 Accidents and injuries
7 Pollution - related diseases
8 Rare diseases
9 Other health threats

For actions concerning disease prevention and health promotion knowledge about existing health problems is required. In order to ascertain that actions attain their objectives and actually lead to the improvements intended, it is necessary to measure changes in health as well as the impact of policies, programmes, and actions. Thus, appropriate measures to monitor health and its determinants, as well

as a capacity for monitoring and evaluation of actions are needed. Therefore, health data and indicators have been identified as one of the priority areas within the framework for action in the field of public health. The European Parliament and the Council of the European Union have adopted a programme of Community action on health monitoring (COM (95) 449 final; Decision No 1400/97/EC). This programme covers the areas of public health mentioned above.
The Community action programme on health monitoring has three objectives, namely:
- establish a system to monitor health and health determinants throughout the Community
- facilitate planning, monitoring and evaluation of Community programmes and actions,
- support national health policies of MS.
Annex II of the Decision lists a number of areas in which indicators may be established as part of the health monitoring system (see Annex 2.1).

With regard to the collection of data on health, the Community action on health monitoring intends to lead to a fast and cost-effective implementation of data registers by building on existing national data bases, which are validated by Member States' authorities. These data may have to be supplemented by specific surveys in order to collect data that are not available by other means. As MS often define their health data and indicators differently, the comparability of the existing data from MS is currently inadequate, and thus the correspondence should be improved. In general it is easier to harmonise survey questions, instruments and methodologies than elements in existing registries. Moreover, activities have already been initiated in this area by WHO-Euro, Reves and the MS. Consequently, harmonisation is likely to be less time- and resource consuming in the case of surveys than in the case of registrations (COM (95) 449 final).

In the preparation of the Health Monitoring programme, the recommendations of the High Level Committee on Health have been used extensively (Ministry of Health, Denmark, 1994). This Committee comprises senior representatives of the Health Ministries of the MS, who advise the Commission on health matters. In 1993 this Committee set up the 'Working Party on Health Data and Indicators' to assist in the development of a Community health monitoring system. The Working Party made a comprehensive review of definitions and sources of available indicators at the European level collected by Eurostat, WHO, and OECD.

With regard to the priority areas mentioned in the Community action in the field of public health (COM (93) 559 final), programmes are available for areas 1-8. The programmes for areas 6-8 are not yet formally adopted by the Parliament and the Council.

1 Community action on health promotion, information, education and training (COM (94) 202 final; Decision No 645/96/EC),
2 Community action on health monitoring (COM (95) 449 final; Decision No 1400/97/EC),
3 Community action plan to combat cancer (COM (94) 83 final; Decision No 646/96/EC),
4 Community action on the prevention of drug dependence (COM (94) 223 final; Decision No 102/97/EC),
5 Community action on the prevention of AIDS and certain other communicable diseases (Decision No 647/96/EC),
6 Community action on injury prevention (COM (97) 178 final),
7 Community action on pollution-related diseases (COM (97) 266 final),
8 Community action on rare diseases (COM (97) 225 final).

These programmes have been screened with regard to interview data that may be needed for evaluation purposes.

In addition, we also included:

- the HFA survey-indicators (see above) (WHO, 1996, List of health for all indicators for which health interview surveys are relevant, Table I, page 13-14)
- the survey indicators that were proposed in 1994 by the 'Working Party on Community Health Data and Indicators' and adopted by the High Level Committee on Health (HLC, see above) (Ministry of Health, Denmark, 1994)
- information needs extracted from HELIOS II: Third Community action programme to assist disabled people. This programme is related to the ones listed above and relevant for the present inventory of health survey coverage.)

2.2 Selection of health related areas and topics

Based on the information needs of the programmes mentioned above, we made an overview of areas, that may be included in health interview surveys, and on a more detailed level we composed a

list of topics. Regarding the content of this list, the Community action programme on health promotion is the most influential, as health interview surveys are an important source of information on lifestyle and other topics within this programme (COM (94) 202 final). In fact significant parts of the areas and topics extracted from the vertical programmes like cancer, drugs, and aids are also linked to health promotion.

The proposed Community action programme on health monitoring 'serves' the other health programmes (COM (95) 449 final). Therefore, the 'areas and topics' list is structured according to the selection of 'areas in which health indicators may be established under a Community health monitoring system'. In this programme the areas have been classified according to five main categories, namely:

A Health status

B Life style and health habits

C Living and working conditions

D Health protection

E Demographic and other social factors

A complete overview of the areas is listed in Annex 2.1.

Starting with the Health Monitoring programme, areas that could not be measured by means of health interview surveys were excluded. The selected areas that might be covered by health interview surveys are underlined in Annex 2.1. Secondly, it was checked whether areas that were mentioned in the other programmes were included in this list; if not, they were added. This procedure was also used on the more detailed level of topics. The complete list of areas is presented in Annex 2.2, and the list of topics in Annex 2.3. These overviews also include references to the relevant programmes. Only from the programme on rare diseases no topics could be extracted that could be measured by means of health interview surveys, and therefore this programme is not included in these overviews. The list of topics in Annex 2.3 indicates that some topics are derived from other topics. To give an example: respondents will not be asked to give their body mass index (BMI), but their weight and height. Thus, BMI will be computed with help of the figures on height and weight. Similarly, given the occurrence of more than one disease, co-morbidity can be assessed.

It appears that the amount of data that are needed for support of these programmes and that may be gathered by health interview surveys is considerable. It should be clarified here that this is a tentative list of topics and not of indicators; a future Committee to be established under the Health Monitoring programme will make decisions on a list of indicators for EU purposes.
This overview clearly shows the similarities and differences between the programmes. The topics of the Health Monitoring programme correspond with those of the High Level Committee and with the Health for All programme of the WHO-Euro. On the other hand, some of the topics mentioned in the Health Promotion programme and the specific programmes on cancer, drugs, AIDS, disability, injuries and pollution-related diseases are not specifically mentioned in the Health Monitoring programme, and thus these topics are appended. Especially in the area of life style and health habits topics are added, like attitudes regarding health promotion, and risk factors for cancer.

This overview serves as a reference to make an examination of the health and health related topics which are included in national health interview and similar surveys. For each survey the areas and topics covered are marked on this list. Next, for each specific topic a listing of surveys that cover this topic is made. Also the phrasing of the questions that are included in these surveys is listed in order to examine the comparability of these questions.

3 Inventory of health interview surveys and other surveys on health in 18 European countries

3.1 Methods

In order to gather information on national surveys on health or health related topics in the EU, NSIs, Ministries of Health and other institutes which execute such surveys were asked to send information. In August 1996 Eurostat sent letters to these institutes explaining the aim and the background of the inventory. This letter is included in Annex 3.1.
The institutes were asked to provide questionnaires of health interview surveys, surveys on impairments, disabilities and handicaps, multi purpose surveys, standard of living surveys or other surveys with a health related component, which were carried out since 1994. Also older surveys

which might be repeated in the coming years were requested. It was asked to forward questionnaires in the original language(s) and if available also in English. Moreover, the institutes were asked to send publications and information on (provisional) plans for future surveys (until the year 2000).
Together with the letter a form was enclosed to gather some general information on these surveys, like mode of data collection, sample size and non-response (see Annex 3.2). Finally, for each country a list of institutes that were addressed was attached. If the person who answered the letter was aware of other institutes than those listed which also conducted surveys on health or health-related topics, he/she was asked to provide the addresses of those institutes.

3.2 Results

Table 3.3 shows the institutes that were addressed and their reactions. First, in each country of the EU at least one and at most five institutes were approached, and in total 39 institutes were addressed. Moreover, 3 institutes (in Austria, Germany and Luxembourg) referred to another institute, that conducted health related surveys, and also these institutes were requested to collaborate. In addition, also the NSIs in Norway, Iceland and Switzerland were asked to send information regarding health interview surveys and other health related surveys. Institutes, which did not reply, were sent reminders and were contacted by telephone. Of the 45 institutes, 43 institutes replied, and the majority of these institutes (33) reported specific health surveys.
National references to international surveys like the European Community Household Panel are not included in Table 3.1 and 3.2. Also references to studies that obtain data from registrations instead of surveys are excluded, as this is beyond the scope of the inventory. In total we received information with regard to 78 surveys. The associates of the NSIs, Ministries of Health and other institutes, whom we contacted, generally have an overall view of the health related surveys in their country. Indeed, some contributors included information of surveys, that were conducted by other institutes, or referred to other institutes. We may conclude that these 78 surveys represent the most important national surveys.

Table 3.2 presents general information on these surveys, based on the information of the returned forms. For surveys that are executed more than once, the data reported in the Table refer to the most recent year, for which this information is available (this year is printed in bold). The following aspects are reported:

- how often the survey is repeated
- the data collection method
- the number of persons and/or households that collaborated
- the non-response
- which institutionalised groups were included: persons living in homes for elderly, nursing homes, and/or other habitations, and
- which age groups were addressed.

The column named 'questionnaire' shows which questionnaires were provided, and more specifically the year and language(s) of the questionnaire. The second last column shows which questionnaires are checked to make a listing of the included topics. The following surveys are not analysed:

- surveys for which no questionnaires are available yet,
- surveys that have been conducted before 1994 and that will not be repeated, and
- surveys that address only a specific part of the population like children, adolescents or prisoners.

Of the 78 surveys included in Table 3.2 a total of 52 questionnaires have been checked.

In the last column additional information is added. The footnotes in this column refer to the survey in the same row. Based on these data and on information in reports and papers, a description of recent surveys and future plans in each country is made. This can be found in Annex 3.3.

4 Coverage of health related areas and topics by surveys

4.1 Methods

The questionnaires of the selection of surveys that met the inclusion criteria (see Table 3.2) were screened. Questionnaires in English, French, German and Dutch have been screened in their original language. With regard to the other languages, the collaborating institutes often provided English versions, and if these were not available the questionnaires or at least the health related sections were translated into English by sworn translators.

For each of the 52 questionnaires an overview was made of the questions that referred to one of the topics, mentioned in Annex 2.3. These results are presented in Annex 4.1. As we focused on health questions, the inventory of health related topics is complete. However, as we did not always receive or translate the background questions, the demographic and social factors are not totally complete.

In a few cases topics are subdivided, e.g. pharmaceutical products (within category D Health Protection) covers both prescribed medicines and 'over the counter' medicines. If reference is made to prescribed medicines in a questionnaire, the question is assigned to this topic, and if reference is made to medicines, without any further specification, the question is allocated to pharmaceutical products. Thus, in general a question is assigned to the most specific topic available. Of course not each health related question in the screened questionnaires could be covered by one of the topics. References to general complaints for instance could not be recorded in the topic list. Therefore, a list of health related questions that could not be included in Annex 4.1 was made for each questionnaire.

4.2 Results

Annex 4.1 shows for each topic which surveys cover that topic, and the first column presents the total number of surveys that cover a topic. In order to assess how often these topics are questioned Annex 4.2 presents the years in which these topics were included in a survey for each country. This Annex also shows how many countries gather at least once information on these topics. Health related topics that were included in at least 20 surveys are presented in Table 4.1. The following conclusions can be drawn from these overviews.

Health status

- questions on self-perceived health, chronic conditions, physical disability, activity limitations, mental health and stress, disease-specific morbidity, and adult body weight and height are included in more than half of the questionnaires, and information on these topics is gathered in 12 to 16 countries,
- items that refer to social network and children's body weight and height are included in 11 to 15 questionnaires in 10 or 11 countries,
- the additional topics are included in a smaller number of questionnaires.

Life style and health habits

- questions on present and former smoking, the consumption of alcoholic drinks and on the level of leisure activities are included most frequently (in 22 to 37 questionnaires) in 14 or 16 countries,
- the consumption of narcotics and psychotropic substances are questioned in 9 surveys in 8 countries,
- the level of daily activities and vigorous exercise are included in one-fourth of the surveys (13 questionnaires) in half of the countries (8 respectively 9 countries),
- with regard to diet the consumption of fruit and vegetables are included most often (in 15 surveys and 11 countries),
- information on breast feeding is gathered in 9 surveys in 9 countries,
- a couple of surveys refer to knowledge on healthy lifestyles and attitudes regarding health promotion,
- the other areas, like exposure to ultraviolet radiation and personal hygiene, are hardly enclosed.

Living and working conditions

- occupation is included in nearly each survey,
- one third of the surveys cover items on housing conditions, like type of dwelling and number of rooms,
- accidents at home or school, at work, leisure accidents and traffic accidents are included 13 to 17 surveys in about 10 countries,
- topics relating to the external environment like air pollution and exposure to noise are included in a small number of questionnaires, and no questionnaire covers questions on radiation.

Health protection

- surveys in most countries cover questions on outpatient and inpatient care (respectively 41 surveys in 15 countries, and 34 surveys in 13 countries),
- items on the use of medicines are covered by 25 questionnaires in 14 countries,
- 19 questionnaires in 13 countries include questions on dental care and 17 questionnaires in 11 countries cover questions on technical aids,
- items on screening for cancer are covered in 10 surveys in 9 countries.
- questions on vaccination are questioned in 7 surveys in 6 countries.

Demographic and social factors

- information on background variables like gender, age, marital status, and education are included in nearly all surveys,
- questions on income, population subgroups (operationalised by nationality), health-insurance status and region of residence are included in about half of the surveys.

Table 4.1

Topics that are covered most frequently by national health interview surveys

Topics	Surveys	Countries
out patient care	41	15
self-perceived health[1]	37	16
present smoking[1]	37	16
chronic conditions	36	15
physical disability (long-term)[1]	34	15
in patient care	34	13
consumption of alcohol	31	16
former smoking[1]	28	14
activity limitations/temporary disability[1]	27	14
mental health[1]	26	13
pharmaceutical products	25	14
disease-specific morbidity	24	12
weight (adults)[1]	24	14
height (adults)[1]	23	14
level of leisure activities[1]	22	14

[1] recommended instruments available (WHO, 1996)

5 Comparability of questions in different surveys

In order to examine the comparability of survey question, this chapter describes the following themes for a selection of topics:

1 related indicators (if applicable),

2 recommended or provisional questions (if available),

3 points for attention, that are used as a checklist for the comparison,

4 the differences and similarities between the questions that are examined,

5 the comparability of derived measures (e.g. co-morbidity in the case of chronic conditions).

Finally, conclusions on the comparability and recommendations to improve the comparability are presented.

For each topic that is included in this chapter, Annex 5.1 reports comments concerning each question of the 52 surveys that cover this topic. In addition, for some topics the wording of the questions and the answer possibilities is reported.

5.1 Chronic conditions

1 Chronic conditions: related indicators

- prevalence of specific diseases
- overall prevalence of chronic conditions
- co-morbidity

2 Chronic conditions: provisional questions

In the case of chronic conditions, two types of questions can be distinguished: disease specific questions and open ended questions. Disease specific questions include a checklist of conditions, and respondents are questioned whether or not they have these conditions. Open-ended questions inquire whether respondents have a chronic condition, and eventually which condition(s). These two types of questions will be discussed separately.

Health and health related interview surveys can include one type or both types of questions. In addition, detailed questions on specific diseases can be enclosed. The Danish Health and Morbidity

Survey of 1994 for instance enclosed a number of questions on asthma and allergies. As these questions differ between the surveys, the comparability of these detailed questions is not examined. Examples of provisional questions of both types are reported below

provisional disease specific question (WHO, 1996, pp. 95-98)

Now I am going to read for you a list of conditions/diseases. Please tell me for every disease/condition whether you suffer from it (now or in the past 12 months).

- Asthma (Yes/No for every disease)
- Chronic bronchitis
- Chronic heart disease
- Hypertension
- Stroke and effects of stroke
- Stomach ulcer/duodenal ulcer
- Chronic back problems
- Chronic skin condition
- Disease of the liver, liver cirrhosis
- Diabetes mellitus
- Thyroid trouble or goitre
- Epilepsy
- Migraine
- Arthritis
- Other, namely.....

provisional open ended question (based on questions in ECHP)

1 Do you have any chronic physical or mental health problem, illness or disability?
- Yes
- No (go to Q..)

2 Are you hampered in your daily activities by this chronic physical or mental health problem, illness or disability?
- Yes
- No

provisional open ended question (Health survey for England)

Do you have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time, or that it is likely to affect you over a period of time.

- *yes*
- *no*

If yes, what is the matter with you? (record fully, probe for detail)

- _____

Can I check, do you have any other long-standing illness, disability or infirmity?

- *yes*
- *no*

(up to 6 long-standing illnesses)

Does this illness or disability limit your activities in any way?
- *yes*
- *no*

3 Chronic conditions: points for attention

1 type of question

Of the 52 questionnaires that have been examined, 36 questionnaires include at least one question on chronic conditions:

- 13 surveys include only disease specific questions
  (A01, A02, A03, A05, D03, D04, D05, D06, FIN01, F01, F03, F07 and I02),
- 14 surveys include only open ended questions
  (EL01, FIN04, FIN05, FIN08, FIN12, NL02, S01, UK01, UK02, UK04, UK05, UK06, UK09 and N01),
- 9 surveys include both types
  (B01, DK01, E01, I01, NL01, P01, UK03, UK10 and CH01).

2 type of conditions

The checklist of disease specific questions may cover different types of conditions: for instance only physical conditions or also mental conditions. Also the terminology may vary: the checklist can include formal medical terms, descriptions of symptoms and/or complaints.

Open ended questions on chronic conditions may refer explicitly to physical and/or mental conditions or not. As respondents can answer in their own words, the answers probably cover medical terms, symptoms and complaints.

3 the criteria for reporting diseases

Respondents can be asked to mention diseases they *have*, diseases which *hamper* them in their *daily activities* or diseases which are *diagnosed or treated* by a doctor.

4 the reference period

Questions can refer to the present state of health or to the occurrence of chronic diseases during a specific period (e.g. the past year).

4 Chronic conditions: differences between disease specific questions

22 Surveys include questions that are based on a checklist of chronic conditions and diseases. These questions differ in a number of respects (see Annex 5.1 for the exact wording of these questions).

1 the type of diseases

The German Survey on Environment, Health and Health Promotion (D06) uses a list of diseases, which is based on the affected organs or organ systems.

Some checklists include temporary conditions like fractures or children's diseases (e.g. the Austrian and Belgian Health Interview Surveys A01 and B01), and some lists include mental conditions like depression and sleeping problems (e.g. the Belgian Health Interview Survey B01, two French Surveys F01 and F03).

2 the number of diseases on the checklist

The number of diseases in these lists vary between 2 and 40. Most lists include 15 to 30 diseases.

3 the number of diseases that can be reported

The majority of the surveys allow to report for each disease whether or not the respondent has it. Only the Austrian surveys (A01 and A02) limit the number of answers (max. 3 respectively 4 answers possible).

4 the criteria for reporting diseases

Most often, the respondents are asked which diseases they have and/or from which diseases they suffer (18 questionnaires). One questionnaire inquires about diseases which hamper the respondents in their daily activities (A02). The Spanish National Health Survey (E01), the Finnish Survey on Health Behaviour (FIN01) and the Swiss Health Interview survey (CH01) use different criteria: these surveys examine illnesses which are diagnosed and/or treated by a doctor.

5 the possibility to add diseases that are not covered by the checklist

Half of the surveys include an additional answer category 'other diseases or disabilities' (11 questionnaires). Seven of these surveys ask to specify this disease or disability. Thus, respondents

can add diseases which are not covered by the checklist. Moreover, if they did not recognise the terminology of their disease in the checklist, they can report their disease or symptoms in their own words. This answer may be recoded to the proper category later on.

6 the reference period

Eight questionnaires do not specify a period. As these questions are phrased in the present tense, they refer to the present state of health. The Spanish National Health Survey (E01) and the French survey on Health Care and Social Insurance (F03) stress that they examine diseases from which the respondents *currently* have. Six surveys examine which diseases the respondents *ever* had. If reference to a certain period is made, the question often refers to the last year or the past 12 months (6 questionnaires).

7 additional questions

Besides examining whether respondents have a disease, some surveys also investigate

- whether this disease is treated, or more specifically treated in hospital (e.g. A01, F03, UK03),
- whether respondents still have or whether they had this disease (e.g. A01, DK01, I01), and
- since when they had it (e.g. F03, I01).

5 Chronic conditions: differences between open ended questions

23 Surveys include open ended questions on chronic conditions. Possible sources of dissimilarities between these questions are described in this paragraph and the wording of the questions is reported in Annex 5.1.

1 the type of diseases

Nearly all surveys emphasise that they cover long-standing or chronic conditions (16 questionnaires). In addition to long-standing conditions, 5 questions also cover accidents and temporary diseases. The Spanish National Health Survey (E01), for instance, specifies that illnesses are directed, which restricted the respondent's activities for more than 10 days. Two surveys (UK05 and CH01) emphasise that also mental conditions should be mentioned.

2 the description of the disease

The majority of the surveys ask the respondent to name the disease, or if the respondent does not know the name, to mention:

- the symptoms or complaints (e.g. FIN04, P01, S01, UK03, UK09, UK10),
- where in the body the complaints are located (e.g. DK01, FIN04, S01), and/or
- what the doctor stated (e.g. FIN04, S01).

3 the number of diseases that can be reported

Mostly up to 4, 5 or 6 diseases can be reported. About half of the surveys explicitly investigate whether the respondent suffers from more than one disease (e.g. DK01, FIN04, FIN08, S01, UK09, UK10).

The Finnish Living Conditions Survey (FIN04) encourages respondents to mention another disease by stressing that 'even a very minor illness' should be added; in addition the respondents receive a list of diseases, which they should check. Finally, in this survey and in the Swedish Survey on Living Conditions (S01) respondents are asked whether they take medicines 'for any other chronic illness' in order to complete the reporting of chronic diseases as far as possible.

4 the time period

The majority of the surveys do not mention a specific period, but they refer to the present, as the questions are stated in the present tense. Two surveys explicitly refer to the past year (E01 and UK06), one survey to the last four weeks (I01) and one survey to the past two weeks (P01).

5 restriction in daily activities

Most surveys include an additional question to examine whether and to which extent the respondent is restricted in his/her daily activities by the illness.

6 Chronic conditions: tentative conclusions on the comparability

Disease specific questions

The checklists vary considerably and also the wording of the questions is not comparable. Hence, the results of these questions are not comparable. To give an example, when respondents are asked

to mark diseases that are diagnosed or treated by a doctor, they may report fewer diseases than when they are asked to mark diseases they have. Similarly, respondents may report fewer diseases when they are asked to mention diseases they currently have than when they are asked which diseases they ever had.

It is recommended to develop a common question, focusing on:

- a common list of diseases (for instance based on ICD codes),
- the criteria for diseases that should be reported (e.g. diseases the respondent has or suffers from),
- whether or not a specific reference period should be included in the question,
- whether or not respondents should be asked to add diseases, and if so, which questions are advised.

Open ended questions

The questions included in the following 16 surveys are partly comparable: B01, DK01, FIN04, FIN05, FIN08, NL01, S01, UK01, UK02, UK03, UK04, UK05, UK09, UK10, N01 and CH01. Unfortunately, we cannot assess the comparability of the reported diseases, as we do not know which classification systems are used to code the answers. For the purpose of international comparability it is recommended to code the diseases according to the ICD.

Yet, also these questions show small deviations that may affect the results. For instance, questions that indicate that also mental conditions should be mentioned will lead to higher estimates than questions that do not include this specification. Therefore, it is advised to develop a recommendation for this type of question.

7 Chronic conditions: the comparability of derived measures

Prevalence of specific diseases

Based on the disease specific questions, comparable estimates of the prevalence of specific diseases may be calculated for diseases that have a low fatality, that are well known, and that are included in most checklists, like asthma or diabetes.

The comparability of prevalence figures, based on the open ended questions, depends on the comparability of the classification systems that are used to code the answers.

Overall prevalence of chronic conditions

The comparability of the overall prevalence figures of chronic diseases based on the disease specific questions is very limited, as a result of the differences between the questions and the checklists. But when there is a short common list, the prevalence of this selection of chronic conditions could be estimated (see also Dunnell, Matheson and Bridgewood (1997) for a discussion of the uses and limitations of survey data on morbidity).

The results based on the open ended questions are probably better comparable, as these questions are more alike than the disease specific questions.

Co-morbidity

Based on both types of questions, co-morbidity can be assessed. With regard to the comparability of this measure, the differences mentioned above should be taken into account. Especially the extent to which respondents are encouraged to mention more than one chronic disease affects the results.

5.2 Height and weight of adults

1 Height and weight: related indicator

body mass index BMI

2 Height and weight: recommended question

Recommended question (WHO (1996) page 85) What is your height without shoes? _____ cm How much do you weigh without clothes and shoes? _____ kg (Pregnant women should be asked what their weight was before pregnancy.)

3 Height and weight: points for attention

1 correction for clothes and shoes

In order to correct for the weight of clothing, respondents may be asked to estimate their weight without clothes and shoes. Similarly, respondents may be asked to give their height without shoes.

2 pregnancy

In order to compute BMI as an indicator for overweight or underweight, pregnant women should be asked to give their weight before pregnancy.

3 type of survey

The respondents' answers may be biased by social desirability. Possibly, the effects of this bias differ between self-administered questionnaires and face to face questionnaires. On the one hand, social desirability may occur more often in interview situations when people have to mention their stature to the interviewer, but on the other hand, the deviation from the actual body weight may be smaller when an interviewer is present.

4 Height and weight: differences between questions

Questions on height and weight that are apparent in 23 surveys are examined. The wording of these questions is included in Annex 5.1.

1 correction for clothes and shoes

About one third of the questions explicitly mention that height without shoes and weight without shoes and clothing should be estimated (8 surveys: B01, D06, E01, E02, NL01, P01, N01 and CH01). One of the Finnish surveys (FIN01) asks for body weight estimated with *light* clothing. Also if these corrections are not specified, most people probably mention their weight and height without clothing spontaneously. Especially people who want to be thinner may give their weight without clothing. And if someone's height is ever measured by a professional (a doctor or nurse, e.g. for a medical test), he/she probably recalls this height, which is measured without shoes. As a result, the deviation between questions that include this correction and questions that do not may be small.

2 pregnancy

Seven surveys specify that pregnant women should give their weight before pregnancy (B01, E01, FIN08, I01, P01, UK09 and N01). Although the remaining questions do not explicitly include this condition in the questionnaire, it may be included in the interviewers' instructions.

3 type of questionnaire

Most questionnaires that include questions on body weight and height are face to face questionnaires. Two surveys use self administered questionnaires (FIN01 and F03) and two surveys apply telephone interviews (FIN08 and CH01). In the Health Survey for England (UK09) weight and height are measured by a nurse. Only if measurement was not possible, respondents were asked to give an estimation of their body height and weight. These different methods may possibly lead to different results.

4 calculation of BMI

Generally people are asked for their height and weight, and BMI (weight/height^2) is computed afterwards. One questionnaire, however, asks people to calculate their BMI themselves and to give this figure instead of height and weight (L01). As this concerns a face to face questionnaire, the interviewer may help the respondent in the computation. Yet, the chance on errors is high, and as height and weight are not recorded, the calculation cannot be verified.

5 Height and weight: tentative conclusions on the comparability

The differences between the questions are small. Also BMI derived from these questions will be comparable. Probably other biases, like social desirability or wrong estimations (e.g. respondents who do not know their stature and give a rough estimation) may affect the reliability to a larger extent than the differences between the questions, that are discussed above. In order to diminish these biases as far as possible, it is recommended to include corrections for clothes and shoes, to ask pregnant women after their weight before pregnancy, and to follow the recommended question.

5.3 Dental health: missing teeth

1 Missing teeth: related indicator

average number of missing teeth (35-44 year)

2 Missing teeth: points for attention

1 type of question: open ended question or precoded answer possibilities

In general open ended questions produce more precise results than questions with precoded answer categories: whereas the latter use a categorisation of missing teeth, open ended questions ask for the exact number of missing teeth. Moreover, as no recommended or provisional question is available, answer possibilities may vary.

2 definition of missing teeth

Questions can inquire after the number of *original* teeth respondents have lost, or after the number of missing teeth, that are *not replaced* by false teeth. In addition, it should be clear whether wisdom teeth are included are not.

3 Missing teeth: differences between the questions

Five surveys include questions on missing teeth. The wording of these questions is reported in Annex 5.1.

1 type of question

In contrast to the Scandinavian questions that include determined answer categories (DK01, FIN01, FIN05 and N01), the French question (F01) is open ended.

2 the answer categories

The Finnish and French questionnaires (FIN01, FIN05 and F01) focus on the number of *missing* teeth, and the Danish and Norwegian ones (DK01 and N01) focus on the number of teeth *left*. The response categories of the two latter questionnaires can be converted to the number of missing teeth, but the resulting categorisation differs from the Finnish ones.

1	no teeth left	*all teeth (28) missing*
2	1-9 teeth left	*19-27 teeth missing*
3	10-19 teeth left	*9-18 teeth missing*
4	20 or more teeth left	*1-8 teeth missing*
5	all my teeth left	*no teeth missing*

3 definition of missing teeth

The French question (F01) inquires after the number of missing teeth that are *not replaced* by a prosthesis. On the other hand, one of the Finnish questionnaires (FIN05) examine the number of *original* teeth that are missing. The additional questions do not specify whether or not teeth that are replaced by false teeth are defined as missing teeth.

In contrast to the other questionnaires, the French and the Norwegian surveys (F01 and N01) state that wisdom teeth should not be counted.

4 calculation of the number of missing teeth

The five questions do not allow to calculate the average number of missing teeth (of 35-44 year olds). Based on the results of the French questionnaire, the average number of missing teeth that are not replaced can be calculated, and based on the other questionnaires, only the answer category that is mentioned most often by people aged 35-44 can be counted.

4 Missing teeth: tentative conclusions on the comparability

The wording of the questions is not comparable. Questions that emphasise that wisdom teeth should not be included will lead to lower figures than questions that do not include this specification. Moreover, questions using precoded answer categories do not allow to calculate the average number of missing teeth of 35-44 year. Therefore, it is advised to elaborate a recommended question, that includes a definition and that is open ended.

5.4 Dental health: toothless persons

1 Toothless persons: related indicator

percentage of people aged 65-74 years who are toothless

2 Toothless persons: differences between the questions

Nine surveys include questions concerning toothless respondents. The questions and answer categories are included in Annex 5.1.

The answers that are underlined refer to persons who have no teeth left. In the French survey (F03)

this answer category also includes persons who have lost *nearly* all teeth, and in the Finnish survey (FIN01) the underlined answer category may include people who have false teeth, but who have also some teeth of their own. The other surveys have a separate answer category for toothless persons, which allows for a calculation of the percentage of people aged 65-74 years who are toothless.

3 Toothless persons: tentative conclusions on the comparability

The questions of the Belgian and Dutch surveys are similar, but the other questions are different. With regard to the comparability of the percentage of people aged 65-74 years who are toothless: this can be computed in the majority of the surveys (B01, DK01, FIN05, NL01, S01, UK10 and N01) and can be estimated roughly in 2 surveys (FIN01 and F03).

If a recommended question for the number of missing teeth would be developed, a separate answer category for people who miss all teeth should be included.

5.5 Dental health: dental prosthesis

1 Dental prosthesis: related indicator

percentage of people who have a dental prosthesis

2 Dental prosthesis: differences between questions

Nine questionnaires include questions on dental prostheses. These questions are reported in Annex 5.1. The answers that are underlined refer to persons who have a prosthesis.

The context of these questions differs: the questions in one of the French, and in the Italian and Portuguese surveys (F03, I01, P01) cover all kinds of prostheses and artificial aids, and the Spanish and Swedish questions (E01 and S01) focus on the general state of the respondent's teeth. The remaining questions refer more specifically to the occurrence of dental prostheses. In addition, the Belgian, French and Dutch surveys (B01, F01, F03 and NL01) inquire whether the prosthesis can be removed or not. The Finnish survey (FIN05) examines only removable dentures.

3 Dental prosthesis: tentative conclusions on the comparability

Again the Belgian and Dutch questions are similar. Although all surveys allow to calculate the

proportion of people who have a dental prosthesis, the comparability of the questions is limited.

5.6 Present and former smoking

1 Present and former smoking: related indicators

- proportion of daily smokers
- proportion of occasional smokers
- proportion of ex-smokers
- proportion of people who have never smoked
- proportion of heavy smokers

2 Present and former smoking: recommended questions

Recommended question (WHO (1996) page 73)

1 Do you smoke?
- *yes, daily*
- *yes, occasionally*
- *no*

2 How many cigarettes do you usually smoke on average each day?
- *does not smoke cigarettes*
- *fewer than 20*
- *20 or more* [heavy smoker]

3 Compared with two years ago would you say you now have reduced smoking?
- *yes* (end)
- *no* (end)

4 Have you ever smoked?
- *yes, daily*
- *yes, occasionally*
- *no* (end)

5 How long ago did you stop smoking?
- *less than two years ago*
- *two years ago or more*

3 Present and former smoking: points for attention

1 definition of smokers

Questions may refer to smoking in general or, more specific, to the consumption of cigarettes, cigars and/or pipe. With regard to cigarettes more detailed information can be gathered: namely on the choice between manufactured and hand-rolled cigarettes and between cigarettes with and without filter

2 quantity smoked

Smokers can be asked how many cigarettes, cigars and/or how much pipe tobacco they consume during a certain time period: daily, weekly or monthly. This question can be open ended, and in that case the exact answers can be recorded, or precoded answer categories can be used. In the latter case, a division between less than 20 cigarettes per day and more than 20 cigarettes would be helpful in order to calculate the proportion of heavy smokers.

3 occasional smoking

Questions concerning both present and former smoking may include an answer category 'yes, occasionally' besides 'yes, daily' in order to distinguish irregular from regular smokers. If this is not the case, occasional smokers can be characterised by the quantity of cigarettes, cigars or pipes they smoke: for instance less than 1 per day.

4 Present and former smoking: differences between questions

36 Questionnaires include questions on present and former smoking behaviour. The wording of these questions is presented in Annex 5.1.

1 definition of smokers

The large majority of the questionnaires (27) specify that they refer to the consumption of cigarettes, cigars and pipe. Six questionnaires refer to smoking in general without further specification (D06, FIN08, FIN12, F01, F06 and IS01), and three questionnaires inquire about cigarette smoking (A01, IRL03 and UK07 (the latter is a study among women)).

Some questionnaires make a further distinction between the type of cigarettes. About one third of the questionnaires (13) inquire about the consumption of manufactured cigarettes (or in other words: cigarettes from a pack) and hand-rolled cigarettes (or roll ups, self rolled cigarettes or shag) (D03, D04, FIN01, NL01, NL02, UK01, UK02, UK03, UK05, UK06, UK09, UK10 and N01). About

one fourth of the questionnaires (8) examine whether respondents smoke cigarettes with or without filter (A03, D03, D04, I01, UK01, UK02, UK03 and UK05).
In addition, the Danish questionnaire inquires about the consumption of cheroots (DK01), the Swedish and Swiss questionnaires explore the consumption of cigarillos (S01 and CH01), and the Swedish and Norwegian questionnaires include the consumption of snuff or chewing tobacco (S01 and N01).

2 quantity smoked

Fourteen questionnaires examine the amount of cigarettes, the number of cigars and the amount of pipe tobacco separately using open ended questions (D03, D04, D05, DK01, E01, E02, FIN01, FIN05, NL01, S01, UK01, UK03, UK06 and CH01). The Belgian survey (B01) uses open ended questions to determine the consumption of cigars and pipe, and a precoded question to estimate the daily consumption of cigarettes. One of the French surveys (F03) examines the daily consumption of cigars, cigarillos and pipe together, and that of cigarettes separately.
Fifteen questionnaires examine the amount of cigarettes the respondents generally smoke, but they do not inquire about the amount of cigars and pipe tobacco. Most surveys (11) use open ended questions (FIN12, I01, I02, NL02, P01, UK02, UK05, UK07, UK09, UK10 and N01), and a minority of the surveys (4) use precoded questions (A01, A03, D01 and IRL03).
Most British questionnaires distinguish between the average number of cigarettes smoked on weekdays and at weekends (UK01, UK02, UK05, UK06, UK09 and UK10).
Three questionnaires use open ended questions to inquire about the overall amounts smoked (FIN08, F01 and F06). Two questionnaires, finally, do not examine quantities (D06 and IS01).

3 occasional smoking

To distinguish daily smokers from occasional smokers, half of the questionnaires (18) include an answer category ‘occasionally’ to the question concerning present smoking. The terminology, however, differs: for instance ‘gelegentlich’ (A03, D01), ‘not every day’ (E01, NL02), ‘now and then’ (FIN12, NL01), or ‘from time to time’ (S01).
Most questionnaires that do not include such an answer category can estimate the proportion of occasional smokers from the quantities consumed (14 questionnaires). If people smoke less than one cigarette, cigar or pipe per day, for instance, they may be typified as occasional smokers. Only 3

questionnaires do not allow to estimate the proportion of occasional smokers (A01, D06 and IS01).

4 heavy smokers

The majority of the questionnaires ask the respondents for the exact number of cigarettes, cigars and/or pipe tobacco (29 questionnaires). Five questionnaires use precoded answer categories to estimate these amounts (A01, A03, B01, D01 and IRL03). The answer categories of these questionnaires allow to calculate the proportion of people who are heavy smokers (more than 20 cigarettes per day). The two questionnaires that do not examine quantities (D06 and Is01) provide no information on heavy smokers.

5 comparison of present smoking with former smoking

A minority of the questionnaires ask respondents whether they smoke more, less or the same amount compared to before: two questionnaires inquire about changes in smoking behaviour within the last year (D03 and F06), and four questionnaires ask respondents to compare their current smoking habits with those 2 years ago (B01, E01, I01 and P01). Finally, one study asks for a comparison with smoking behaviour 7 years ago, as that survey is repeated every 7 years (UK03).

6 former smoking

All questionnaires but one (IS01) inspect whether people, who do not smoke currently, have ever smoked or not. Most questionnaires inquire about the former smoking habits of ex-smokers, e.g. when they started smoking, when they stopped, how long they have smoked, and how much they smoked.

7 additional questions

Many questionnaires include additional questions regarding smoking, for instance whether people want to diminish their tobacco consumption and the brand of cigarettes they usually smoke.

5 Present and former smoking: tentative conclusions on the comparability

Generally, the questions differ from the recommended questions. Probably many countries have their own tradition with regard to this topic, as the differences between questionnaires within countries are smaller than between countries. Although the large majority of the questionnaires allow to calculate

the proportions of daily smokers, heavy smokers, occasional smokers, former smokers, and the proportion of people who have never smoked, the findings of different surveys may vary as a result of the differences between the questions. The proportion of occasional smokers, for instance, certainly differs between the surveys as the terminology varies.

In order to get internationally comparable data, the recommended set of questions should be included in the questionnaires. If more information on smoking behaviour is preferred, for instance on the consumption of cigars and pipe tobacco, other questions may be added to the recommended questions. New surveys appear to follow the recommendations, like the Belgian health interview survey did.

5.7 In patient care

1 In patient care: related indicators

- hospitalised (yes/no)
- number of times
- number of days

2 In patient care: provisional question

No recommended question is available. Therefore, a provisional question is presented below.

Provisional question (based on Swinkels, 1996, PHARE seminar on Health Interview Surveys)

Basic question

1 Have you been admitted to a hospital or clinic during the past 12 months, since ..... (date). (Do not include admissions for childbirth.)

- *yes, _____ times*
- *no*

Additional question (to be answered for all admissions during reference period)

2 How many nights did you spend in the hospital? _____ *nights*

3 In patient care: points for attention

1 the context of the question

Questions may focus on in patient care solely, or may focus on different types of care like contacts

with GP's, dentists and other types of out patient care concurrently.

2 exclusion of hospitalisation due to childbirth

In order to prevent confusion, it should be specified that admissions due to childbearing should not be reported.

3 the reference period

Because of the low prevalence rate of hospitalisation, a reference period of one year is preferred (Swinkels, 1996). Underreporting resulting from memory effects is probably minor, as people forget hospitalisations less often than visits to the GP or the dentist due to the more serious nature of the complaint.

When the respondents are asked whether they have been hospitalised during the past year, the respondents may refer to the past 365 days or to the past calendar year. When an interview takes place on 16 February 1997, for instance, respondents may refer to the period since 16 February 1996, or to the calendar year 1996. Similarly, respondents may refer to dissimilar periods of time when the question hints at the past 12 months. In order to clarify the exact period of time that is intended, Swinkels (1996) advised to include the date by adding the statement 'so since ..... (date

4 In patient care: differences between questions

In total 26 questions on hospitalisation have been examined. The wording of these questions is reported in Annex 5.1

1 definition of hospitalisation

Half of the questionnaires (13) specify that stays in hospital overnight or longer or, in other words, visits as an in patient or hospital admissions are intended (D01, D03, D04, D05, D06, E01, FIN08, F07, NL01, UK01, UK05, UK10 and N01). The other questionnaires (11) use the term hospitalisation without further specification (B01, FIN01, FIN04, FIN05, F03, I01, I02, L01, P01, S01 and CH01). The Portuguese questionnaire (P01), for instance, examines how many days the respondents was in a hospital or a clinic in the two weeks prior to the interview. Probably, respondents who visited a hospital, but did not stay overnight also answer positively. As a result,

hospitalisation figures based on this question will be much higher. A British questionnaire (UK03) examines whether respondents are hospitalised 'either overnight or as a day patient', and one of the French studies (F01) explains that not only overnight stays, but also stays of at least 2 days while the respondent returns home at night should be reported. Like the Portuguese study, hospitalisation figures based on these questions are higher.

Respondents may not always know which kinds of hospitals and clinics are meant, and therefore some questions include more detailed information. The Norwegian study (N01), for instance, points that admissions to hospitals and/or care institutions should be reported, and the Swiss (CH01) and one of the Finnish (FIN08) studies indicate that visits to rehabilitation centres, spas and sanatoria should be excluded.

2 the context of the question

The majority of the questionnaires (24) include specific questions on in patient care. Only two questionnaires (D01 and D06) also inquire about out patient care.

3 exclusion of hospitalisation due to childbirth

Only 5 questions stress that admissions due to childbirth should not be reported (B01, I01, I02, NL01 and UK05). The other 21 questions do not include this specification. Figures on hospitalisation based on the latter questions may be higher compared to the figures based on questions that include this specification.

4 the reference period

All questions on hospitalisation refer to a specific time period. Most questions (18) refer to the past year or past 12 months. The other questions refer to the past 6 months (FIN08, F01), 3 months (F03, I01, S01), 1 month (UK03), 4 weeks (D01) or 2 weeks (P01).

Ten questions specify the exact period by adding 'since .....(date)' (B01, E01, FIN05, FIN08, L01, NL01, S01, UK01, UK05 and UK10). The other 16 questions refer to the past months or weeks without indicating the dates.

5 number of times

More than half of the questionnaires (14) examine how many times the respondent has been

hospitalised during the reference period. Twelve questions use open ended answer categories (B01, D03, D04, E01, F03, I01, I02, NL01, S01, UK01, UK05 and N01), and two questions use precoded answer categories (F01 and CH01).

6 number of days/nights

Nearly all questionnaires (23) examine the number of days (or nights) spent in hospital. They inquire after:

- the total number of days during the reference period (13 studies: D05, D06, FIN01, FIN04, FIN05, FIN08, F07, I02, L01, P01, S01, N01 and CH01),
- the number of days for each stay separately (5: D03, D04, NL01, UK01 and UK05), or
- the number of days of the last stay (4: B01, D01, E01 and F01).

The Italian Health Interview Survey (I01) examines both the total number of days in the reference period and the number of days of the last time. Most questions refer to the number of nights, which may lead to different results than questions that examine the number of days.

5 In patient care: tentative conclusions on the comparability

The large majority of the questions refer to in patient care solely, and most questions examine hospitalisation during the past year. Still, the comparability is limited. Some questions refer to a shorter period of time, which makes it difficult to compare hospitalisation figures.

The definition of hospitalisation probably has the largest influence on the comparability of the hospitalisation figures. It is recommended that the question should state that only visits as an in patient (and no day visits) have to be recorded, and that women should not report hospital visits due to childbirth. In addition, it is advised to clarify which hospitals are intended and which visits should not be reported, like visits to sanatoria.

6 In patient care: the comparability of derived measures

Number of times

In order to gather information on the number of hospitalisations, it is advised to examine how often the respondent was hospitalised during the past year (the preferred reference period).

Number of days

Whereas the number of *days* is one of the indicators that is used to quantify hospitalisation, most questions refer to the number of *nights.* Reference to the number of nights is preferred, as it emphasises that in patient visits rather than day visits have to be recorded. Moreover, it probably leads to more reliable estimates, as the number of nights is less ambiguous than the number of days. When respondents are asked for the number of days they have been hospitalised, they may include both the first and the last day, they may include one of these days, or they may report only the days in-between.

Finally, recommendations should be developed, that clarify whether the total number of nights the respondent was hospitalised should be counted, or the number of nights for each visit separately, or only with regard to the last visit. The number of nights for each visit separately is preferred, as this yields the most detailed information. Moreover, mistakes in the summation of the number of nights when respondents have been hospitalised more than once may be eliminated. Only if respondents are hospitalised very often, they should be asked for the total number of nights.

5.8 Self perceived health

1 Self perceived health: recommended question

Recommended question (WHO (1996) page 52)

How is your health in general?
- *very good*
- *good*
- *fair*
- *bad*
- *very bad*

2 Self perceived health: points for attention

1 reference period

It is recommended to refer to 'health in general' rather than 'present state of health' as it is not intended to measure temporary disabilities.

2 number and type of answer categories

Obviously, differences in the number and wording of the answer categories may lead to different results. Thus, the number, the wording and the order should be comparable.

3 comparison with 'people of the respondent's own age'

The WHO/CBS publication (1996) discourages this addition, as this information does not provide the possibility to monitor progress of the average health status in the population. This question rather provides information on the health status in comparison to the average state of health.

3 Self perceived health: differences between questions

37 Questionnaires include this topic. Two surveys (DK01 and UK09) include two questions: one in a face to face questionnaire and one in a self-administered questionnaire. As a result, 39 questions have been examined. Annex 5.1 presents the wording of these questions.

1 reference period

Most questions (25) refer to 'health in general', although the word 'general' is not always specified. Two questions examine the state of health in the past year or the past 12 months (E01 and UK01). The other questions refer to the present state of health or current health status (12 surveys: D03, D04, D06, DK01 (face to face questionnaire), FIN01, FIN04, FIN05, FIN08, FIN10, FIN12, F01 and CH01).

2 number and type of answer categories

15 Questions use 5 answer categories that are comparable with the recommendation.

18 Questions also include 5 answer categories, but the wording of these categories does not correspond with the recommendation. Of these 18:

- 6 questions include 2 positive answers, 1 average answer and 2 negative answer categories (A05, FIN01, FIN05, FIN08, FIN10 and FIN12),
- 6 questions include 3 positive and 2 negative answers (D03, D04, D05, D06, I01 and IS01),
- 3 questions use 3 positive, 1 average and 1 negative answers (DK01 (self

administered part), E02 and UK09 (self administered part)),

- the 2 Dutch questions have 2 positive, 2 average and 1 negative answer possibility (NL01 and NL02), and
- 1 Italian question (I02) does not specify the answer categories; respondents are asked to assess their health on a scale from 1 to 5 (labelled: bottom score and top score).

In addition, three questions have 4 answer categories:

- including 2 positive and 2 negative answers (F06 and F08), or
- 2 positive, 1 average and 1 negative answer category (UK03).

One question (UK01) includes 3 answer possibilities: 1 positive, 1 average and 1 negative answer. Finally, two questions use rating scales ranging from 0 to 10 (F03) and from 0 to 100 (UK04). Obviously, questions that have different numbers of answer possibilities cannot be compared. Even if this number is similar, small deviations in the wording of the answers can lead to different results.

3 comparison with 'people of the respondent's own age'

Some questions include this addition (5 questions: A05, F01, F06, F08 and UK03).

4 additional questions

Besides the recommended questions referred to above, a number of questionnaires gather additional information. Some questionnaires inquire about a comparison of the present state of health with the health status last year (B01, DK01, E02, UK09 and N01) or 5 years ago (D05). Three questionnaires ask to rate the present health status on a scale (D06, NL01 and UK01), and two of these questionnaires also ask to rate the state of health in the past (one year ago (D06) or 5 years ago (NL01)). The Swedish questionnaire includes a question on a comparison of the respondents' health status with that of people of the same age (S01), and the Swiss questionnaire inquires whether the present state of health differs from the general state (CH01).

4 Self perceived health: tentative conclusions on the comparability

Ten questions correspond with the recommendation of the WHO/CBS, namely A01, B01, L01, P01, S01, UK02, UK05, UK09, UK10 and N01. The other questions can be made international comparable:

- by referring to the general state of health instead of the current state,

- by adjusting the wording and eventually the number and the order of the answer categories, and
- by skipping the phrase 'compared with people of your age'.

The WHO 'survey of surveys' shows large differences between 11 countries in the proportions of people with a (very) good state of health, fair/average health status, and a (very) bad/poor health status. Part of these intercountry differences can be explained by differences in question wording and/or answer categories (WHO, 1997b).

5.9 Out patient care: general practitioner

1 Out patient care: related indicators

Questions on out-patient care cover visits to general practitioners (GPs), specialists, dentists, physiotherapists, alternative practitioners like homeopaths etc. Also out patient visits to hospitals are included. Of these different types of out patient care, visits to the GP are included most frequently in health interview surveys, and therefore we compare this topic. An indicator on GP consultations that may be used for international comparisons is the frequency of the consultations.

2 Out patient care GP: provisional question

Provisional question (based on Swinkels, 1996, PHARE seminar on Health Interview Surveys)

Introduction
The following questions concern contacts with your GP. They relate to visits during surgery hours and house-calls, but also to telephone calls for other reasons than to make an appointment.

Basic questions
1 How often have you consulted your GP during the past 2 weeks ending yesterday, since .... (date)?
- _____ *times* → go to question 3
- *not one single time*

2 Can you tell when you consulted your GP for the last time?
- *on _____19__ (date) or _____ weeks/months/years ago*
- *never*

If last consultation ≤ 2 months ago → go to question 3

3	How often have you consulted your GP during the past 2 months, since ..... (date)? _____

3 Out patient care GP: points for attention

1 definition of a consultation

In order to clarify which contacts with the GP should be reported, it is necessary to indicate which contacts should be included and which contacts should be excluded. Home visits and consultations by telephone may be included, while contacts to make an appointment may be excluded. Moreover, it may be specified whether consultations on behalf of other people should be reported or not.

2 reference period

Generally questions on consultations with a GP are retrospective, and reference periods may vary. Studies in the Netherlands have shown that when the reference period is 14 days it is unlikely that respondents report consultations wrongly. However, memory effects bias the results when longer reference periods are used (Swinkels, 1996).

Swinkels (1996) also advises to specify the reference period in order to prevent confusion by adding the starting date, e.g. 'during the past 2 weeks, so since ....'. Similarly, the final date can be included: for example 'during the past 2 weeks ending yesterday'.

3 date of last consultation

In order to estimate the proportion of people who consult a GP during one year, respondents who did not report a consultation with the family doctor during the reference period should be asked after the date of their last consultation (Swinkels, 1996). Consequently, it is possible to calculate how long ago the consultation took place. Together with the information on the proportion of people who consulted a GP during the reference period, it can be estimated how many people consulted a doctor during one year.

4 Out patient care GP: differences between questions

The wording of questions that are included in 26 questionnaires has been examined. An overview of these questions is presented in Annex 5.1.

1 context

The majority of the questions (12) inquire after visits to 'a doctor'. Thus, respondents may report not only visits to GPs (or family doctors), but also visits to specialists and company doctors. 7 Questionnaires (A01, D03, D04, D05, D06, DK01 and L01) inquire after contacts with different types of doctors separately. 5 Studies (B01, NL01, NL02, UK02 and UK03) focus on consultations with GPs solely and 2 studies (UK05 and CH01) include two questions: one on doctors in general and one specifically on GPs.

2 number of consultations

Of the 26 studies, only one (UK02) does not inquire after the number of consultations. Contrary to the other studies, one study (L01) uses precoded answers. Most studies inquire after the number of consultations with the GP, and some studies inquire after the total number of contacts with different types of doctors.

3 definition of consultation

7 Studies (D06, FIN01, FIN04, F06, L01, UK03 and N01) do not indicate which contacts should be reported and which contacts should not be reported. 10 Questionnaires emphasise that consultations by telephone should be included. In contrast, one questionnaire (FIN08) indicates that telephone contacts should be excluded. 11 Studies specify that home visits should be included, and a similar number of studies indicate that consultations on behalf of others should be excluded. Finally, the two Dutch studies (NL01 and NL02) report that visits to locums should be recorded.

4 reference period

The reference periods vary widely: from 2 weeks (5 studies: E01, UK01, UK05, UK06 and UK10) to 12 months (10 studies: A01, D05, D06, FIN01, FIN04, F06, L01, UK02, N01 and CH01). The other 11 studies refer to periods of 4 weeks, or of 1, 2, 3 or 6 months.
10 Questions (B01, FIN08, NL01, NL02, S01, UK01, UK02, UK05, UK06 and UK10) clarify which period is referred to by adding exact dates.

5 date of last consultation

Ten studies (B01, D03, D04, D05, E01, NL01, NL02, UK10, N01 and CH01) ask respondents

who did not report a consultation during the reference period when the last consultation took place. Also these questions vary: whereas most questions are open ended, 3 questions use precoded answer categories, and while 6 questions refer to contacts with the GP, 4 questions inquire after the date of the last contact for different types of doctors simultaneously.

5 Out patient care GP: tentative conclusions on the comparability

The comparability of the questions on consultations with GPs is limited for a number of reasons. Firstly, some questions examine contacts with a variety of doctors, which leads to higher estimates of the number of consultations than questions that refer specifically to contacts with GPs. Secondly, questions that do not specify the type of consultations that should be reported probably give different estimates than questions that indicate which contacts should be included and which contacts should be excluded. Thirdly, the reference periods are not comparable. The longer the reference periods, the larger the effects of memory bias, and the higher the chance on underreporting. Fourthly, a minority of the studies inquire after the date of the last consultation, if respondents did not report a consultation during the reference period. This information contributes to a more accurate estimation of the number of consultations during one year. However, also these questions show large variations. Therefore, it is advised to develop questions that:

- refer specifically to contacts with GPs, and eventually to contacts with other kinds of doctors separately,
- specify that home visits and consultations by telephone should be included, (the number of consultations made on behalf of other persons may be asked separately),
- have a short reference period, preferably of 2 weeks, and
- inquire after the date of the last consultation, if respondents did not consult a GP during the reference period, preferably by means of an open ended question.

6 Conclusions and recommendations

The present project has been initiated in order to collect information on how health and health related topics are measured by means of national population surveys in 18 European countries (the 15 Member States of the EU and Norway, Iceland and Switzerland). The project intends to facilitate the production of harmonised statistics by improving the comparability of health related data and to explore the possibilities for adequate collection of data from these national surveys by Eurostat.
Chapter 1.1 describes the four specific goals of the project:

1 an overview of recent national health interview surveys and other surveys with a substantial health component in the 18 countries mentioned above,
2 an inventory of future plans for such surveys,
3 an overview of the coverage of health related areas and topics by these surveys, and
4 an examination of the comparability of national questions included in recent surveys.

The main results in the light of these four aims are described in section 6.1. Next, section 6.2 reports recommendations for future actions.

6.1 Interpretation of the results

Based on the inventory of recent national health interview surveys and other health-related surveys (the first aim), it can be concluded that health interview surveys are executed regularly in most countries: periodic health interview surveys are reported in 14 of the 18 countries. Especially in Finland, France and the UK many health related surveys have been executed recently. Also in Austria, Germany, Denmark, the Netherlands and Norway periodic national health interview surveys as well as non-recurrent health surveys and surveys that focus on a specific health theme like alcohol consumption have been performed. In Italy, Sweden and Switzerland periodic health interview surveys have been executed regularly and in Portugal and Spain such surveys have been repeated at irregular intervals. In Belgium the first national health interview survey is executed in 1997, and subsequently this survey will be repeated regularly.
In contrast to the countries above, no periodic health interview surveys have been reported in Greece, Ireland, Luxembourg and Iceland. However, in these countries (except Greece) multi purpose surveys that cover health, and surveys on one specific health theme have been executed.

It seems that recently more national health and health-related surveys have been executed than ever before. If this trend continues, there may be even more health surveys in the future. Generally, many important surveys are periodic, implying that these will be repeated. Moreover, the inventory of future plans for national health related surveys (the second aim) shows that also new health surveys are being planned. To give some examples: in Finland preparations are being made for a study on the state of health of the Finns in the year 2000 (Terveys 2000) that will be based on a sample of about 10,000 respondents; in France a large-scale disability survey is being planned in 1997 in order to interview about 20,000 disabled people; and in Ireland a national lifestyle survey starts in 1997 and this study will regularly cover health related questions from 1998 onwards.

In conclusion, given the large number of national health interview surveys and other health related surveys in the recent past and in the future, there are numerous health data available on the national level. However, two comments should be made. Firstly, the reported health data are by no means available every year. In contrast to a small number of health surveys that are executed continuously or replicated every year, most surveys are repeated at 2 to 10 yearly intervals. In addition, many surveys are executed only once. Secondly, the data collection methods vary between the surveys. To give some examples: the type of survey (health interview surveys, disability surveys, multi purpose surveys etc.), the sample frames, the type of interviews (face to face, self administered and/or telephone interviews), the numbers of people that are approached and the response percentages differ (see Table 3.2). These differences also affect the comparability of the data.

The third aim focuses on the coverage of health and health related topics that are relevant for the programme on health monitoring and for other programmes in the field of public health: which topics are frequently covered by health related surveys and which topics are hardly covered? First, topics that are apparent in 10 action programmes in the field of public health and that may be measured by means of health interview surveys have been listed (see Annex 2.3). Next, the contents of 52 questionnaires originating from 18 European countries have been investigated.

This examination shows that especially topics that in the area of 'Health status' are included in the questionnaires like self-perceived health, chronic conditions, physical disability and activity limitations. Also topics on 'Health protection', or in other words medical consumption, are frequently covered e.g. hospitalisation (inpatient care), consultations with the GP (outpatient care) and medicine

use. Of the topics concerning 'Lifestyle and health habits' questions on smoking and drinking habits and on physical activities are included most often. However, the area of 'Lifestyle and health habits' also incorporates many topics that are hardly included in health surveys, like topics on:

- diet, e.g. behaviour regarding food hygiene,
- sex life,
- knowledge on healthy lifestyles,
- attitudes regarding health promotion,
- awareness of health education campaigns,
- risk taking behaviour,
- personal hygiene (for deprived groups),
- risk factors for cancer, and
- exposure to ultraviolet radiation.

In addition, this inventory allows to establish to which extent these health related surveys meet the information needs of the 10 programmes in the field of public health, that are described in Chapter 2. The more general and horizontal programmes cover a greater variety of themes than the more specific and vertical programmes, that go into a full consideration of one health problem. On the whole, the information needs of the general programmes are more often met than the needs of the more specific programmes. Thus, the areas of the Community action programmes on health monitoring (COM (95) 449 final), and on health promotion, information, education and training (COM (94) 202 final), the Health for All survey indicators (WHO, 1996), and the survey indicators that have been adopted by the High Level Committee on Health (Ministry of Health, Denmark, 1994) are more often included in the health related questionnaires than the topics of the Community action programmes on cancer (COM (94) 83 final), on the prevention of drug dependence (COM (94) 223 final), on the prevention of AIDS and certain other communicable diseases (Decision No 647/96/EC), on injury prevention (COM (97) 178 final), on pollution-related diseases (COM (97) 266 final), and the Third Community action programme to assist disabled people (Helios II).

In order to explore the possibilities for international comparison of data from these national surveys, the comparability of the topics that are included most frequently has been studied (the fourth aim). Table 6.1 presents an overview of the comparability with regard to the wording of the questions and regarding the measures that can be derived from these questions.

Table 6.1
The comparability of questions for 10 frequently measured topics and the comparability of derived measures

questions	compar.[1]	derived measures	compar.[1]
chronic conditions: disease specific	-	prevalence of specific diseases	+
		overall prevalence of chronic conditions	+
		co-morbidity	-
chronic conditions: open ended	+	prevalence of specific diseases	+
		overall prevalence of chronic conditions	+
		co-morbidity	+
self perceived health	+		
height and weight	++	body mass index	++
missing teeth	-	average number of missing teeth	[2]
toothless persons	-	% of toothless persons	+
dental prosthesis	-	% of people with dental prosthesis	+
present and former smoking	--	% of daily smokers	+
		% of occasional smokers	-
		% of ex-smokers	+
		% of never smokers	+
		% of heavy smokers	+
in patient care: hospitalisation	-	number of hospitalisations	-
		number of hospitalised days	-
out patient care: GP consultations	-	frequency of GP consultations	-

[1] comparability: -- not comparable; - comparability is limited; + partly comparable; ++ comparable
[2] cannot be calculated

This table shows that the comparability of disease specific questions on *chronic conditions* is limited. Both the wording of the questions and the number and types of diseases that are included in the checklists appear to differ. Despite these differences, the prevalence of well-known diseases that have a low fatality and that are included in most checklists may be comparable, if the wording of the questions is comparable. Similarly, the overall prevalence of chronic conditions can be calculated for a short common list of diseases, and the comparability of this measure depends mainly on the formulation of the questions. The comparability of co-morbidity depends primarily on the comparability of the checklists.

Generally, the wording of the open ended questions on chronic conditions appears to be better comparable than the formulation of the disease-specific questions, and as a result the comparability of the overall prevalence of chronic conditions is better comparable too. The prevalence of specific diseases based on open-ended questions is comparable for diseases that are well-known and that have a low fatality. The comparability of co-morbidity depends mainly on the extent to which

respondents are encouraged to mention more than one disease.

The questions on *self perceived health* are partly comparable. Many questions correspond with the recommended question of the WHO/CBS (WHO, 1996). The other questions differ in the wording of the questions and/or in the formulation of the answers.

Questions on adult body *height and weight* show small differences, and consequently the derived measure, body mass index, is comparable.

With regard to indicators of dental health, *the number of missing teeth, the proportion of toothless persons* and *the proportion of people who have a dental prosthesis* have been examined. Most questions on the number of missing teeth have precoded answer categories, and unfortunately these answers do not allow to calculate the average number of missing teeth. The questions regarding the two other indicators on dental health vary widely from one survey to another. Yet, most questions allow to calculate the proportion of toothless persons or the proportion of people who have a dental prosthesis, and these figures are (partly) comparable, despite the different question wordings.

Similarly, the questions on *present and former smoking* differ largely. However, almost all questions that refer to the consumption of cigarettes allow to calculate the proportions of daily cigarette smokers, occasional smokers, heavy smokers, former smokers and ex-smokers. Generally, the comparability of these figures is higher than the comparability of the questions, on which these figures are based. Only the comparability of occasional smokers is limited, as the formulation and interpretation of 'occasional' differs between the surveys.

Two main reasons limit the comparability of the questions on *in patient care* or hospitalisation. Firstly, many questions do not clarify which hospitalisations should be reported and which admissions should not be included, and secondly, the reference periods differ between the questions. These deviations influence the comparability of the two derived measures: the number of hospitalisations and the number of hospitalised days.

With regard to *out patient care*, questions on consultations with the general practitioner have been examined. The comparability of these questions is limited for similar reasons as mentioned above: firstly, the questions vary in the extent in which they elucidate which type of contacts with the GP should be included and which consultations should be excluded, and secondly, the reference periods vary widely. In addition, some questions refer to 'doctors' in general, which implies that respondents may also include contacts with other doctors than the GP like specialists.

This overview of comparisons demonstrates that one of the basic prerequisites for international comparability is the existence of comparable definitions. The questions on consultations with the GP, for instance, show that the data of different surveys are not comparable, because of differences in health care systems and because of differences in the interpretation of consultations. On the other hand, when definitions are clear and unambiguous, which is the case for ‘
different questions may lead to comparable results.

In order to prevent confusion, definitions should be as clear as possible. The interpretation and translation of ‘occasional (cigarette) smokers’, for instance, varies between countries. As a result, the comparison of occasional smokers is less reliable than the comparison of daily smokers. Therefore, it is recommended to clarify the term ‘occasional’ by including the definition e.g. ‘not every day’ in the question.

6.2 Recommendations for future actions

In order to improve the comparability of health related data, it is recommended to:

1 develop guidelines for recommended questions,
2 include these recommended questions in surveys,
3 draw up guidelines for the methodology of health surveys, and
4 implement these harmonised methods.

Obviously, harmonisation of questions and surveys, or in other words input harmonisation, is the key to internationally comparable results. However, as long as input harmonisation is not fully accomplished, output harmonisation should be pursued for topics for which no comparable questions are available yet. The present inventory shows that it is possible to make comparisons of survey data in different countries, as long as the differences between the questions and the surveys are taken into account.

In order to encourage output harmonisation, it is advised to:

1 study the effects of differences between questions on the results,
2 continue the present inventory of health interview surveys and other health related surveys,
3 collect the data of these surveys, and
4 compare these data, taking into account the possible deviations between the surveys and questions.

These different aspects of harmonisation are illustrated below.

Input harmonisation

In order to encourage input harmonisation, it is recommended to continue the development of recommended questions, that has been initiated by the WHO/Euro and Statistics Netherlands (1996) and that will be continued and extended in the WHO EUROHIS Project titled 'Developing common methods and instruments for health interview surveys in Europe' within the BIOMED 2 Programme, and that may be supplemented with other efforts.

The following aspects should be considered in the development of harmonised instruments. First, apparently similar questions may be interpreted differently in different countries. As mentioned before, the explication of the expression 'occasional' varies between countries. Bias as a result of interpretation differences can be reduced by incorporating as many explicit definitions as possible. Next, recommended questions should be translated both forward and backward. Moreover, it is advised to test the validity and reliability of the questions in each country and in each language separately, e.g. by comparing the results of survey data with registration data, if possible. In addition, the effects of the position of the question in the questionnaire should be taken into account.

Next, when recommended questions are available, they should be included in as many surveys as possible. The present inventory shows that surveys that have been developed recently include more recommended questions than older surveys. Especially the Belgian and the Portuguese health interview surveys appear to follow many (but not all) recommendations. The usefulness of the recommendations for the Belgian survey has been discussed at the Fourth consultation to develop common methods and instruments for health interview surveys in Europe of the WHO (Tafforeau and Van Oyen, 1997). In general, this development stimulates further harmonisation: the more surveys include these recommendations, the more inviting it is for other surveys to incorporate these internationally comparable questions too.

However, particularly countries that have a long history of health interview surveys encounter the disadvantages of harmonisation. Especially discontinuity in trends as a result of the difference between the recommended and the traditional question is problematic. One possibility to overcome this drawback is to include both the traditional (national) question and the recommended (international) question in different subsamples of one survey, and to examine the differences in the results that may be caused by these different questions.

In order to have results that are comparable between countries, not only the questions, but also the survey methods should be harmonised. The comparability of national health interview surveys can be enlarged by drawing up and implementing guidelines regarding the frequency of these surveys, the sample frame, the mode of data collection etc. These methodological aspects have been elaborated in the WHO/CBS publication (1996).

Output harmonisation

The inventory shows that for some topics, in spite of the different wordings used, survey data are comparable. In some cases, e.g. the percentage of daily smokers, the derived measures may be even better comparable than the questions. However, it should be taken into account that if health related questions differ, a cross-national comparison of the resulting data may reflect:

1 real national differences,
2 national differences in the wording of questions and answers, and/or
3 national differences in the interpretation of the questions.

To give an example: cross-national differences in the proportion of occasional smokers derived from different national health surveys may not only reflect real national differences in the proportion of occasional smokers, but also differences in the wording of the questions (e.g. referring to smoking in general or to cigarettes only) and/or differences in the interpretation of the expression 'occasional'. Especially distinctions as a result of differences in interpretation are difficult to assess. The effect of differences in question wording on the resulting data may be examined by comparing findings derived from different questions in one country.

Harmonisation may be supported by a *continuous* inventory of health interview surveys and other health related surveys. A continuous or yearly inventory allows to update the developments in health surveys and to follow the comparability of questions. It is recommended to collect information on the methodology and the questionnaires of each survey, and to store this information in one database, that may function as a reference tool. If this information would be available on a large scale in a computerised format, people who are involved in health related surveys may explore details of the included surveys and examine the formulation of the questions on particular topics.

The National Surveys Guide of the British Health Education Authority (HEA) sets a good example. This resource was developed as a reference tool of the British health and lifestyles surveys to assist

researchers and planners in identifying what information exists and to assist in day-to-day problems of questionnaire content and design. Initially developed as a paper-based document, the Guide has been converted to a CD-ROM version in 1996 in order to serve more users. This CD-ROM allows to search via two main routes: users can look for particular surveys or for particular topics (Health Education Authority, 1996).

If such a database covering European health surveys would be available, people who are involved in the development of questionnaires, may use this database to examine which questions are used in other health surveys. This is particularly interesting for topics for which no recommended instruments are available yet.

Similarly, the findings of the national surveys can be collected and stored in a database. These figures can be used to examine the availability of national health data, and the comparability of these data derived from different health surveys.

Subject to approval by the TF at its meeting of 19/11/97, the EC Task Force on 'Health and health-related survey data' can support the harmonisation of health related survey data by:

- cooperating in the development of recommended questions,
- including these recommended questions in health surveys,
- developing international guidelines for survey methods,
- and applying these guidelines,
- finding solutions for drawbacks of these harmonisation activities,
- contributing to the development of a continuous inventory of health related surveys, and
- taking part in the provision of survey data for an international health database.

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