



FINAL REPORT

**HEALTH SURVEYS IN THE EU:
HIS AND HIS/HES EVALUATIONS AND MODELS**
Phase 1

28 February 2001



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Introduction

As stated in the outline (Agreement no. SOC 98 201403 05F03), the project *Health Surveys in the EU: HIS/HES evaluations and models* aims to support Health Monitoring by means of production of a computerised up to date overview of methods and contents of existing and planned Health Interview Surveys (HIS), Health Examination Surveys (HES), combinations of HIS/HES, and other population surveys with a significant health component in the MS and EFTA/EEA countries to provide insight into the coverage of areas that are relevant for Health Monitoring by national and international surveys.

The project comprises two phases: the aims of the current phase 1 are to produce the data base mentioned above, to review the literature, to collect information and to review European experiences on HIS, HIS/HES and HES, and to create a European network for development and testing of proposed HIS/HES and HES methodologies.

The final overall project aim is to develop comprehensive and comparable health measurement for health surveys in the EU and the Member States by developing models for surveys which combine the HIS and the HES. It is intended that models of varying intensity will be developed for the different circumstances in the Member States.

Organisation of the project

The project was co-ordinated by Mr. Jaap van den Berg from Statistics Netherlands until November 2000. From April 1999 until February 2000, Mr. Branko van Eijk carried out the research activities. Mr. Branko van Eijk was employed by the University of Maastricht, department of Medical Sociology. Ms. Christianne Hupkens and Mr. Henk Swinkels were responsible for the research activities from January 2000 onwards. Ms. Christianne Hupkens took over the co-ordination of the project from Mr. Jaap van den Berg in November 2000. Ms. Marie-José Poublon assisted in reading in questionnaires into the database.

The activities at KTL Finland were lead by Prof. Arpo Aromaa. PhD Päivikki Koponen carried out the research activities at KTL. Ms. Virpi Killström assisted in secretarial work and MD Seppo Koskinen participated in the planning stages of the review. Data managing needs were met by data planners employed by the Department of Health and Disability at KTL.

The project consisted of two related parts, namely one part concerning Health Interview Surveys and a second part concerning Health Examination Surveys. The primary responsible institute with regard to HIS was Statistics Netherlands. KTL Finland conducted the tasks regarding HES and therefore was primary responsible for that part. All procedures and documents (like e.g. questionnaires) were mutually discussed and co-ordinated to one another.

In addition to CBS and KTL, a Core Group was established to guide the project. The Core Group consists of experts in the field of health survey research originating from 9 different institutes. An overview of the members of the Core Group is presented in annex 1 of the Interim Report.

A European network for development and testing of proposed methodologies has also been created during the project.

The collection of information on surveys for the present project was conducted in co-ordination with the WHO Regional Office for Europe. In the framework of the EUROHIS project, WHO Europe needed also to inquire after methodological aspects and contents of HIS at about the same time as the present inventory. Therefore, the information collected by the present inventory was made available to EUROHIS and vice versa, in order to avoid duplication of work for the respondents.

Meetings

Two Core Group meetings have been organised: the first on 14-15 June 1999, and the second on 27-28 October 1999. On 14-15 June 2000 a plenary meeting was held to discuss the results of the project and future plans. The plenary meeting was attended by members of the Core Group and also by experts of other EU countries not represented in the Core Group.

The purpose of the first Core Group meeting on 14-15 June 1999 was:

- exchange information on the current state of national HIS and HIS/HES studies in the Core Group countries,
- discuss the plans for executing the project,
- exchange ideas about methodological issues concerning the project, and
- confer on the identification of network participants in each country concerned (see annex 1 to the Interim Report for the agenda and minutes of the meeting).

The aims of the second Core Group meeting of 27-28 October 1999 were:

- summarise the preliminary results of the inventory,
- demonstrate the first version of HIS/HES database,
- review the experiences on the standardisation of methods and quality control of the MONICA project, as these experiences are valuable for the HIS/HES project,
- discuss the role of HIS/HES in Health Monitoring in the European Union, and
- discuss the plans for future collaboration (see **annex 1** to the present report for the agenda and the minutes of the second Core Group meeting).

The plenary meeting of 14-15 June, 2000 was held back to back with the Eurostat Task Force 'Health and health related survey data', and attended by 20 participants. First, the developments within the HM Programme and other programmes were presented. The results of the HIS/HES project were discussed, and the database was demonstrated. In addition, the participants were given the opportunity to work with the database on a number of laptops. Finally, plans for the second phase of the project were presented and discussed (**annex 2** to the present report shows the agenda and the minutes of the plenary meeting).

The present project was also presented and discussed at meetings of the Eurostat Task Force 'Health and health related survey data' and the Eurostat Working Group 'Public Health Statistics'.

Overview of activities at Statistics Netherlands

At Statistics Netherlands the preparatory work was directed at the necessary conditions for designing the database. First, two proposals were written: one on the inclusion criteria of the surveys and the other on the selection of the questions that should be included in the database. These proposals were discussed during the first Core Group meeting.

Secondly, the database was developed. After consulting the Core Group and after consulting other projects, in which databases were developed and used, it was decided to store the information of this project by using Microsoft Access software. In the period up until June 1999 the global design of the database was made and some secondary files were created.

From June to September 1999 the questionnaires for the inventory of HIS and HES were developed. After evaluating the results from the questionnaire of the earlier inventory in 1996, a draft 'questionnaire concerning methodological aspects of health interview surveys' has been made. The Core Group members were asked to comment on this questionnaire and the accompanying request

letter. The final version of the methodological questionnaire and the accompanying letter are provided in respectively annex 2 and annex 3 of the Interim Report.

Until September the database was developed further. As it was intended to develop the database conform the questionnaire that was used for the inventory of HIS and HES, the database was adjusted to these questionnaires. In this way the database could be used for the mailing of the inventory in September 1999.

In the first week of September Statistics Netherlands sent 44 methodological questionnaire and accompanying letters to contact persons in the 15 EU MS, Norway, Iceland and Switzerland. For each national HIS, the contact persons were asked to return:

- the completed methodological questionnaire,
- a paper version of the most recent HIS questionnaire in the original language and in English, if available
- a computer file of the most recent HIS questionnaire in the original language and in English, if available.

In addition, the contact persons were asked to inform Statistics Netherlands on new health interview surveys, if they were not yet included in the inventory.

From October 1999 onwards the methodological questionnaires that were returned were read into the database. From November onwards, we contacted the contact persons, preferably by phone or e-mail. If the contact persons had not yet reacted, we reminded them to return the information. If the contact persons had returned the methodological questionnaire, we check whether they returned all the information requested (the HIS questionnaires both on paper and as computer files).

In order to facilitate the overview of contents of HIS questionnaires, a list of health topics was developed during the last months of 1999 and the first months of 2000. This list serves as a reference tool to identify which health related topics are included in each survey. This list is also used as a tool in the HIS/HES database to search for a particular set of questions: each question included in the database is labelled according to the topic list. This list was based on the draft set of European Community Health Indicators (ECHI) that was available in November 1999.

From November 1999 until December 2000, the database was filled. The information that was included in the returned methodological questionnaires of both HIS and HES was read into the database. Regarding HES also the schedules for the health examinations (manuals/protocols) and/or reported methods were included in the database. This information was easily read into the database.

Including the HIS questionnaires, however, caused difficulties and took up a lot of time. Fourteen questionnaires that were not supplied as a computer file, but only on paper were scanned. After scanning these questionnaires, they needed to be edited manually. Furthermore, official translators translated nine questionnaires that were not available in English, but only in the original language. The resulting files with 'electronic' questions had to be included in the database manually one by one. At the same time topic codes were assigned to the questions. It showed that this preparation (scanning and editing) and inclusion of the questions in the database was most time consuming.

From October 2000 onwards the final report (Health interview surveys in the European Union: overview of methods and contents) has been drafted. The report describes the activities mentioned above in more detail. In addition, the report describes the international comparability of questions on smoking and drinking in health interview surveys.

Overview of activities at KTL Finland

At KTL Finland much of the preparatory work was done on the literature review. The preparatory work also included communication with different countries to find the right contact persons in each EU/EFTA Member State and to build up a network of experts. A literature search was carried out with the help of Medline and other databases. The literature search was used to describe the current state of Health Examination Surveys and the methodologies used.

All surveys meeting the inclusion criteria were critically reviewed using scientific articles and/or original reports. A draft report on HES in each EU and EFTA Member State was written based on the literature review. Questionnaires for the inventory of HES and the accompanying request letters were developed (see annex 4 and 5 to the Interim Report). These were based on the HIS questionnaires with some similar items, but with other specific HES issues, too. It was decided to use two versions of the HES questionnaire, one for countries with national HES according to the literature review and consultations with the core group members. A second, shorter version was used for countries without such surveys. The core group members were asked to comment on these questionnaires and the accompanying request letters. Other activities at KTL Finland concerned finding the right contact persons for each Member State. Letters were sent to members of the Health Monitoring Committee and other known experts on HIS/HES in each country. Most countries appointed these contact persons (1-3 persons in each country) who were contacted to confirm their willingness to participate.

Early October the questionnaire on HES was sent off to the contact persons of HES in 16 European States: 13 Member States of the EU, together with Norway, Iceland and Switzerland. In all 9 methodological questionnaires (questionnaire a) were mailed to contact persons for each identified national HES (including those in pilot/planning stage). All these questionnaires were returned and, if needed, additional information was requested from the contact persons. For countries without national HES, another questionnaire was used (questionnaire b). 10 such questionnaires were mailed in September-October 2000, and 8 were returned. From three countries additional information on current situation and plans for future HES was received through later survey specific questionnaires (questionnaire a) and communication with the contact persons. Concerning most countries a questionnaire response and further information was received directly from the appointed contact person. However, in some cases, several attempts were made before the right experts were found and adequate information was received. From a few countries a questionnaire response was received only after contacting several persons and after several reminders.

Information based on the responses to the questionnaires was included in the draft report and into the database, and the draft report was edited based on comments received from the core group and network members after the plenary meeting. Information on some methodological questions and on some measurements in national HES were briefly evaluated and compared. A more detailed evaluation and comparison will be carried out during phase 2.

Deliverables of the project

The main deliverables of phase 1 of the project are:

- the HIS/HES database
- a European network for development and testing of HIS/HES and HES methodologies
- the report 'Health Examination Surveys (HES). Review of literature and inventory of surveys in the EU/EFTA Member States' by Päivikki Koponen and Arpo Aromaa
- the report 'Health interview surveys in the European Union: overview of methods and contents' by Christianne Hupkens and Henk Swinkels
- the project plan for phase 2 of the project

Phase 2 of the project

The plan for phase 2 was edited based on the discussions during the plenary meeting. It was agreed that the main aims of the second phase will be 1) to select, evaluate and recommend methods for use in HES and HIS/HES surveys and for future field testing and development during phase 3, and 2) to maintain and develop the health survey database and to develop the system for dissemination. It was decided that the Scientific Institute of Public Health (IPH) in Belgium will take over the tasks originally planned for CBS as a subcontractor and CBS will participate in the second phase as a core group member. The partnership during phase 2 will include KTL as the main contractor, IPH as the subcontractor and the core groups for HIS and for HES. In addition a few topic specific experts will be invited after final decisions are made about the subprojects during phase 2. It was decided that KTL will act as the overall co-ordinator and be responsible for HES and HIS/HES and IPH for HIS and for updating and improving the database. Core group members were asked to present ideas and preliminary plans for these subprojects and a few suggestions were received from them.

The grant agreement between the Commission and KTL for the second phase was signed at the end of December 2000/in January 2001.

Short summary of the project

The final overall aim of the project "*Health Surveys in the EU: HIS/HES evaluations and models*" is to develop comprehensive and comparable health measurement for health surveys in the EU and the Member States by developing models for surveys, which combine the health interview and the health examination. During the first phase of the project, overviews of previous, current and planned national health interview (HIS) and health examination surveys (HES) were made. In order to disseminate the information on the methodological aspects of these surveys, also a health survey database was developed. This database shows the methods and contents of HIS and HES in the EU/EFTA Member States. In addition, a European network for development and testing of proposed HIS/HES methodologies has been created.

An overview of HES was made by means of a literature review and an inventory of HES in the EU/EFTA Member States. National population based HESs with a comprehensive focus have been conducted at regular or irregular intervals in five countries (Finland, Germany, Ireland, the Netherlands and UK) and in a large region in one country (Catalonia, Spain). In these countries several local, regional and/or focused surveys have been carried out previously or in parallel to the national HESs. All of these national HESs include a HIS component preceding or parallel to the HES. National surveys in the planning or pilot stage were identified in four countries (France, Italy, Norway, and Sweden) and there are some preliminary plans for a national survey in one more country (Portugal). More focused and geographically limited HESs have been carried out in almost all EU/EFTA countries. The major reason given for not carrying out national HESs until now was the high expense or the difficulties in implementing fieldwork. However, all respondents from countries without national HESs considered that such national HESs are necessary. Most respondents felt that there is a need to develop a core module for HES in Europe.

The HIS/HES may be carried out according to different models. The survey may include an interview with single measurements and/or blood samples or a comprehensive health examination taking several hours to complete. Differences in the fieldwork phase limit comparability of results of the surveys. There are also important differences between sampling frames. There is a clear emphasis on CVD in both national and regional/local surveys, but other health status components have also been covered, most often respiratory diseases and diabetes. Mental and dental health issues are often the subject of separate surveys. Diagnostic interviews for mental health have been part of the general HIS/HESs in

three countries, while specific surveys have been carried out in two other countries. Dental health has been studied only in one national HIS/HES.

So far little attention has been paid to the comparability across countries of findings of national HIS/HES. To improve comparability there is a need for better standardisation concerning individual examination methods and measurements. Also, the survey protocols in general must be improved. Individual methods can be developed, and they have already been developed in disease specific studies, but the feasibility of these methods needs to be tested in existing national HESs. Collaboration and co-ordination is needed to promote comprehensive health monitoring at the European level. One part of this is joint evaluation and development of health examinations and their methods. These collaborative analyses and development efforts will be the core of the second phase of this project.

The inventory of national HIS in the EU, Norway, Iceland and Switzerland showed that HIS are being executed regularly in most countries. Periodic HIS were recorded in 16 countries. Especially in Finland, France and the UK many health surveys were being executed. In most countries one or two national HIS were recorded, namely in Austria, Belgium, Denmark, Germany, Iceland, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and The Netherlands. Only in Greece and Luxembourg no HIS were reported.

Information on the methods and contents of these HIS, HES and HIS/HES was read into the health survey database. The database covers information on 8 national HES, 37 national HIS, and 2 international health surveys. In addition, the recommended instruments of WHO/EURO are included. The database covers more than 5,000 HIS questions, both in the original language and in English. Users of the database can search for specific information: on particular surveys or on particular topics, like use of medicines.

In order to facilitate the search on topics, we developed a list of health topics. The list is based on the list of health areas and health topics that was developed for a former inventory of HIS in 1996/97, and on the set of European Community Health Indicators (ECHI). The list includes 93 topics, divided into 7 areas: demographic and socio-economic factors, health status, personal factors, life style factors, living and working conditions, prevention, health protection and health promotion, and use of health and social services.

Analyses of the HIS questionnaires that are included in the database shows which topics are frequently included in HIS and which topics are hardly included. Topics on the health status of respondents are most often included in the surveys. Especially questions on disease specific morbidity, perceived health, activities of daily living, and chronic conditions are included in many surveys. Questions on life style factors are also often included. Almost all surveys include questions on smoking behaviour. Questions on diet, alcohol consumption, and physical activity are included in at least 24 surveys. Nearly 20% of the questions in the database inquire after the use of health and social services, like hospitalization, contacts with the GP, and the use of medicines.

The comparability of the questions in different national HIS was studied for two frequently included topics: smoking prevalence and heavy drinking. The comparability of both topics appeared to be limited. The comparability may be improved in the future if more health surveys include questions that are recommended and/or used by the majority of the existing surveys. The health survey database can be used to facilitate this harmonisation process.

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