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## CINDI HEALTH MONITOR Proposal for Practical Guidelines





Kansanterveyslaitos  
Folkhälsoinstitutet  
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## CINDI HEALTH MONITOR Proposal for Practical Guidelines

World Health Organization  
Regional Office for Europe

National Public Health Institute (KTL)  
Department of Epidemiology and  
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## CONTENTS

PREFACE .....	4
RECOMMENDATIONS FOR CINDI HEALTH MONITOR .....	5
1. Background .....	7
2. Goals of CINDI Health Monitor .....	7
3. Questionnaire .....	8
4. Sampling .....	10
5. Data collection .....	11
6. Data entry .....	12
7. Documentation of the survey process .....	14
8. Data analysis and reporting .....	16
9. Final remarks .....	18
10. References .....	20

## BOXES

1. Principles used in the preparation of a population questionnaire .....	8
2. Example of problems in formulating questions and response alternatives .....	9
3. Example of local categories .....	9
4. How much does the response rate increase after reminders? Example from Finbalt .....	11
5. Advantages of self-administered questionnaires and interviews .....	12
6. Disadvantages of self-administered questionnaires and interviews .....	12
7. Example of combined sample and questionnaire data file .....	13
8. Information included in the data collection report .....	15
9. Contents of national CINDI Health Monitor –report.....	17
10. Example of basic tabulations .....	18
11. Checklist before starting CINDI Health Monitor .....	19

## APPENDICES

1. CINDI Health Monitor Questionnaire
2. Variable names according to CINDI Health Monitor Questionnaire
3. Glossary

## **PREFACE**

The Annual Meeting of CINDI Programme Directors in Malta, June 2000, decided that the CINDI Programme should launch a health behaviour monitoring system. The aim was to serve monitoring of practical intervention objectives and process related factors – thus, also to replace the previous CINDI process evaluation surveys. The CINDI Programme Directors Meeting in Croatia, June 2001, agreed on the questionnaire and asked the National Public Health Institute of Finland (KTL) to continue to give technical support in launching and implementing the new CINDI Health Monitor programme.

This proposal for practical guidelines contains the questionnaire agreed by the CINDI Programme Directors meeting and practical guidelines for implementing the surveys. CINDI Health Monitor is based on the long experience with Finbalt Health Monitor in Finland, the Baltic countries and Russia (Republic of Karelia). The implementation guidelines have benefited from the planning meetings with the country representatives and from contributions of several agencies, including Centers for Disease Control and Prevention (CDC) in the USA.

KTL is thankful to all these collaborators and especially to WHO for close co-operation.

This proposal is issued for immediate assistance to CINDI countries that are now piloting the approach and, furthermore, to be available for discussions at the KTL/CDC/WHO meeting “Monitoring Health Behaviors – Towards Global Surveillance” in Tuusula, October 2001. These discussions and experiences will help WHO Regional Office for Europe and KTL to finalise the guidelines that will undoubtedly foster health behaviour monitoring in Europe.

Aulikki Nissinen, professor  
Director, Department of Epidemiology and Health Promotion,  
National Public Health Institute (KTL), Finland

## RECOMMENDATIONS FOR CINDI HEALTH MONITOR<sup>1</sup>

### Purpose

- *The overall purpose of national monitoring of health behaviours and related factors is to serve national disease prevention and health promotion and international collaboration.*

### Questionnaire

- *CINDI Health Monitor surveys are based on a common **core questionnaire**. Questions categorised as **obligatory** are asked in an identical form in every survey. After translation, the questionnaire should be tested in local conditions. Countries will add their local questions, based on the local situation and local programme needs.*

### Sample

- *The survey is directed to **a simple random sample** of the adult population. The sample should be based on a population register or, if this is not available, it should at least be a representative sample of the population.*
- *The surveys are conducted at **the national level**. If this is not possible, the survey can be conducted in a demonstration area.*
- *The sample size should be at least 3000, with the core age range being 25-64 years.*
- *Each person in the sample, also those who do not participate in the survey, should be given **an identification code**. Basic demographic characteristics (e.g. age and sex) of the persons in the sample should be incorporated in the data.*
- ***Non-respondents** should not be replaced with other individuals. Non-respondents are reminded by sending them a new invitation.*

### Data collection

- *A self-administered postal questionnaire is recommended. If this is not possible, face-to-face or telephone interviews can be used.*
- *The survey is carried out every second year, preferably in March-May.*

### Data entry

- *The database should include information both on respondents and non-respondents. An English language variable list which follows a common format is recommended.*

### Documentation

- *The person responsible for data management prepares a **data collection report** of each survey using the common format.*
- *The basic results of each survey are published in a **national report**. For comparability of the results, the national reports should follow a common structure.*
- *The national reports include basic tables constructed according to a common format.*
- *The national reports include an abstract and tables in English but may otherwise be written in the national languages.*

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<sup>1</sup> Accepted at the annual meeting of the CINDI Programme Directors in Dubrovnik, Croatia, June 2001.





## 1. Background

The annual meeting of the CINDI Programme Directors in Malta, June 2000, agreed to replace the CINDI process evaluation survey (WHO 1996) with the CINDI Health Monitor. The aim was to improve monitoring of health behaviour and related factors. The CINDI Health Monitor will apply the approach used in the Finbalt Health Monitor project (Prättälä et al 1999) going on in Estonia, Finland, Latvia and Lithuania.

In order to introduce the health behaviour monitoring survey and questionnaire to those who will be involved in conducting the survey, a training seminar was organised in Finland, at the National Public Health Institute (KTL) in February 2001. Altogether 18 CINDI countries participated actively in the seminar. Most of the participating countries agreed to carry out a health monitoring survey in 2001-2003.

This document has been written by the Finnish organising team of the CINDI training seminar to facilitate the development of the CINDI Health Monitor

and to harmonise national monitoring systems so that they will be suitable for international comparisons. The guidelines aim to give practical advice for anyone planning and conducting a health behaviour monitoring survey. The document is based on three information sources:

1. Previous CINDI guidelines (WHO 1996),
2. Experiences of Finbalt Health Monitor
3. Feedback given by the participants of the CINDI training seminar on Feb. 12-13, 2001.

This document is structured to follow the stages of a survey process from questionnaire planning to reporting. However, in practise, some of the described stages do not follow any standardised order. For example, documentation of the survey process should start from the beginning: a plan for the database needs to be ready before the sample has been drawn.

## 2. Goals of CINDI Health Monitor

*The purpose of the CINDI Health Monitor, in order to serve national disease prevention and health promotion, as well as related international collaboration, is:*

- *to monitor health behaviour and related factors in order to evaluate and to promote favourable health behaviours in populations,*
- *to make international comparisons of rates and trends.*

CINDI Health Monitor is an obligatory component of the CINDI programme monitoring and evaluation, and should be carried out on a regular basis.

A central aim of CINDI monitoring and evaluation is to compare trends in different member countries and demonstration areas. To ensure comparability between populations, the methods for

assessment must be based upon common criteria. However, each national programme will organise its own monitoring and evaluation. The countries should use the common core questionnaire and thus contribute to the international comparisons.



### 3. Questionnaire

*The CINDI Health Monitor surveys are based on the common **core questionnaire**<sup>2</sup>. Questions categorised as **obligatory** are asked in an identical form in every survey. After translation, the questionnaire should be tested in local conditions. Countries will add their local questions, based on the local situation and local programme needs.*

The CINDI core questionnaire is presented in Appendix 1. To enable monitoring of national trends and making of international comparisons, identical questions in each country and every survey are required. In the core questionnaire, the questions are divided into two categories: (1) obligatory and (2) highly recommended. Obligatory questions should be asked in an identical form in every country in each subsequent CINDI Health Monitor survey. The countries may also have additional local questions based on their national interests.

The questionnaire is planned to be self-administered and distributed by mail. If mailing is not possible, the questionnaire can be distributed personally to the respondents. Depending on the local conditions, the respondents may return the forms into a specified place or the research personnel can collect them later. The questionnaire can also be modified for surveys using personal interviews.

As a population survey, the CINDI Health Monitor questionnaire focuses on phenomena that are relatively frequent in the target population. The wordings and issues must be familiar to the respondents (Box 1).

Even if the core questionnaire has been used in several international surveys, each new translated version should be tested for suitability to local conditions. At the very least, a small-scale pilot survey is recommended. Questionnaires can rarely be directly translated and transferred from one culture to another. Therefore, the wordings should be based on knowledge of local conditions.

When adapting the core questionnaire to local conditions, the researchers should familiarise themselves with previous studies both from their own countries and abroad and consult local experts on the formulation of the questions (Box 2). Statistics on alcohol, tobacco and food consumption are also relevant data sources for questionnaire planning. It is recommended to use the translation back-translation -procedure.

#### **BOX 1 PRINCIPLES USED IN THE PREPARATION OF A POPULATION QUESTIONNAIRE**

- Ask only phenomena familiar to the respondents
- Focus on common issues, asking rare or extreme phenomena is not useful
- Use everyday language and simple expressions
- Ask only one issue in one question
- Don't use open questions
- Make sure that everyone can find a suitable response alternative (yes / no / I don't know...)

<sup>2</sup> Key concepts used in this report are defined in Appendix 3.

## BOX 2 EXAMPLE OF PROBLEMS IN FORMULATING QUESTIONS AND RESPONSE ALTERNATIVES

How is smoking arranged in your workplace?

- 1 nobody smokes
- 2 smoking is allowed only in a separate smoking room
- 3 smoking is allowed in smoking room and in some offices
- 4 smoking is allowed everywhere

This question was used in a survey in Finland. There are at least three problems:

- 1) 'Nobody smokes' does not really answer the question
- 2) Even though nobody smokes in the workplace, there might be special arrangements made for visitors
- 3) One alternative is missing: it is very frequent that smoking is not allowed indoors and smokers have to go outside to smoke

Local categories may be needed in adaptation of the core questionnaire to local conditions. In the core questionnaire (Appendix 1) most of these questions are indicated with comments for translation. Typically, such questions are on types of foods, alcoholic beverages and tobacco products. Creating local categories means that the national items have to be classifiable into one of the common items in the core questionnaire (Box 3). For example, the aim of the question on bread spreads is to estimate the type of fat usually used – whether it is mostly saturated or unsaturated. Bread spreads like lard (saturated)

or soft vegetable margarines (unsaturated) might be frequent in one country but virtually unknown in another. All alternatives of the bread spreads which the respondent can choose from must be known by the respondent and classifiable into the international categories based on the degree of saturation.

N.B. While planning the questionnaire you should keep in mind how the variables are recorded from the questionnaire (see Chapter 6, 'Data entry'). Remember also that each questionnaire form should include an identification code (see Chapter 7, 'Sampling').

## BOX 3 EXAMPLE OF LOCAL CATEGORIES

**Core question 4.2 What kind of fat do you mostly use for food preparation at home ?**

Corresponding common category is shown in brackets ( )

<i>Core question</i>	<i>Estonia</i>	<i>Finland</i>	<i>Latvia</i>	<i>Lithuania</i>
1 Vegetable oil	1 Vegetable oil (1)	1 Vegetable oil (1)	1 Vegetable oil (1)	1 Vegetable oil (1)
2 Margarine	2 Margarine (2)	2 Low fat spread (2)	2 Margarine (2)	2 Margarine (2)
3 Butter or product consisting mainly of butter	3 Butter or product with mainly butter (3)	3 Benecol (2)	3 Butter or product with mainly butter (3)	3 Butter(3)
4 Lard or other animal fat	4 Lard or animal fat (4)	4 Soft margarine (2)	4 Lard or animal fat (4)	4 Lard (4)
5 No fat at all	5 No fat at all (5)	5 Hard margarine (2)	5 No fat at all (5)	5 No fat at all (5)
6 I do not know		6 Mixt of butter and oil (3)	6 I don't know (6)	
7 I do not usually prepare food		7 Butter (3)		
		8 No fat at all (5)		

#### 4. Sampling

- *The survey is directed to a **simple random sample** of the adult population. The sample should be based on a population register or, if this is not available, it should at least be a representative sample of the population.*
- *The surveys are conducted at **the national level**. If this is not possible, the survey can be conducted in a demonstration area.*
- *The sample size should be at least 3000, with the core age range being 25-64 years.*
- *Each person in the sample, also those who do not participate in the survey, should be given **an identification code**. Basic demographic characteristics (e.g. age and sex) of the persons in the sample should be incorporated in the data.*
- ***Non-respondents** should not be replaced with other individuals. Non-respondents are reminded by sending them a new invitation.*

The target population of a health monitoring survey is usually so large that everyone can not be examined. Therefore, it is necessary to draw a sample from the population. The sample should represent as well as possible the target population. The recommended way to draw a sample is a simple random sample. That means that each adult member of the sampling frame has an equal probability of being selected to the sample.

The sample should be based on a population register, which represents the target population as well as possible. In cases where a population register is not available, the most representative list should be used (e.g. voting list, health insurance register or telephone catalogue). The sampling unit should be the individual, not a household. In sampling, consultation with local statistical centres is recommended. The representativeness of the sample should be checked against other information sources, for example census data or statistical yearbooks. When the sample is drawn, each person in the sample should be given an identification code and a sample data file should be created (see also Chapter 6, 'Data entry').

If analyses for specific population subgroups or geographical areas are anticipated, stratification can be used to guar-

antee sufficient representation of the subgroups in the survey. However, using any sampling procedure other than a simple random sample should be avoided when it is not absolutely necessary. When surveys are repeated, the sampling method should be kept the same.

In order to follow national trends, it is recommended to conduct the survey at the national level. However, some centres may conduct the survey in a demonstration area. All the same requirements in sampling are still applicable inside these demonstration areas.

The core age range is 25-64 years. Younger and older persons can additionally be included in the sample.

If an individual does not respond to the survey he/she should be considered as a non-respondent. Non-respondents should not be replaced with other individuals. However, the non-respondents should be sent a reminder (Box 4).

After completing the survey, the sample data should be saved together with the questionnaire data. All basic demographic characteristics available for the persons in the sample (such as sex and age) should be incorporated in the data file (see Chapter 6, 'Data entry', and Box 7). Also information on non-respondents should be included.

**BOX 4 HOW MUCH DOES THE RESPONSE RATE INCREASE AFTER REMINDERS? EXAMPLE FROM FINBALT**

**Response rates, Finbalt Health Monitor in 1998.**

		<i>Finland</i>	<i>Latvia</i>	<i>Lithuania</i>	<i>Estonia</i>
Total sample	N	5000	3002	3000	2000
First mailing	%	47	48	51	(no data)
First reminder	%	22	46	24	(no data)
Second reminder	%	16	20	-	(no data)
Third reminder	%	14	-	-	(no data)
Total response rate	%	70	77	62	68
Total respondents	N	3504	2322	1874	1362

These can be used in sending reminders to the non-respondents and calculating

the response rates in the population sub-groups.

## 5. Data collection

- *A self-administered postal questionnaire is recommended. If this is not possible face-to-face or telephone interviews can be used.*
- *The survey is carried out every second year, preferably in March-May.*

All data collection methods have their advantages and disadvantages. None of them is in all respects clearly superior to the others. Different data collection methods do not necessarily give identical results. Questionnaires needed in interviews and mailed surveys may not be completely identical. The lists of advantages and disadvantages presented in Boxes 5 and 6 may be of help in choosing the appropriate data collection method.

It is recommended that the surveys should be conducted on a regular basis, preferably every second year. The subsequent surveys should be carried out in the same period (March-May) of the year in each country.

The layout of the questionnaire and the formulation of the questions can have a

profound impact on the results. Therefore, special attention should be paid on clarity and readability. For example, elderly people may be unable to read the text if the font size is too small. Basically all the same requirements on clarity are applicable to face-to-face interviews.

The response rate can be increased by reminding the non-respondents once or even several times (Box 4). The first reminder may consist only of a new invitation letter whereas the second reminder – in the case where a mailed questionnaire is used – may contain also a new questionnaire form. The data collection method on each reminder round must be the same as that used in the first questionnaire.

**BOX 5 ADVANTAGES OF SELF-ADMINISTERED QUESTIONNAIRES AND INTERVIEWS****Self-administered mailed questionnaires**

- Cheap and effective
- Fast, large amount can be mailed at the same time to a large sample
- Not sensitive to influence of the interviewer (interviewer effect)
- Privacy, the respondents can fill in the form in the privacy of their homes

**Face-to-face interviews**

- Personal, respondents may be pleased when somebody is interested in their life
- Misunderstandings in questions can be discussed
- Does not require literacy of the respondent
- Produces less missing data

**BOX 6 DISADVANTAGES OF SELF-ADMINISTERED QUESTIONNAIRES AND INTERVIEWS****Self-administered questionnaires**

- Misunderstandings cannot be checked
- Complicated issues cannot be clarified
- Use of skip rules (“if no, go to question number xx”) is limited
- Relies on the mailing system and address data - but can also be distributed personally

**Face-to-face interviews**

- Expensive - telephone interviews are cheaper but less personal
- The interviewers and other persons (e.g. family members) who are present during the interview may influence the answers
- Difficult to ask sensitive questions
- Difficult to interview a large group at the same time

## 6. Data entry

- *The database should include information both on respondents and non-respondents. An English language variable list following the common format is recommended.*

The database should be planned carefully already at the beginning of the first survey. The database should include sample data (e.g. identification code, age, sex of each person belonging to the sample), and questionnaire data (all data from the questionnaire forms). This means that the database should include data on all the people to whom the questionnaire has been sent. For non-respondents, there might be only a few variables available, such as identification code, gender and birth year (Box 7). The names of the variables should be decided already while planning the questionnaire. It is recommended to

adapt the English language variable list following the common format (Appendix 2).

Questionnaire data should preferably be coded and entered to the same file with the sample data. If the questionnaire data and sample data files are separate, both files must include the identification code to ensure that the observations in the files are linkable. One important variable that also should be coded with the survey data is information from which questionnaire / reminder round the response was received (Box 7).

### BOX 7 EXAMPLE OF COMBINED SAMPLE AND QUESTIONNAIRE DATA FILE

ID	PART	ROUND	SEX_S	BIRTHY_S	LANGUAGE	SEX	BIRTHY	MARSTA	NCHILD	etc...
0001	1	1	1	1935	1	1	1935	1	1	1
0002	1	2	2	1951	1	2	1951	3	0	2
0003	0	.	1	1975	1	.	.	.	.	.
0004	1	1	1	1974	1	2	1974	4	1	1
0005	1	1	1	1957	2	1	1957	1	0	2
0006	1	1	2	1938	1	2	1937	3	1	1
0007	1	2	2	1955	1	2	1955	2	1	0
0008	1	3	2	1934	1	2	1934	4	1	0
0009	0	.	1	1970	2	.	.	.	.	.
0010	0	.	2	1954	2	.	.	.	.	.
0011	1	1	2	1961	1	2	1961	1	1	0
0012	1	2	1	1974	1	1	1974	1	1	2
0013	1	1	2	1935	1	2	1936	4	0	1
0014	0	.	1	1948	1	.	.	.	.	.
0015	1	1	2	1976	1	2	1976	1	0	2
0016	1	1	2	1955	1	2	1955	3	.	1
0017	1	3	1	1963	3	1	1963	4	1	2
0018	1	1	2	1933	1	2	1933	3	1	0
0019	1	1	2	1971	1	2	1971	4	0	2
0020	1	1	1	1943	1	1	1943	2	1	0
etc.										

. missing information

#### Variable names

ID = identification code

PART = code for participation 0=non-respondent 1= respondent

ROUND = round when answers were received 1=first mailing/contact 2=second mailing/contact ...

SEX\_S = sex according to the sample data

BIRTHY\_S = birth year according to the sample data

LANGUAGE = language code according to the sample data

SEX = sex according to the questionnaire

BIRTHY = birth year according to questionnaire

MARSTA, NCHILD... = other variables derived from the questionnaire (see also Appendix 2)

Names and addresses of the persons included in the sample should be stored to enable the sending of reminders. To assure confidentiality, information with names and addresses is usually kept separately from the questionnaire data. Remember that the identification code should also be included in the name and address file.

At the data entry phase, all of the information from the questionnaire should be entered in the data file as it is found in the questionnaire form. This raw data should be saved unchanged as a baseline data. All corrections should be carried out afterwards following the rules agreed within the research group. The rules concern the procedures on how to handle missing information, extreme

values, questions with multiple choices, open questions and skip rules, and they should be decided and documented already at the survey planning phase. The corrected data file should be saved separately. All the corrections, changes and modifications made must be documented in a data collection report (Box 8).

If there is information on the same issues both in the sample data and in the questionnaire data, keep the information separate by making two variables: one based on the sample data (registers etc.) and the other one on the questionnaire. Typically, sex and age of the respondent will be found both in the sample data and the questionnaire (Box 7).

## 7. Documentation of the survey process

- *The person responsible for data management prepares a **data collection report** of each survey using the common format.*

Long term monitoring means that someone might well analyse the data many years after the actual survey was carried out. If there are no documents, it is very possible that no-one will be completely aware of the characteristics of the data. Therefore, every annual survey process should be documented in the data collection report using a uniform method (Box 8).

The data collection report should be written by the person(s) who is actually working with the data. The aim is to briefly describe how each survey was made and to provide all the information needed in analysing the data. The following topic areas should be covered: Identification and contact information on the centre, principal investigator and responsible data-analyst, description of the target population and survey area,

sampling procedure (sampling frame etc.), data collection (method, survey time, reminder rounds etc.) and making the data-file (what has been done with the data, variable names) (Box 8).

It is also important that all the other information worth recording about mailing, coding, missing addresses, frequently empty questions, rejected outliers or anything else, which a data-analyst should know has to be documented carefully.

The final version of the national questionnaire(s) should be an appendix of the data collection report. It is also important that local exceptions from the core questionnaire should be mentioned in the report. An English translation, at least of key terms, is strongly recommended.



## BOX 8 INFORMATION INCLUDED IN THE DATA COLLECTION REPORT

- 1 Identification
  - 1.1 Name of CINDI Centre
  - 1.2 Date of completing the report (day, month, year)
  - 1.3 Person completing the report, responsible data-analyst
  - 1.4 Contact information (mailing address, telephone, fax, email)
  
- 2 Description of the target population
  - 2.1 Administrative / geographical name of the area
  - 2.2 Total number of residents in the study area (at the time of sample draw)
  - 2.3 Demographic characteristics of the target population (age, degree of urbanisation, native languages...)
  
- 3 Sampling
  - 3.1 When the sample was drawn (month, year)
  - 3.2 Sampling frame  
Population register / Other (describe)
  - 3.3 Selection procedure  
Simple random sample / Other (describe)
  - 3.4 Sample size and age frame
  - 3.5 How age was defined for sampling  
According to the date of sampling / According to a fixed date (which date) / According to the proposed date of the survey beginning / Other (describe)
  
- 4 Data collection
  - 4.1 Data collection method  
Mailed questionnaire / Face-to-face interview / Telephone interview / Other (describe)
  - 4.2 Dates for first mailing and reminders
  - 4.3 Survey periods for interviews (specify dates as month and year of start and finish for each period if several)
  - 4.4 Languages used in questionnaires or interviews

**Please include the questionnaire form(s) as an appendix!**
  
- 5 Fill in the sampling-profile table:
 

Age frame	Population size		Sample size		No of respondents	
	Male	Female	Male	Female	Male	Female
  
- 6 Making the data-file
  - 6.1 Describe what has been done with the data: software used, local exceptions from the core questionnaire, handling of missing data, all corrections made to data, extreme values etc.
  - 6.2 Describe all constructed variables and indexes

**Please include the list of variables as an appendix!**

The data files should be stored according to systematic naming in each national CINDI centre. All of the different data file versions should be dated. All changes of data file should be documented.

It is ideal if someone can personally take responsibility for continuity of documentation in subsequent surveys and be contacted when needed. Therefore, the name, address and email of the responsible data-analyst should be stated in the data collection report.

## 8. Data analysis and reporting

- *The basic results of each survey are published in a **national report**. For comparability of the results the national reports should follow the common structure.*
- *The national reports should include basic tables constructed according to a common format.*
- *The national reports should include an abstract and tables in English but may otherwise be written in the national languages.*

This document gives guidelines for the analyses needed in the national reports: for the sake of international comparability, it is useful that all the CINDI countries follow a similar structure in their national reports. The other ways to publish results in scientific papers are beyond of the scope of this document.

In the CINDI Health Monitor it is important to be aware of socio-demographic variation and trends in health behaviours and other health indicators. The analyses should start from checking the basic characteristics of the respondents, such as age, gender and socio-economic distribution and from comparing these to the census data. Thereafter, the prevalences of health behaviours and indicators - smoking, alcohol consumption, food habits, physical activity, body mass index and self assessed health - can be analysed in the subgroups defined by age, gender and other socio-demographic variables.

When analysing the data it is important to clarify the numerators and denominators. For example: Do we calculate the proportion of smokers advised to stop smoking among all smokers or only among those who have visited health personnel during the last year?

Data stratification, standardisation and adjustments should be considered carefully and if used, conventional epidemiological procedures such as standardisation to World or European populations should be used. Categorisation and classification of data should be done according to existing natural categories, internationally accepted categories or using tertiles, quartiles etc. Special attention in data analyses should be paid to missing data. In the basic analyses, indexes combining several variables are not recommended. However, if indexes are used, their construction must be documented in detail.

The basic results published as a national report (Box 9) will provide practical information for the policy makers and a checklist for the researchers. Efforts should be made to prepare as comparable reports as possible. The example shown in Box 9 gives some general guidelines to be followed whenever there are no strong reasons for resorting to different procedures.

An appendix including the basic tables will form the main part of the report. The report is especially valuable for other countries if it is constructed according to a common format and if an

English translation is given. Therefore, the format and categorisation of the variables presented in Box 10 is recommended. In the optimal case, the re-

sults of individual countries can be compared on the basis of the appendix tables.

### **BOX 9 CONTENTS OF A NATIONAL CINDI HEALTH MONITOR**

**REPORT** (The report can be written in local language but an English summary should be included. Tables and figures should have English translations.)

#### CONTENTS

#### SUMMARY (1 page)

- 1 INTRODUCTION (1-2 pages, the purpose and background of the survey)
- 2 MATERIAL AND METHODS (2-5 pages)
  - 2.1 Sample
  - 2.2 Response rate and non-response analysis
  - 2.3 Basic characteristics of the respondents (age, sex, place of residence)
  - 2.4 Method, time of survey (interview vs. self-administered questionnaire) etc.
- 3 RESULTS (5-20 pages, text and graphics describing the main findings by gender, age, education, place of residence, also trends if available)
  - 3.1 Self assessed health
  - 3.2 Daily smoking
  - 3.3 Food habits
  - 3.4 Alcohol consumption
  - 3.5 BMI and physical activity
  - etc.
- 4 CONCLUSIONS
- 5 SUMMARY IN ENGLISH (2-5 pages describing main findings, subheadings recommended)

#### APPENDICES

(Derivation of indexes if used)

List of tables (names of the tables both in local and English language)

**Tables (this will form the main part of the report, N.B. all text in both local and English languages, see also Box 10)**

Questionnaire form(s) in local languages

List of references

**BOX 10 EXAMPLE OF BASIC TABULATIONS**

TAULUKKO 38.B. Päivittäin tupakoivien osuus taustamuuttujien mukaan (%)  
 TABLE 38.B. Proportion of daily smokers by background variables (%)

		Miehet/Males						Naiset/Females						Total	Total
		Ikäryhmä/Age group						Ikäryhmä/Age group							
		15-24	25-34	35-44	45-54	55-64	Total	15-24	25-34	35-44	45-54	55-64	Total		
KOULUTUS/ EDUCATION	0-9v./0-9 years	20	36	35	32	21	27	23	47	50	27	12	24	25	
	10-12 v./10-12	24	46	46	36	25	36	31	36	31	22	16	27	31	
	13 v.+/13 years+	21	17	24	19	14	19	14	14	16	15	19	15	17	
KAUPUNGIS- TUMISASTE/ URBANIZATION	Pääkaupunkiseutu/ Helsinki Metropolitan area	17	19	33	31	27	26	33	17	31	21	27	25	25	
	Isot kaupungit/Cities	29	29	33	33	19	29	19	28	22	20	9	19	24	
	Pienet kaupungit/Towns	18	26	34	22	18	24	18	17	27	26	17	22	23	
	Maalaiskunnat/Rural areas	24	34	35	33	18	29	23	18	17	16	11	17	23	
VUOSI/YEAR	2000	22	28	34	30	20	27	22	20	24	20	15	20	23	

National Public Health Institute  
 Department of Epidemiology and Health Promotion

This exemplary table is based on Finnish data of 2000. It is strongly recommended that the phenomenon of interest (prevalence of daily smoking in this example) is tabulated at least according to gender, age, education and urbanisation. Categorisation of the background variables should follow the example. Additional background variables such as marital status or occupation can also be included.

## 9. Final remarks

In writing this guidebook we have described only the basic procedures needed in practically every survey, without focusing much attention on theoretical issues. There are several textbooks where survey methodology has been presented in detail. We have included some references. However,

instructions in the textbooks may differ from these guidelines.

Before starting your own survey we recommend that you carefully go through the Box 11. Can you and your staff answer yes to all of the questions?

**BOX 11 CHECKLIST BEFORE STARTING CINDI HEALTH MONITOR****1. Questionnaire**

Is your questionnaire comparable to the CINDI core questionnaire?

Have you included all the obligatory questions?

Has the questionnaire been pre-tested in local conditions?

**2. Sample**

Have you drawn a random sample of the population from a representative register?

Is the age frame of the population at least 25-64?

Is the sample size at least 3000?

Have you registered /documented all the sample data?

**3. Data collection**

Have you taken into account seasonal variation in health behaviour, e.g. food habits?

Have you compared the advantages and disadvantages of self-administered questionnaires and interviews?

Have you planned the reminder rounds?

Do you have contact information (addresses, telephone numbers) available for carrying out reminder rounds?

**4. Data entry**

Do you have an identification code and sample data also for non-respondents?

**5. Documentation**

Have you given instructions to the responsible staff on how to make the data collection report?

**6. Data analysis and reporting**

Have you evaluated the suitability of the proposed contents of the national report for your centre?

## 10. References

Cited references:

**Prättälä R, Helasoja V, the Finbalt Group.** Finbalt Health Monitor. Feasibility of a Collaborative System for Monitoring Health Behaviour in Finland and the Baltic Countries. Publications of the National Public Health Institute B21/1999. Helsinki 1999.

**WHO.** Protocol and Guidelines. CINDI 2000. WHO Regional Office for Europe. Copenhagen 1996.

Additional literature on survey methodology, statistical analyses of survey data:

**de Bruin A, Picavet HSL, Nossikov A.** Health Interview Surveys: Towards International Harmonization of Methods and Instruments. WHO Regional Publications, European Series, No. 58. WHO Regional Office for Europe, Copenhagen 1996.

**Dillman DA.** Mail and Telephone surveys: The Total Design Method. John Wiley & Sons, New York 1978.

**Firebaugh G.** Analyzing repeated surveys. Series: Quantitative Applications in the Social Sciences, No. 115. Sage Publications, Thousand Oaks 1997.

**Grabauskas V, Klumbiene J, Petkeviciene J, Dregval L, Saferis V, Prättälä R, Helasoja V, Puska P.** Suaugusiu lietuvos Zmoniu gyvensenos tyrimas, 2000. Health Behaviour among Lithuanian Adult Population, 2000. Publications of the National Public Health Institute B6/2001, Helsinki 2001.

Manual of the **WHO MONICA Project**: <http://www.ktl.fi/publications/monica/manual/>

## **APPENDIX 1**





## CINDI Health Monitor Questionnaire

Category of the importance of the question in brackets after the number of each question:  
(1)=Obligatory, (2)=Highly recommended

### 1. BACKGROUND INFORMATION

**1.1 (1)**      *Sex?*

- 1 male
- 2 female

**1.2 (1)**      *Year of birth?*

19+ . . . +

**1.3 (1)**      *Marital status?*

- 1 Married or living in a partnership
- 2 single
- 3 separated or divorced
- 4 widowed

**1.4. (2)**      *How many children under the age of 18 are living in your home?*

+ . . . +persons

**1.5 (1)**      *Total number of years of full-time education (including school, study)?*

+ . . . +years

**1.6. (2)**      *Occupation?*

- 1 farming, cattle-raising, forestry
- 2 industrial, mining, construction or other similar type of work
- 3 office work, intellectual work, services
- 4 student
- 5 housewife
- 6 pensioned
- 7 unemployed

### 2. HEALTH SERVICES AND HEALTH STATUS

**2.1 (1)**      *How many times did you visit the doctor during the last year (12 months)?*

(Include hospitalisation or visits to the outpatient department; do not include visits to the dentist).

+ . . . +times.

**2.2 (1)**      *Do you receive disability pension?*

- 1 no
- 2 yes, partial pension
- 3 yes, for a limited period
- 4 yes, permanently

**2.3 (2)**      *During the last year (12 months), how many days were you absent from work or unable to carry out normal duties because of illness?*

(If you do not remember exactly, please give an estimate. Do not include absence owing to a normal pregnancy).

+ . . . . . + days

**2.4 (2)** *During the last year (12 months), have you been diagnosed as having, or been treated for, any of the following conditions?*

	<b>yes</b>	<b>no</b>
High blood pressure, (hypertension) .....	1	2
High blood cholesterol, (hypercholesterolemia).....	1	2
High blood sugar, (diabetes).....	1	2
Myocardial infarction, (heart attack) .....	1	2
Angina pectoris (chest pain during exercise).....	1	2
Heart failure .....	1	2
Rheumatism or arthritis.....	1	2
Back illness .....	1	2
Chronic bronchitis or emphysema.....	1	2
Bronchial asthma	1	2
Gastritis or ulcer.....	1	2

**2.5 (2)** *During the last year (12 months) have you had persistent coughs with phlegm that persist for a while and that occur almost daily?*

- 1 no
- 2 yes, for less than 1 month
- 3 yes, for a period of 1-2 months
- 4 yes, for a period of 3 months or longer

**2.6 (1)** *Have you had any of the following symptoms or complaints during the last month (30 days)?*

	<b>yes</b>	<b>no</b>
Chest pain during exercise .	1	2
Joint pain .....	1	2
Back-pain .....	1	2
Neck/shoulder pain .....	1	2
Swelling of feet .....	1	2
Varicose veins .....	1	2
Eczema .....	1	2
Constipation.....	1	2
Headache .....	1	2
Insomnia.....	1	2
Depression.....	1	2
Toothache.....	1	2

**2.7 (1)** *How would you assess your present state of health?*

- 1 good
- 2 reasonably good
- 3 average
- 4 rather poor
- 5 poor

**2.8 (1)** *Have you taken any tablets, pills or other medication during the last week (7 days):*

	<b>yes</b>	<b>no</b>
for high blood pressure.....	1	2
for high cholesterol.....	1	2
for headache .....	1	2
for other aches and pains ....	1	2
for cough .....	1	2
sedatives .....	1	2
vitamins, minerals or trace elements.....	1	2
contraceptives .....	1	2

**2.9 (1)** *Have you been feeling tense, stressed or under a lot of pressure during the last month (30 days)?*

- 1 not at all
- 2 yes - somewhat but not more than is usual for people in general
- 3 yes - more than is usual for people in general
- 4 yes - my life is almost unbearable

**2.10 (1)** *When was the last time your blood pressure was measured?*

- 1 during the previous year
- 2 between 1 and 5 years ago
- 3 more than 5 years ago
- 4 never
- 5 I do not know

**2.11 (1)** *When was the last time your blood cholesterol was measured?*

- 1 during the previous year
- 2 between 1 and 5 years ago
- 3 more than 5 years ago
- 4 never
- 5 I do not know

- 2.12 (1)      *How many teeth are you missing?***  
 1    none  
 2    between 1 and 5  
 3    between 6-10  
 4    more than 10 – but not all  
 5    all your teeth are missing or  
       you have dentures

- 2.13 (1)      *How often have you seen a dentist  
 during the last year (12 months)?***  
 + - - - +times

- 2.14 (1)      *How often do you brush your  
 teeth?***  
 1    more than once daily  
 2    once daily  
 3    less than once daily  
 4    never

**3.      SMOKING**

- 3.1. (1)      *Do you or any family members  
 smoke at home?***  
 1    No, nobody smokes  
 2    Yes, somebody smokes

- 3.2 (1)      *How many hours a day do you  
 spend at your workplace where  
 somebody smokes?***  
 1    more than 5 hours  
 2    between 1 and 5 hours  
 3    less than one hour a day  
 4    almost never  
 5    I do not work outside the home

- 3.3 (1)      *Have you ever smoked in your  
 life?***  
 1    no  
 2    yes

- 3.4 (1)      *Have you ever smoked at least 100  
 cigarettes, cigars or pipefuls in  
 your lifetime?***  
 1    no (proceed to question 4.1)  
 2    yes

- 3.5 (1)      *Have you ever smoked daily  
 (=almost every day for at least one  
 year)? If so, how many years alto-  
 gether?***  
 1    no  
 2    yes, I have smoked daily for a  
       total of + - - - + years

- 3.6. (1)      *Do you smoke at the present time  
 (cigarettes, cigars, pipe)?***  
 1    yes, daily  
 2    occasionally  
 3    not at all

- 3.7 (1)      *When did you last smoke?  
 If you smoke currently, please cir-  
 cle alternative 1.***  
 1    yesterday or today  
 2    2 days - 1 month ago  
 3    1 month - half a year ago  
 4    half a year to one year ago  
 5    1-5 years ago  
 6    5-10 years ago  
 7    more than ten years ago

- 3.8 (2)      *How much do you smoke, or did  
 you smoke before you stopped, on  
 average per day?***  
*(please give an answer to each  
 item)*  
 manufactured cigarettes  
    + - - - +cigarettes per day  
 self-rolled cigarettes  
    + - - - +cigarettes per day  
 pipe  
    + - - - + pipefuls a day  
 cigars  
    + - - - +cigars a day

*NOTE FOR TRANSLATION! Local catego-  
 ries on other types of tobacco allowed!*

- 3.9 (1)      *Would you like to stop smoking?***  
 1    no  
 2    yes  
 3    I am not sure  
 4    I do not smoke at present

**3.10 (1)** *Have you ever tried seriously to stop smoking and been without smoking for at least 24 hours? If so, when was the last time?*  
 1 during the last month  
 2 a month to half a year ago  
 3 half a year to one year ago  
 4 more than one year ago  
 5 never

**3.11 (1)** *Are you concerned about the harmful consequences that smoking can have on your health?*  
 1 very concerned  
 2 somewhat concerned  
 3 not much concerned  
 4 not at all concerned

**3.12 (1)** *During the last year (12 months) have you been advised to stop smoking by any of the following:*

	yes	no
a doctor .....	1.....	2
a dentist.....	1.....	2
other health care personnel.....	1.....	2
a family member .....	1.....	2
others .....	1.....	2

**4. FOOD HABITS**

**4.1 (2)** *Do you eat breakfast at all?*  
 1 no  
 2 yes

**4.2 (1)** *What kind of fat do you mostly use for food preparation at home? (please circle only one alternative)*  
 1 vegetable oil  
 2 margarine  
 3 butter or product consisting mainly of butter  
 4 lard or other animal fat  
 5 no fat at all  
 6 I do not know  
 7 I do not usually prepare food

**4.3 (2)** *How often do you prepare food at home?*  
 1 never  
 2 a few times a year  
 3 2-3 times a month  
 4 once a week  
 5 2-3 times a week  
 6 daily

**4.4 (1)** *What kind of fat do you use on bread mostly? (please circle only one alternative)*  
 1 none  
 2 low fat margarine  
 3 ordinary margarine  
 4 butter product consisting mainly of butter  
 5 lard or other animal fat  
 6 butter

**4.5 (2)** *If you drink milk do you usually use (please circle only one alternative)*

- 1 whole milk (ordinary cow's milk, about 4.3 % fat or more)
- 2 consumer milk (ordinary shop milk, about 3.9 % fat)
- 3 low-fat milk (about 1.9 % fat)
- 4 skim milk (about 0.05 % fat)
- 5 I do not drink milk

*NOTE FOR TRANSLATION! please replace with local alternatives, if needed!*

**4.6 (1)** *How many cups of coffee or tea do you usually drink a day? Please answer both items.*  
 coffee + - - - + cups  
 tea + - - - + cups

**4.7 (2)** *How many lumps of sugar or spoonfuls of granulated sugar do you use for one cup of coffee or tea? (Please mark 0 if you don't use sugar).*  
 + - - - + lumps or teaspoonfuls in a cup of coffee  
  
 + - - - + lumps or teaspoonfuls in a cup of tea

**4.8 (2)** *How many slices of bread do you usually eat per day?*  
 rye bread + - - - + slices a day  
 white bread + - - - + slices a day  
 other bread + - - - + slices a day

**4.9 (2)** *How often during the last week have you consumed the following foods and drinks?*

	never	1-2 times	3-5 times	6-7 times
boiled potatoes .....	1	2	3	4
fried potatoes(excl.crisps) .	1	2	3	4
rice/pasta .....	1	2	3	4
cereals (cornflakes, porridge) .....	1	2	3	4
cheese .....	1	2	3	4
chicken.....	1	2	3	4
fish.....	1	2	3	4
meat .....	1	2	3	4
meat products (sausages etc.) .....	1	2	3	4
fresh vegetables .....	1	2	3	4
other vegetables .....	1	2	3	4
fresh fruit/berries .....	1	2	3	4
other fruit/berries .....	1	2	3	4
sweet pastries (cookies, cakes) .....	1	2	3	4
sweets (candy, chocolate) .	1	2	3	4
soft drinks .....	1	2	3	4
eggs .....	1	2	3	4

**4.10 (2)** *Do you add salt to your meals at the table?*  
 1 never  
 2 when the food is not salty enough  
 3 almost always before tasting

**4.11 (1)** *During the last year (12 months) have you been advised to change your dietary habits for health reasons by any of the following:*

	yes	no
a doctor .....	1	2
other health care personnel.....	1	2
a family member .....	1	2
by others.....	1	2

**5. ALCOHOL**

**5.1 (2)** *During the last year (12 months) have you consumed any alcoholic drinks (beer, wine or spirits)?*

- 1 yes
- 2 no

**5.2 (1)** *How many glasses (regular restaurant portions) or bottles of the following drinks have you had during the last week (7 days).*

*(If you have not had any, mark 0).*

medium strong or strong beer

+ . . . + bottles

free-mixed highballs + . . . + bottles

strong alcohol, spirits + . . . +

restaurant portions (4 cl)

wine or equivalent + . . . + glasses

*NOTE FOR TRANSLATION! local drinks/categories/portions allowed !*

**5.3 (1)** *How often do you usually have strong spirits?*

- 1 never
- 2 a few times a year
- 3 2-3 times a month
- 4 once a week
- 5 2-3 times a week
- 6 daily

**5.4 (2)** *How often do you usually drink wine?*

- 1 never
- 2 a few times a year
- 3 2-3 times a month
- 4 once a week
- 5 2-3 times a week
- 6 daily

**5.5 (1)** *How often do you usually drink beer?*

- 1 never
- 2 a few times a year
- 3 2-3 times a month
- 4 once a week
- 5 2-3 times a week
- 6 daily

**5.6 (1)** *How often do you drink six glasses (regular restaurant portions) or bottles of alcohol, or more, at once?*

- 1 never
- 2 less than once a month
- 3 once a month
- 4 once a week
- 5 daily or almost daily

**5.7 (1)** *During the last year (12 months) have you been advised to drink less by any of the following:*

- |                       | yes | no |
|-----------------------|-----|----|
| a doctor .....        | 1   | 2  |
| other health care     |     |    |
| personnel.....        | 1   | 2  |
| a family member ..... | 1   | 2  |
| others .....          | 1   | 2  |

**6. HEIGHT, WEIGHT AND PHYSICAL ACTIVITY**

**6.1 (1)** *How tall are you?*

+ . . . . . + cm

**6.2 (1)** *How much do you weigh in light clothing?*

+ . . . . . + kg

**6.3 (2)** *In your opinion, are you?*

- 1 underweight?
- 2 normal weight?
- 3 overweight?
- 4 I do not know

**6.4 (1)** *Vigorous physical activities: refer to activities that take hard physical*



*effort and make you breathe much harder than normal.*

***During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling? Include only those physical activities that you did for at least 10 minutes at a time. (please mark 0 if you did not do any vigorous physical activity)***

On + - + days

**6.5 (1)** ***How much time did you usually spend on one of those days doing vigorous physical activity?***

+ - - - + hours + - - - + minutes

**6.6 (1)** ***Moderate physical activities: refer to activities that take moderate physical effort and make you breathe somewhat harder than normal.***

***During the last 7 days, on how many days did you do moderate physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Include only those physical activities that you did for at least 10 minutes at a time. Do not include walking. (please mark 0 if you did not do any moderate physical activity)***

On + - + days

**6.7 (1)** ***How much time in total did you usually spend on one of those days doing moderate physical activity?***

+ - - - + hours + - - - + minutes

**6.8 (1)** ***During the last 7 days, on how many days did you walk for at least 10 minutes at the time? Include walking at work and at home, walking to travel from place to place, and any other walking that you did solely for recreation, sport, exercise or leisure. (please mark 0 if you did not do any vigorous physical activity)***

On + - + days

**6.9 (1)** ***How much time in total did you usually spend walking on one of those days?***

+ - - - + hours + - - - + minutes

**6.10 (1)** ***How much time do you spend sitting on a usual week day? Include sitting at the desk, visiting friends, reading, travelling on a bus or sitting or lying down to watch television.***

+ - - - + hours + - - - + minutes

**6.11 (2)** ***How many minutes a day do you spend walking or riding a bicycle to and from work? (Combine time spent both ways).***

- 1 I do not work at all or I work at home
- 2 I go to work by car
- 3 less than 15 minutes a day
- 4 15-30 minutes a day
- 5 30-60 minutes a day
- 6 more than one hour a day

*NOTE! Questions 6.4 to 6.10 are adapted from the IPAQ. Please consult the IPAQ website before using them. [www.ipaq.ki.se](http://www.ipaq.ki.se)*

**6.12 (2)** *In your leisure time, how often do you do physical exercise for at least 30 minutes which makes you at least mildly short of breath or perspire?*

- 1 daily
- 2 4-6 times a week
- 3 2-3 times a week
- 4 once a week
- 5 2-3 times a month
- 6 a few times a year or less
- 7 I cannot exercise because of illness
- 8 I cannot exercise because of disability

**6.13 (2)** *How physically strenuous is your work?*

- 1 very light (mainly sitting)
- 2 light (mainly walking)
- 3 medium (lifting, carrying light loads)
- 4 heavy manual work (climbing, carrying heavy loads)

**6.14 (1)** *During the last year (12 months) have you been advised to increase your physical activity by any of the following?*

	yes	no
doctor.....	1	2
other health care		
personnel.....	1	2
family member.....	1	2
other.....	1	2

**7. TRAFFIC SAFETY**

**7.1 (1)** *Do you use a reflector when walking on streets without lights when it is dark?*

- 1 almost always
- 2 sometimes
- 3 never
- 4 I never walk on unlit streets when it is dark

**7.2 (1)** *Do you use a seat-belt when driving or as a passenger in the front seat?*

- 1 almost always
- 2 sometimes
- 3 never
- 4 I never use a car

**7.3 (1)** *Do you use a seat-belt in the back seat?*

- 1 almost always
- 2 sometimes
- 3 never
- 4 there is no seat-belt in the back seat
- 5 I never travel in the back of the car

**7.4 (2)** *Are you aware if any of your close friends have driven a car under the influence of alcohol during the last year (12 months)?*

- 1 no
- 2 yes
- 3 difficult to say

**8. OTHERS**

**8.1 (1)** *During the last year (12 months), have you changed your diet or other habits for health reasons?*

**yes no**

- I eat less fat..... 1 .... 2
- I have changed type of fat I eat..... 1 .... 2
- I eat more vegetables ..... 1 .... 2
- I eat less sugar ..... 1 .... 2
- I eat less salt..... 1 .... 2
- I have been on a weight-reducing diet ..... 1 .... 2
- I drink less alcohol..... 1 .... 2
- I do more physical exercise 1 .... 2

**8.2 (1)** *In your opinion what is the most important reason for the rather high death rate among the adult population in our country.*

*(Please mark only one alternative).*

- 1 wrong diet
  - 2 stress
  - 3 difficult living conditions
  - 4 strenuous work
  - 5 smoking
  - 6 lack of physical exercise
  - 7 lack of vitamins, minerals etc.
  - 8 overweight
  - 9 genetic factors
  - 10 alcohol
  - 11 lack of health services
  - 12 other, please specify
- 

**8.3 (2)** *Do you know anyone who has tried drugs (hashish, marihuana, amphetamine, heroine) during the last year (12 months)?*

- 1 no
- 2 one person
- 3 2-5 persons
- 4 more than five persons



## **APPENDIX 2**



## Variable names according to CINDI Health Monitor Questionnaire

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### Sample data

Identification code	<b>ID</b>
Code for participation	<b>PART</b>
Round when answer was received	<b>ROUND</b>
Sex according to the sample data	<b>SEX_S</b>
Birth year according to the sample data	<b>BIRTHY_S</b>
Language according to the sample data	<b>LANGUAGE</b>

### Questionnaire data

1.1	Sex	<b>SEX</b>
1.2	Year of birth	<b>BIRTHY</b>
1.3	Marital status	<b>MARSTA</b>
1.4	How many children...	<b>NCHILD</b>
1.5	Total number of years of educ	<b>EDUCYRS</b>
1.6	Occupation	<b>OCCUP</b>
2.1	How many times did you visit doctor...	<b>DOCOF</b>
2.2	Do you receive disability pension	<b>DISPENS</b>
2.3	How many days were you absent...	<b>ABSDAY</b>
2.4	Have you been diagnosed as having any of the following...	
	High blood pressure	<b>HIGHBP</b>
	High blood cholesterol	<b>HIGHCHOL</b>
	Diabetes	<b>DIAB</b>
	Myocardial infarction	<b>MYOCINF</b>
	Angina pectoris	<b>ANGPEC</b>
	Heart failure	<b>HRTFAIL</b>
	Rheumatic anhritis	<b>RHEUANT</b>
	Back illness	<b>BACKILL</b>
	Chronic bronchitis, emphysema	<b>CBRONC</b>
	Bronchial asthma	<b>BRASTH</b>
	Gastritis or ulcer	<b>GASTR</b>
2.5	Coughs with phlegm...	<b>CHGPLG</b>
2.6	Have you had any of the following sympsoms...	
	Chest pain during exercise	<b>CHEPA</b>
	Joint-pain	<b>JOINPA</b>
	Back-pain	<b>BACKPA</b>
	Neck/shoulder pain	<b>NESHPA</b>
	Swelling in feet	<b>SWELLFT</b>
	Varicose veins	<b>VARICVE</b>
	Eczema	<b>ECZEMA</b>
	Constipation	<b>CONSTIP</b>

APPENDIX 2

Headache	<b>HEADA</b>
Insomnia	<b>INSOMN</b>
Depression	<b>DEPR</b>
Toothache	<b>TOOTHA</b>
2.7 Assessment of own health	<b>ASSHEAL</b>
2.8 Have you used tablets, pills for...	
medication for high blood pressure	<b>MEDBP</b>
medication for high cholestherol	<b>MEDCHOL</b>
medication for headache	<b>MEDHEAD</b>
medication for other aches	<b>MEDOTH</b>
medication for cough	<b>MEDCOU</b>
sedatives	<b>SEDAT</b>
vitamins, miner, trace elements	<b>VITAM</b>
contraceptives	<b>CONTR</b>
2.9 Have you been tense stressed...	<b>TENSE</b>
2.10 When was the last time...blood press	<b>BPMEAS</b>
2.11 When was the last time...cholesterol	<b>CHOLMEAS</b>
2.12 How many teeth are you missing...	<b>MISTHT</b>
2.13 How often did you see dentist...	<b>DENT</b>
2.14 How often do you brush your teeth	<b>BRSTHT</b>
3.1 Do you or any...smoke at home	<b>SMOKHOME</b>
3.2 How many hours a day...at workplace	<b>SMOKWORK</b>
3.3 Have you ever smoked in your life	<b>SMOKEVER</b>
3.4 Have you ever smoked at least 100 cigarettes...	<b>SMOK100</b>
3.5 Have you ever smoked daily...	<b>SMOKDAY</b>
.... I have smoked daily altogether ..... years	<b>SMOKDYRS</b>
3.6 Do you smoke at the present time	<b>SMOKNOW</b>
3.7 When did you last smoke...	<b>SMOKLAST</b>
3.8 How much do you smoke...	
Manufactured cigarettes	<b>CIGMANUF</b>
Selfrolled cigarettes	<b>CIGSELF</b>
pipefuls	<b>PIPEF</b>
cigars	<b>CIGARS</b>
3.9 Would you like to stop smoking	<b>STOPSMOK</b>
3.10 Have you ever tried seriously to stop...	<b>TRYPSTOP</b>
3.11 Are you concerned about the harmful consequences...	<b>SMOKHARM</b>
3.12 Have you been advised to stop...	<b>ADVSMOK</b>
4.1 Do you eat breakfast at all	<b>BRKFST</b>
4.2 What kind of fat do you... food preparation...	<b>FATFOOD</b>
4.3 How often do you prepare food	<b>FOODHOME</b>
4.4 What kind of fat do you... on bread...	<b>FATBRD</b>
4.5 If you drink milk do you usually use...	<b>MILKQUAL</b>
4.6 How many cups of...	
coffee	<b>COFFCUP</b>
tea	<b>TEACUP</b>



APPENDIX 2

4.7	How many lumps of sugar...	
	in cup of coffee	<b>SUGCOFF</b>
	in cup of tea	<b>SUGTEA</b>
4.8	How many slices of bread do you eat...	
	rye bread	<b>RYEBRD</b>
	white bread	<b>WHIBRD</b>
	other bread	<b>OTHBRD</b>
4.9	How often during the last week you have consumed...	
	boiled potatoes	<b>POTBOIL</b>
	fried potatoes	<b>POTFR</b>
	rice/pasta	<b>RICEPA</b>
	cereals	<b>CEREAL</b>
	cheese	<b>CHEESE</b>
	chicken	<b>CHICK</b>
	fish	<b>FISH</b>
	meat	<b>MEAT</b>
	meat products	<b>MEATPRD</b>
	fresh vegetables	<b>VEGFRE</b>
	other vegetables	<b>VEGOTH</b>
	fresh fruit/berries	<b>FRUITFRE</b>
	other fruit/berries	<b>FRUITOTH</b>
	sweet pastries	<b>SWTPSTR</b>
	sweets	<b>SWEETS</b>
	soft drinks	<b>SFTDRINK</b>
	eggs	<b>EGGS</b>
4.10	Do you add salt to your meals...	<b>SALTMEAL</b>
4.11	Advised to change your diet	<b>ADVDIET</b>
5.1	Have you consumed any alcoholic drinks	<b>ALCOHOL</b>
5.2	How many glasses of...	
	beer	<b>BEER</b>
	free-mixed highballs	<b>HIGHB</b>
	strong alcohol	<b>STRONG</b>
	wine	<b>WINE</b>
5.3	How often do you usually have strong spirits	<b>SPIROF</b>
5.4	How often do you usually have wine	<b>WINEOF</b>
5.5	How often do you usually have beer	<b>BEEROF</b>
5.6	How often...six glasses or bottles	<b>ALCO6</b>
5.7	Have you been advised to drink less	<b>ADVALCO</b>
6.1	How tall are you now	<b>HEIGHT</b>
6.2	How much do you weigh	<b>WEIGHT</b>
6.3	Opinion, are you...	<b>OPINION</b>
6.4	On how many days...vigorous physical activity	<b>VIGDAYS</b>
6.5	How much time...vigorous	<b>VIGTIME</b>

## APPENDIX 2

6.6	On how many days...moderate physical activity	<b>MODDAYS</b>
6.7	How much time...moderate	<b>MODTIME</b>
6.8	On how many days did you walk	<b>WALKDAYS</b>
6.9	How much time...walking	<b>WALKTIME</b>
6.10	How much time...sitting	<b>SITTIME</b>
6.11	How many minutes a day do you spend walking...	<b>EXERWORK</b>
6.12	In your leisure time, how often...physical exercise...	<b>EXERLEIS</b>
6.13	How physically strenuous is your work	<b>WORKSTR</b>
6.14	Have you been advised to increase your physical activity	<b>ADVPHYS</b>
7.1	Do you use reflector when walking on streets...	<b>REFLEC</b>
7.2	Do you use seat-belt...	<b>SEATBD</b>
7.3	Do you use seat belt on the back seat	<b>SEATBB</b>
7.4	Are you aware of any of your close friends have....	<b>DRNDRW</b>
8.1	Have you changed you diet...	
	eat less fat	<b>LESSFAT</b>
	chanced the type of fat	<b>TYPEFAT</b>
	eat more vegetables	<b>MOREVEG</b>
	eat less sugar	<b>LESSUGAR</b>
	eat less salt	<b>LESSALT</b>
	weight-reducing diet	<b>WRDIET</b>
	drink less alcohol	<b>LESSALCO</b>
	more physical exercise	<b>MOREEXER</b>
8.2	Please indicate which in your opinion is the most...	<b>REASON</b>
8.3	Do you know...tried drugs	<b>DRUGS</b>

## **APPENDIX 3**



## Glossary

These definitions of terms refer to this guidebook. Where possible, we have used generally accepted terminology.

### Core questionnaire

The English version of the CINDI Health Monitor questionnaire. It includes **obligatory** and **highly recommended questions**. The core questionnaire is commonly agreed by the CINDI Directors Meeting.

### Data collection report

A document written about each survey by the person who is responsible for the data collection and management. The report includes:

- contact information for the CINDI centre and responsible persons,
- description of the target population,
- sampling information (sampling frame(s), sample size, sampling method, when the sampling frame was last updated prior to sampling and time of sampling.)
- data collection and non-response,
- description of the data file,
- any other relevant information needed for the data analyses or interpretation of the results, including information about the quality of the data.

### Data entry

The process of transferring the **sample data** and the **questionnaire data** into electronic format. This usually means keying of the questionnaire from paper to computer.

### Highly recommended questions

Questions, which are not obligatory, but which should be left out from a national questionnaire only if there are specific reasons to do this. In addition to **obligatory** and **highly recommended questions**, the countries may include national questions according to their specific interests.

### National report

A descriptive report of the main results of a survey. It should include all basic tables in the standard format presented in this guidebook. The national report provides key information for policy makers and serves as a basic reference for researchers for creating ideas and checking their results.

### Obligatory questions

Questions, which need to be included in standard form in each national CINDI Health Monitor survey.

### Outlier

An observation that has an exceptionally large or small value compared to other observations and which therefore seems suspicious. An outlier may result from an error in the measurement or recording, or it may be a genuine result. Therefore, all outliers should be carefully examined before conducting any analyses. They should not be removed or changed without further justification.

**Questionnaire data**

All the data obtained from the questionnaire.

**Sample data**

Data available about the subjects before they are contacted. This typically includes age and sex, which are usually available from the sampling frame and other possible information available from registers.

**Sampling frame**

The list of sampling units (e.g. persons) from which the sample is drawn. It may be population register, electoral list, public health register etc. It ideally represents the target population exactly, but there are reasons why actual sampling frames often deviate from the ideal.

**Simple random sampling**

Sampling where every member of the sampling frame has an equal chance of being drawn.

**Skip rule**

A cue that instructs to pass a question which is irrelevant to the respondent, and to move to the next relevant question. For example, non-smokers should "skip" the questions intended only for smokers.

**Stratified random sampling**

In stratified random sampling the population is first divided into non-overlapping subgroups which together comprise the whole of the population. Separate random samples are then drawn from each subpopulation. Stratified random sampling is often used to guarantee sufficient representation of the subgroups in the survey. In the analyses the data will need to be weighted appropriately to get results which are representative of the whole population.

**Target population**

The population about which information is wanted.