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**Third consultation to develop common methods and instruments
for Health interview surveys**

Report on a WHO Meeting

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TARGET 35

Health Information Support

Index

HEALTH STATUS INDICATORS

HEALTH SURVEYS

INTERVIEWS - methods

EUR

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1. INTRODUCTION

The third 'Consultation to develop common methods and instruments' was sponsored by the World Health Organization Regional Office for Europe. The Netherlands Central Bureau of Statistics initiated and organised this Consultation, held at the CBS building at Voorburg, 22-24 September 1992.

Mr. J.T.P. Bonte, head of the department for health statistics, welcomed the participants to the Netherlands CBS. In his opening address, Professor Dr. A.P.J. Abrahamse, Director General of the Netherlands CBS, reminded the meeting of the three general issues which form the basis of discussions for the third Consultation:

- * Monitoring the WHO Health For All strategies
- * Creating an impetus for further international comparisons of health interview data
- * Using common methods and instruments in health interview surveys

Dr. A. Nossikov representing WHO, welcomed the participants on behalf of Dr. J.E. Asvall, Regional Director for Europe.

Ms. Dr. M.W. de Kleijn-de Vrankrijker took the Chair and Dr. H. Meltzer was elected rapporteur for the third Consultation and Ms. A. de Bruin was elected co-rapporteur.

2. BACKGROUND

In the eighties two observations led to the initiative of the Netherlands Central Bureau of Statistics (NCBS) to foster an international collaboration of experts to develop instruments for health interview surveys.

During that decade, it became generally accepted that Health Interview Surveys (HISs) were essential for health information systems, providing statistics on life expectancy, mortality, (hospital-) morbidity, finance and manpower. Despite the existence of continuous HISs in some countries, the general picture showed that most countries carried them out on an ad-hoc basis if at all. These surveys seemed to have developed largely independently. Although this may have had some advantages (new thinking may lead to new solutions), it seemed that many efforts did not result in more than a reinvention of the wheel in different qualities.

It was felt that the situation would be improved by allowing researchers responsible for the surveys to benefit from each others experience by means of international exchange meetings. Many findings, successes and especially misfortunes, are not

easily accessible via other channels. A major challenge was to develop new instruments and to get them standardized in order to achieve better international comparability and enhance the value and the use of survey results.

Many of the indicators for measuring health targets (described in the WHO/EURO publication 'Targets for Health for all') are completely dependent on the availability of data from population health interview surveys. In the Health For All (HFA) monitoring exercises that took place in 1985, 1988 and 1991, only a small proportion of these indicators were available in a limited number of countries. Significant improvements in progress in data collection for survey indicators need to be made to avoid a lack of information by the year 2000.

These observations led to the initiative to organize international collaboration of experts for the development of common instruments and methods for health interview surveys. It was decided that the most advantageous and fruitful starting point would be to develop instruments for the HFA survey-indicators and also to examine methodological and organizational survey procedures.

These ideas were explored by NCBS in consultation with WHO/EURO which resulted in the request by WHO/EURO to NCBS to organize the first 'Consultation to develop common methods and instruments for Health interview surveys', sponsored by WHO/EURO. The meeting took place in June 1988, and resulted in a green book, containing the report and four leading papers. The second consultation took place in September 1990 and also resulted in a green book containing the report and four leading papers.

3. SCOPE AND PURPOSE

The five purposes of the third Consultation were as follows:

- * To review regional HFA indicators, including suggested, revised and new ones, which can best be measured through population (health interview) surveys and which were not fully dealt with during the first and second consultation. The review should include whether or how instruments already recommended need to be adjusted and what new indicators should be introduced.
- * To review whether the revised list of HFA indicators lacks relevant indicators normally measured by health interview surveys. To recommend any additional indicators to the list.
- * To develop common instruments for the measurement of the above-mentioned indicators. This relates to the review and the coordination of existing instruments, and development of instruments for areas not yet covered.

- * To discuss current and future population (health interview) surveys in the European Region and selected countries outside the Region, in order to assess the coverage of HFA indicators in these countries, particularly from the perspective of the updated HFA targets and the suggested, revised or new indicators.
- * To discuss the possibilities of including common instruments for HFA indicators, agreed upon during the consultations, in current and future population (health interview) surveys and feasibility studies for surveys.

4. MEASUREMENT OF HEALTH FOR ALL INDICATORS IN HEALTH INTERVIEW SURVEYS

4.1 Review of present situation

A paper on this topic (Annex 1, no. 3) referred to a postal enquiry of Member States. The aims of this investigation were:

- (a) to explore the availability and provision of comparable data on the HFA indicators which had been used, and the willingness of countries to use HFA-indicators in the future in order to make better international comparisons.
- (b) to take stock of current practices of health interview surveys in Europe.

This exercise was undertaken in order to answer two questions.

Question 1: How far are the surveys which are already planned for 1993/94 likely to produce data which are comparable with the recommendations of the Consultations, thus testing the feasibility of these recommendations.

Question 2: What opportunities and/or problems are anticipated with regard to harmonization of survey data in future?

The countries which responded to the postal enquiry were classified into four groups in terms of their experience with instruments providing data on eight HFA indicators:

- Group 1. Surveys already planned to provide the data.
- Group 2. Instruments which with some small effort could be adapted to produce comparable data.
- Group 3. Recommended instruments were difficult to include.
- Group 4. Indicators were measured by other methods.

The results were summarised in the following table:

SUMMARY SCORE OF COUNTRY REPLIES
(Opportunities to provide data on selected Health for All Indicators
in line with WHO/EURO recommendations)

Health for All Indicators (abridged concept)								
Opportunity	Perceived health	Days of temporary disability/person/year	Levels of long-term disability	Proportion of non-smokers, light and heavy smokers	Neonates with birth weight > 2500g	Children breastfed	Body mass index	Socio-economic classification
Group 1	13	12	5	16	3	6	13	9
Group 2	4	5	5	4	2	6	5	4
Group 3	2	3	10	-	3	2	1	5
Group 4	-	-	-	-	12	4	-	-
Number of replies	19	20	20	20	20	18	19	18

The aim for 1993/94 was to encourage countries to move to Group 1.

The conclusions, expressed as answers to Questions 1 and 2 were that:

Answer 1: Although slightly different questions may be used, or minor modifications needed, comparable data may be produced by a significant number of countries.

Answer 2: There are both opportunities and constraints in harmonizing measurement of HFA indicators.

Opportunities for harmonization may arise from brevity of questions or by looking at harmonization at the level of concept, i.e. using slightly different questions to get the same results. The main constraint was that some countries were more concerned about preserving existing national trends than modifying questions to make them more suitable for international comparisons.

A stimulus to greater use of recommended instruments could come from

- * giving guidance on survey concepts, sampling procedures and analysis/presentation of data.
- * indicating how available data have been used and showing their relevance to health policy.

4.2 Points arising from discussion about review

Some participants felt that the statistics represented in the report did not accurately portray the situation on availability of HIS data in their respective countries mainly due to a confusion between first, the willingness to use a recommended instrument, second, the availability of information using that or similar instruments, and third the willingness to provide data from the use of such instruments.

Other participants whose countries were not referred to in the results of the postal enquiry felt that they could now make a contribution. The table above presents the revised statistics.

The full text of the revised paper would be made available with the report of the Third Consultation.

The discussion which followed focused on the incentives for creating and using a HFA-Health Interview Module (HFA-HIM), consisting of Health for All interview instruments and guidelines. The main points were:

- * Establishing who are the users of data and how the data can serve their needs. Will they be governments with health strategies, those who monitor the nation's health, or at a sub-national level, planners, or users of health services?
- * Showing how results of the HFA-HIM can be used, e.g. for effective budgeting.
- * Fixing a date for implementation.

Some of the elements which should form a strategy to implement a HFA-HIM were:

- * To sensitize potential users of survey information:
 - demonstrating to health administrators how this helps in managing health in their countries.
 - convincing policy makers of the importance of the information.
- * To further the impact of the already produced recommendations:
 - publish the guidelines with indication of how they can be practically implemented.
 - establish a catalogue of (national) health surveys in Europe (about 20 questions to cover basic parameters of surveys, and a network between survey practitioners).
 - establish a data base of survey results on basic HFA indicators and regional breakdowns.
 - establish an HFA-HIM to include instruments and other subsidiary guidance (sampling, stratification).

- * To stimulate otherwise the countries to provide data that they can potentially produce.
- * To divide responsibilities between WHO/EURO, CBS, etc.

4.3 Plans for health interview surveys in 1993/94

The representative of each country presented their plans for the measurement of HFA indicators in health interview surveys in 1993/94.

Australia

There are plans to conduct a health survey in 1994/95 with a sample size that will allow national, state, and regional comparisons. The topics which are likely to be included are: recent illnesses (last 2 weeks), long-term conditions (6 months) perceived state of health, hospital episodes, consultation with health care providers, immunisation, use of medications, sickness absence, recreational and sport activities, height, weight, and diet, breast feeding and contraception. These topics were included in the previous 1989/90 survey. Additional topics for the 1994/95 survey under consideration are mental health and emotional well being, nutrition, and health examinations.

Belgium

There is currently no health interview survey in Belgium. The necessity of conducting such a survey covering the Flemish and French Community is presently being discussed within the framework of the Centre for Operational Public Health Research. Future plans comprise a follow-up morbidity survey on 3,000 persons of 55 years and over in 1993, and a first HIS in 1996.

Canada

In 1994, Canada plans to begin a national population health survey which will be conducted every two years. The plan is to cover 20,000 households, with information collected from children as well as adults. There is a possibility that some individuals will be selected for follow up for up to 20 years as well as producing cross-sectional estimates every 4 years. A one-hour interview is envisaged covering health status, service use, social and psycho-social factors, lifestyle measures and the creation of a health index. The draft questionnaire will be ready in October 1992, for a test in 1993 and a main stage survey in 1994.

Czech republic

At present the Czech Republic is finalising its proposals for a new National Health Information System (NHIS) to be in place for 1993. A sample of about 10,000 people will be selected for a survey of oral health in 1993. The Czech Republic will accept

recommendations of the Consultations in preparing the Czech version of a survey to measure, inter alia, HFA indicators.

Denmark

In 1993/94 Denmark intend to carry out a general HIS. About two-thirds of the question content have been covered in previous surveys. The new topics will include allergies, well-being and psycho-social factors, and the perceived relative importance of various health issues.

France

In France, a national HIS is carried out every ten years. The last one took place in 1991-1992. The HIS questionnaire was modified to include some instruments and questions recommended by the 1st and 2nd consultations.

Hungary

In Hungary there are plans for a HIS in 1993. The questionnaire for the pilot-survey has been designed. The sample size will be about 37,000 persons (excluding the institutionalized population). Many of the questions are based on the previous surveys, yet some new questions are planned on nutrition and social security.

Italy

A multi-purpose survey with a component on health matters is planned for 1994/95. Information on certain health topics will be collected on a continuous basis - acute sickness, temporary disability, sickness absence. Issues covered by an annual ad hoc survey include chronic sickness, home accidents, need for health services. Long term disabilities and health behaviour are two topics which may be included in the health module of the multi-purpose survey which is planned to be carried out every three years.

Netherlands

In the Netherlands a continuous HIS has been carried out since 1981. Recently a book entitled "The Netherlands Health Interview Survey 1981-1991" was published, containing the aims, methodology, history and main results from the NethHIS. Supplements to the NethHIS in recent years have dealt with health insurance, disability, lifestyle, physical activities, vaccination and consumer satisfaction. In 1993/94 the intention is to include as many common instruments as possible.

Norway

Three different surveys with a health component are carried out by CBS, Norway. Quarterly multi-purpose surveys started in 1992 and include questions on disability (16-79 year olds). In

addition, further health questions may be included from time to time. Surveys on level of living include questions on chronic illness and long term disability every four years. The last survey was carried out in 1991 (age 16+). Health surveys, with a detailed health questionnaire, are carried out every ten years. Here all ages are included, and adults respond for children under 16 years.

Switzerland

The Swiss Health Survey (1992) covered health status, health behaviours and use of services from those aged 15 and over. This survey will be repeated in 1996 and it is planned to do it every subsequent 3 years. Other HISs include a survey of the health behaviours of school children (9+) and an annual survey of sexual and other behaviours (of 15-44 year olds) as part of an AIDS prevention campaign. Health related topics are also included in other national surveys such as the social insurance evaluation study, the labour force survey and the household budget survey. Small regional surveys were done during the last 5 years and will be conducted in the future.

United Kingdom

An important purpose of health surveys in the UK is to monitor health strategies for government: monitoring the health of the nation and the effects of health promotion as well as in the planning and evaluation of health services. For example, since 1991 an on-going annual survey has been carried out in England which covers cardiovascular disease, stroke, their risk factors and nutrition. Health measurements and tests are undertaken (mainly by nurses) as well as an interviewer carrying out face-to-face interviews. In 1993 and 1994 the sample size will be 17,000 per year. Other surveys are planned which will focus specifically on diet and nutrition, and psychiatric morbidity. Overall the survey programme will help to monitor several of the targets set out in the 'Health of the Nation' White Paper. A Survey Advice Centre will be set up as a focal point for information and advice on data and methodology. This is aimed at promoting harmonization at the local level, but the need for harmonization at a national and European level is also recognized.

U.S.A.

The USA intend to continue in 1993/94 with their National Health Interview Survey started in 1957. It will include children as well as adults, look at utilisation of services, and obtain data on both acute and chronic illness. Each year supplementary topics are included. In 1993/94 the focus will be on disability. In later years health promotion, disease prevention and family health issues are to be included.

4.4 Common themes arising from reports of consultation members

a. The relationship of Health Interview and Health Examination Surveys

Health interview surveys are an important and integral part of any attempt to monitor the health of a population. For example, standardised instruments such as the Rose Angina Questionnaire can be used to help measure the prevalence of ischaemic heart diseases in a comparable fashion. However, for certain types of disorders (including cardiovascular disease), health examination surveys are essential in providing objective information about the disease and/or its risk factors. In such cases, health examination and health interview data should ideally be collected as part of the same surveys because they are complementary. Where this is not possible, efforts should be made to link the data in some way. In the future, the combined use of both health examination and health interview data from surveys should be outlined.

b. Carrying out health interview surveys in the institutionalised population

Although those people living in institutions represent between 1% and 2% of the general population, they are of particular interest for health interview surveys. The extent to which common instruments can be used in health surveys of people living in institutions as well as in private households will be a subject of future work.

c. Who should be interviewed in the household?

In some countries health measures are obtained by interviewing all adult members of the household. In other countries surveys are carried with selected household members, interviewed in depth and asked about others living in the same household. Some countries continue to include children in their health surveys; other countries hope to include children for the first time in forthcoming surveys. There needs to be agreement among countries on the age which distinguishes an adult from a child. Interviews about small children should be carried out by proxy.

d. Inclusion of questions on psychological well-being and social functioning

Many countries plan to include questions on psychological well-being and social functioning (social disabilities and social networks) in 1993/94. Because of the lack of previous research, it was felt to be important to harmonize research on these topics.

e. Health measures as outcomes or as indicators

The choice of instruments to measure various aspects of health behaviour is dependent on whether the behaviour itself is seen as an outcome measure (i.e. a dependent variable) or as an indicator or as a predictor of health status (an independent or mediating variable).

f. Continuous and periodic surveys

In some countries large scale continuous surveys are carried out; in other countries surveys are carried out periodically. The planned periodic surveys described in the previous subsection have gaps of two to ten years between them. The issue of making national comparisons from the results obtained from using common instruments in relation to frequency of data collection needs further investigation.

g. HFA indicators and relevance of data for policy making

One of the best ways of encouraging the use of survey based HFA indicators is to demonstrate their use as aids to policy making, e.g. with regard to planning and monitoring the utilisation of services.

h. Focus of knowledge about health interview surveys

Information about all the health surveys proposed within a country should be available at one focal point. This would permit continuity of HIS knowledge and harmonization of survey activities.

5. IMPLEMENTING A HEALTH FOR ALL HEALTH INTERVIEW MODULE (HFA-HIM)

5.1 A Proposal for the introduction of common instruments in health interview surveys

The reason for proposing the introduction of common instruments in health interview surveys is to achieve greater comparability of survey results from different countries (and between different regions within countries).

This implies two prerequisites:

- (1) common protocols, and
- (2) common instruments.

The HFA indicators delimit the territorium and form an impetus for implementation.

Common instruments can be achieved in three steps:

- (1) formulation of (recommended) instruments for promotion and testing in interested countries,
- (2) testing of instruments and evaluation of the experience when using the recommended instruments (reliability, validity, number of users), and
- (3) on this basis, formulation of standard instruments.

Some instruments recommended at previous meetings have already been used in a number of countries. These are: perceived health, temporary disability, smoking, birth weight, breastfeeding, and body mass index. For these instruments step (2) can be carried out, after which the formulation of standards can be effectuated.

Other instruments, such as those measuring long-term disability, socio-economic situation, or disability-free life expectancy have not been used extensively yet and therefore have probably a longer way to go to reach a standard status.

It is recommended that the remaining recommended instruments for HFA indicators should be evaluated and promoted as standards around 1995. Afterwards there should be five-yearly revisions. At the same time new trial instruments should be developed. The criteria for making a 'recommended' instrument a 'standard' instrument should be to test it in at least three countries in a representative, national HIS within one year. There should be an agreement supported by data analysis between the three countries about the adequacy of the instrument. The agreement should include a recommendation on how to cope with trend disruption.

There should be a continuous procedure providing formulation of new common instruments, testing and evaluating them, and agreement on and revision of standards.

One way of promoting the instruments is by publishing a book with guidelines on how to carry out a HFA-HIM, including a chapter on methodology issues, e.g. sampling and sample size, etc. Another method is by establishing a catalogue, which could be an extension of the inventory work done by CBS and WHO/EURO. A third way is by doing international comparative research for which a data base is needed. This should be established by WHO, for the other countries supported by a collaborating centre.

5.2 Conclusions from discussion about proposal

After having discussed this proposal the Consultation agreed on the following conclusions:

- * Trials on recommended instruments will be carried out and experiences with their use will be evaluated in order to reach official standards.

* Evaluations of the following five recommended instruments will be undertaken by experts from three countries, with WHO acting as coordinator:

- perceived health
- temporary disability
- body mass index
- breastfeeding
- smoking

A protocol for this evaluation will be completed by the end of October 1992 with the aim of distributing a report to participants of the Third Consultation by the end of September 1993. A detailed time-table of the study is given in Annex 3.

* A book giving guidelines on measuring HFA indicators in health interview surveys will be produced.

6. CONCLUSIONS AND RECOMMENDATIONS WITH REGARD TO SPECIFIC ITEMS

6.1 International variation in socio-economic inequalities in self-reported health

The main results of this study which compared the situation in the Netherlands with that in other industrialised countries were:

- (a) Among men in Sweden, the UK and Spain, health inequalities were smaller than in the Netherlands. Larger differences than in the Netherlands were found in Germany, Italy, Canada and the USA. This pattern is consistent among nearly all health indicators for which data were available for the study. Health inequalities in Denmark and Finland are not consistently smaller or larger than in the Netherlands.
- (b) The international pattern for women is less clear. Health inequalities are relatively large in Italy, Spain, Canada and the USA.
- (c) A review of the completeness of the data received from the 12 participating countries showed that:
 - (i) Three socio-economic indicators were used in the study: level of education, of income and of occupation. Education was provided by 10 out of the 12 countries in the study. Occupation was provided by only 6 countries and income by only 5. This situation led to a substantial reduction of the possibilities to compare health differences on the basis of various SES-indicators.

Therefore it was recommended to encourage countries to include education and at least one of the other two SES-indicators in their surveys which will permit international comparisons to be made.

(ii) Seven health indicators were used in the study:

- Perceived health
- Health complaints
- Long term disability
- Cut down daily activities
- Chronic conditions (open ended question)
- Chronic conditions (checklist question)
- Body length

On the average only 3 to 4 indicators were available per country in the study, which substantially reduced possibilities for comparative analysis. Also, in one out of three cases the question(s) used to measure an indicator were lacking sufficient international comparability.

It was recommended that countries use the same or at least sufficiently comparable questions to measure health indicators.

It was also recommended that the present study be repeated in the future, preferably every 5 years. The endeavours of the researchers for more comprehensive studies in the near future - taking into account not only health, but also lifestyle and medical consumption - were encouraged. Coordination with proposed studies on health inequalities in Europe in the EC-BIOMED-Programme would also be of great benefit.

Studies which rely on a comparison of health interview surveys from different countries are bound to produce results with large margins of uncertainty. In this study, the uncertainty was reduced as far as possible. However, sufficiently reliable international comparisons require that health interview surveys in various countries are carried out according to a standardised protocol and with a common interview schedule.

6.2 Healthy life expectancy

The calculation of 'disability-free life expectancy' at birth and at 65 years on the conceptual basis of ICIDH was reconfirmed, especially for monitoring progress towards HFA targets. The concept of health expectancy has broadened considerably in the last few years to include health expectancies based on assessment of perceived health (good, fair, bad, etc.) or on the presence of absence of specific conditions such as dementia-free life expectancy at 65 years. The Third Consultation encourages the development of such indicators.

It was concluded that countries should use the Sullivan method to calculate health expectancies, especially 'Disability-Free Life Expectancy' (DFLE), using data from national cross-sectional surveys. In order to improve the accuracy of the estimation, information about changes in health status is required. This can be provided by including in the national (cross-sectional) survey a retrospective question about health status (i.e., disability 12 months previously).

In order to further improve the accuracy of the estimation of health expectancies (calculation using a multi-state life table), it is recommended that countries examine carefully the possibility for the future of setting up a regular repeated wave health survey which is common practice for Labour Force Surveys, i.e., two or three waves of interviewing with a one or two year interval. It is advisable that these surveys include people who live in institutions.

6.3 Nutrition

It was recommended that the questions on the use of breakfast and snacks, suggested by the first consultation, are dropped.

Confirmed was the recommendation to monitor the distribution of BMI in the population (by age and sex), which in this context should be regarded as a retrospective indicator of caloric intake. Reference was made to the Second Consultation for the recommended formulation of the indicator and for the recommended instruments (see Annex 5, indicator 16.10).

The objective of food measurement in a population survey should be, at minimum, to measure the intake of fat (total and saturated) relative to total energy intake differentiated by age, sex and socio-economic status. Other nutrients may be included depending on specific national priorities. It would be desirable to have a common instrument that measures this objective. However, such an instrument is not yet available. Given the fact that food consumption is very varied and often differs substantially between countries, it is doubtful whether such an instrument can be developed at all.

There are in fact, several methods to measure the intake of nutrients, none of which is really short. In order to make international comparisons of average intake it may be more appropriate to employ a more accurate method with a short reference period, such as the 24-hour recall or to measure the current intake through food records. Assessing the past intake over a longer period of time (usual intake) has the advantage of providing more analytic possibilities (detect statistical differences, correlation studies), but this was not seen as a minimum requirement for international comparisons. The first mentioned methods are generally more costly while the latter may be less accurate. The international comparability of these methods is still the subject of research and therefore no

recommendations were made about a specific method of data collection. However, in the book with guidelines on measuring HFA indicators some examples of methods will be given.

Prior to the measurement of food consumption in a survey, it was recommended to include questions on the following issues:

- whether the respondent has a special diet or follows a particular dietary regime (minimum answer categories: yes/no).
- (For female respondents) whether the respondent is pregnant or breast-feeding.

Apart from the preferable measurement of nutrient intake in population surveys, which, in view of the magnitude of these studies, may not take place very frequently, it was recommended to continue monitoring national trends in availability of macro-nutrients on a yearly basis.

FAO food balance sheets are used as the instrument to measure the availability of macro-nutrients. It was recommended that the formulation of the concerning HFA indicator should be in line with the proposed instrument. Thus, where FAO food balance sheets are proposed as instrument, the corresponding indicator (16.3; see Annex 5) should read:

"Average daily availability of energy (in kcal), lipids, proteins and carbohydrates (in grammes and as percentage of total energy intake), per capita".

In addition, it was recommended that the following new indicator referring to the intake of fat (16.11; see Annex 5) should be included:

"Average daily intake of fat (total and saturated) relative to total energy intake, by age and sex".

6.4 Physical activity

A change of the HFA-indicator "energy expenditure pattern" (16.7) was recommended. This definition was seen to be too narrow and specific. Instead of the energy expenditure pattern, it was proposed that the physical activity pattern should be monitored.

Furthermore, it was proposed that a new and simple instrument for the assessment of physical activity should be used in order to monitor the physical activity patterns in European populations. Practical reasons largely determined this recommendation.

Self-assessment of leisure-time activity could be made with the following two questions:

1. What describes best your leisure-time activities during the last year?

- * hard training and competitive sport more than once a week
- * jogging and other recreational sports or heavy gardening at least 4 hours a week
- * walking, bicycling or other light activities at least 4 hours a week
- * reading, watching TV or other sedentary activities.

2. At least once a week do you engage in any regular activity, such as jogging, cycling, etc. long enough to work up a sweat? If yes, how many days per week?

These questions can be used with both face-to face interviews and self-administered questionnaires. Additionally, self-assessment of occupational and household physical activity can be added.

If a detailed assessment of physical activity is required - beyond HFA-monitoring purposes - an instrument for activity assessment which can be used to estimate energy expenditure values, both for total and leisure-time activity was recommended. Thus, occupational activity and housework should be included. Long-term patterns should also be established using a 12 months reporting period. Self-administered questionnaires are not recommended. The Canada Fitness Survey Questionnaire, adapted as necessary for different countries, is recommended for trial use.

6.5 Alcohol consumption

Six general recommendations were put forward:

- Surveys should measure the quantity of alcohol consumption during a "typical" or "average" period of time. The approach may be to ask about consumption during a calendar period (e.g., the week before interview), and then to ask if that period was typical for the respondent. An alternative approach may be to ask about consumption during the "usual", "typical" or "average" period of time, e.g., "During an average week, how many days do you drink?"
- Although there will be international variation in the questions asked about quantities (e.g., pints, half pints, glasses, cans, bottles, etc.), questions should be asked in such a way as to be convertible to a standard international unit, e.g. grams of ethanol/week.
- The length of period about which quantity of consumption is asked may vary among nations (e.g., one week, two weeks), but the quantity of consumption should be reported for a standard period, and one week is recommended, as in "grams of alcohol per week".

- The concept of "harmful use" is important to HFA targets, but no recommendation is made for defining that concept. Rather it is recommended that quantities be reported in a standard way, and in sufficient detail, so that a variety of definitions of harmful" amounts of consumption could be applied.
- Alcohol consumption is regarded by many respondents as a very personal and private subject. Also, there is often a tendency for respondents to underreport consumption because of the social stigma they perceive to be attached to high levels of consumption. The sensitivity of the topic and the tendency to underreport must be considered in administering questions. It is recommended that, where possible, questions should be self-completed.
- While it is desirable to obtain information on alcohol consumption for persons at all ages, even early adolescents, problems of legality, ethics and reporting bias will preclude this in many HISs. It is recommended, therefore that information be collected to the youngest age possible, and that all HISs collect alcohol consumption information for persons 18 years of age and older.

A number of problems remain:

- Most HISs do not obtain information on persons not residing in households; for alcohol data this may result in a serious bias, because heavy drinkers are disproportionately homeless or institutionalized.
- Despite the methods used in HISs, there will be a significant under-reporting of consumption; methods of estimating the extent of under-reporting and correcting for it should be further developed.
- The order in which questions about alcohol consumption are asked has an effect on responses and ultimately on measures of quantity consumed; attention to question order effects, including methodological research, is required.
- Although it is recommended that HISs focus on quantity of alcohol consumed, there are other very important aspects of alcohol consumption that should be measured in HISs where possible, including physical dependence, behavioural problems, temporal patterns, and the physical and social setting in which consumption occurs.
- Measuring the quantity of alcohol consumed holds the best prospects for international comparability related to the HFA indicators, but does not maximize the potential for other uses of alcohol data, such as establishing causal links to disease conditions, or constellations of risk behaviours.

While additional work is required before a set of questions can be recommended for general use, an illustrative set of questions incorporating the general recommendations (above) is suggested as a guideline. This set of questions, included in Annex 4, is derived from questions in the national health interview surveys of Canada, Australia, the United States, and the Netherlands.

6.6 Mental Health: conditions

It is practically not possible to measure all chronic conditions adequately in a single health interview survey. It should be possible to measure at least one or two conditions in a particular national survey.

It was recommended that for measuring the emotional well-being of the population the 12-item version of the General Health Questionnaire should be used (GHQ-12). This instrument addresses HFA Target 12 which has been widened to deal with mental disorders and the quality of life of people with such disorders.

The prevalence of selected major chronic conditions (e.g. mental retardation, dementia, schizophrenia, affective disorders and anxiety disorders) are best measured through specialised surveys rather than a HIS. Nevertheless, depending on national priorities, some countries may wish to include specific instruments for one or more conditions within a HIS. For measuring the prevalence of such conditions, whether in a HIS or a specialised survey, the following instruments were recommended:

- (i) For mental retardation subjects with lower education should be asked screening questions from the Epidemiologic Catchment Area (ECA-) survey and the Canadian Health and Activity Limitations Survey. Where there is an indication of mental retardation, the instruments to be used in Stage 2 are the Mini-Mental State Examination (for subjects 14-55 years) and the Visual Retention Test (for subjects 7-13 years and illiterate adults).
- (ii) For dementia only subjects aged 55 years and above should be assessed using the Iowa dementia test.
- (iii) For mental disorders the GHQ-12 supplemented with six additional questions should be used as the screening instrument. Subjects with a score of 3 or above on the GHQ should be interviewed using the appropriate parts of the Diagnostic Interview Schedule for the particular disorder being investigated.

Before these instruments are implemented in a HIS they should be tested and evaluated.

With further work it is hoped that a more generic measure of chronic mental health conditions can be routinely included in HISs.

The identification of mental disorders by interviews or self-reporting methods has a number of problems. These include the need to establish communication and rapport with respondents (including the need to use proxy informants), and the importance of including persons in health institutions.

It is important to develop instruments for use in household surveys to assess the prevalence of chronic mental disorders in the general population given the general movement to de-institutionalise persons with such conditions. It is important, for example, to detect the increasing prevalence of dementia. It was noted that the REVES network had reached the same conclusion in measuring this chronic condition.

6.7 Mental health: disability

There was agreement on the formulated question with respect to temporary disabilities (indicator 4.1; see Annex 5); they were recommended for further use. However, it should be clear that this question asks about a recent change (in the past two weeks) and does not deal with chronic cases.

Disabilities can manifest themselves in terms of over-activity or alteration of activities as well as the more usual characteristics of restriction of function and restriction in activity. The focus of the recommended question is on restriction and limitation. No solution was offered on how to cater for excessive behaviour.

Since the recommended question on temporary disabilities (mental health) does not differ much from the existing one for physical health, trials will be carried out in four countries (Australia, Denmark, United Kingdom, Netherlands) to test the use of the new question in addition to the existing one.

A splitting of the screening question for long-term disabilities (indicator 4.2) was proposed. One question would ask about the existence of long term emotional and psychological problems, and the other, about limitation in kind or amount of activities. Furthermore, it was suggested that the same wording should be used in the questions for indicators 4.1 and 4.2, i.e., not "cut down" in one question and "limited" in the other; not "emotional" in one, and "nervous, psychological" in the other.

A further study of the Groningen Social Disabilities Schedule self report version, was recommended with the expectation that from the current version a core set of questions could be selected for use in health interview surveys. The WHO Collaborating Centre in Groningen was asked to produce such a list within 6 to 12 months. If a reliable, valid and short list

of social disabilities items could be produced, the two stage procedure would probably be abandoned.

Such a list should also have a proxy informant version, in case the respondent is not able to answer the questions.

It was recommended that such a list of disability items will be part of one instrument measuring mental and physical disabilities, as requested for indicator 4.2.

6.8 Physical health: chronic conditions

The discussion concerned a proposal for a pilot study based on recommendations from the 2nd Consultation on measuring chronic conditions. There was substantial agreement on the list of conditions recommended in the 2nd Consultation. Discussion focused on the following specific issues raised in the proposal.

The criteria for defining chronic illness were based on a definition of chronic disease formulated in 1957. It was decided that two criteria were sufficient to distinguish between acute and chronic disease and these were: the nature of the disease and its duration. It was suggested that a duration of 6 months be used.

Five criteria were recommended as those which should be used to determine which chronic diseases should be included in a HIS questionnaire.

- (1) the prevalence (the number of people suffering)
- (2) severity of the disease (mortality, hospitalization, other medical consumption, limitation of functions, relation to ICIDH and quality of life)
- (3) economic costs
- (4) use of health care services
- (5) amenable to self-reporting.

The issue was considered of whether surveys should measure incidence, prevalence or both. For the great majority of conditions, prevalence was regarded as the most important measure in a European context. Countries which are concerned with the incidence of particular conditions could ask additional questions concerning the onset of these conditions.

The wording of the questions must be based on the respondent's ability to understand the described condition. In some cases the disease name is sufficient (diabetes); in other cases additional questions or symptoms are necessary (asthma) and in yet other cases alternative wording must be used (back problems).

There was agreement with the recommendation from the 2nd Consultation that respondents should be asked if a health professional had given the diagnosis.

7. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

1. Implementing a health interview module

There was agreement on the procedure for implementing a HFA-HIM by carrying out trials on recommended instruments and evaluating them in order to reach official standard versions. The criteria for evaluating new instruments will be measures of reliability, validity and the number of users involved in the trial. The recommended instruments on five indicators have been chosen to be evaluated by three experts with the WHO acting as coordinator.

A book giving guidelines on carrying out a HFA-HIM will be produced.

2. Socio-economic inequalities in self-reported health

The results of the study confirmed the importance of having comparable SES-data on education, and on occupation and/or income to permit comparisons between countries. The study should be repeated in five years time. Coordination with proposed studies in the EC-BIOMED Programme would be beneficial.

3. Healthy life expectancy

The Sullivan method is confirmed as the preferred method. In order to improve the accuracy of the estimates it is possible to have annual surveys with a 12 months retrospective question on health status or 2- or 3-wave studies with a relatively short interval, as an alternative for longitudinal studies.

4. Nutrition

The recommendation of the previous Consultation to include questions about breakfast and snacks was revoked. Priority should be given to measuring the intake of nutrients, in particular fat (total and saturated) relative to total energy intake. Although no instrument was proposed a series of preliminary questions prior to measurement was put forward. It was also recommended to continue monitoring on a yearly basis trends in availability of macro-nutrients.

5. Physical activity

Preference should be given to looking at physical activity patterns. Physical activity should be classified into leisure activities and occupational and household activities. A simple instrument was recommended for the measurement of leisure activities but not for those which were job related. However, a recommendation was made to use the Canada Fitness Survey Questionnaire in trial studies which seek detailed information on physical activity.

6. Alcohol consumption

Quantity and period of recall are the two main concepts which should be used to produce a standard international unit of alcohol consumption. Data should be collected from the youngest age possible. The administration of questionnaires by self completion is the preferred option. Illustrative questions about alcohol consumption which could be applied in trial studies are shown in Annex 4.

7. Mental health: conditions

The use of the 12-item version of the General Health Questionnaire is recommended for the purpose of obtaining a measure of emotional well-being. The recommended instruments to measure major chronic mental conditions are shown in Annex 5. It is preferable to use these instruments in specialised surveys.

8. Mental health: disability

The recommended question on temporary disability because of mental health problems will be tested in relation to the existing question regarding physical health in four countries. For long-term disability a shorter version of the Groningen Social Disabilities Schedule (GSDS) will be developed. When available, this shorter version of the GSDS can be added to existing questions about long term disability, thus eliminating the need for screening questions.

9. Physical health: chronic conditions

There was a discussion on the criteria for defining chronic diseases in HIS, whether incidence or prevalence should be measured and what terminology should be used to elicit reports of conditions. A study will be carried out, taking into account conclusions from previous discussions in order to propose instruments to measure physical health.

10. Items requiring further consultation

Two items were brought forward for further consultation: the relationship between health interview- and health examination surveys, and questions about the health of people resident in institutions. Items regarding how HIS is administered and managed and the relevance of HFA indicators for health strategies, should be included in the book with guidelines on carrying out a HFA-HIM that will be published.

An updated list of recommended instruments for HFA indicators is given in Annex 5.

Annex 1**List of working papers**

1. "Where we stand (1992)" by J van den Berg.
(ICP/HST/124/5)
2. "Scope: Aims of the meeting". (ICP/HST/124/1)
3. "Measurement of health for all indicators in health interview surveys planned for 1993/94 and some notes on prospects for survey harmonization" by A Nossikov.
(ICP/HST/124, 3918g, 18 September 1992; and the revised version ICP/HST/124/Rev.1, 3918g, 10 November 1992)
4. "International variation in socio-economic inequalities in self reported health." by AE Kunst, J Geurts and J van den Berg. (ICP/HST/124/6)
5. "Multiplication of health expectancy calculations and international comparison problems" by J-M Robine, I Romieu and C Mathers (ICP/HST/124/10, 5 September 1992; and a revised version, 19 September 1992)
6. "Measurement of food consumption in health interview surveys" by A de Bruin. (ICP/HST/124/7)
7. "Assessment of physical activity in health interview surveys" by T Spuhler. (ICP/HST/124/8)
8. "Surveying alcohol consumption: A proposal on some questions" by H Swinkels. (ICP/HST/124/11)
9. "The measurement of mental disorders and their consequences in health interview surveys" by G van de Willige and D Wiersma. (ICP/HST/124/9)
10. "Pilot study observation of diseases in questionnaires; aims of the project" by HPA van de Water. (ICP/HST/124/12)

Additional paper available at consultation:

11. "Response trends in Europe" by W de Heer and A Israels
(ICP/HST/124/A)

Papers and documents are available on request from either the Netherlands CBS or WHO/EURO.

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the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

As a result of the demographic changes, the number of people in the world who are aged 65 and over is expected to increase from 200 million in 1990 to 400 million in 2020. The number of people aged 75 and over is expected to increase from 60 million in 1990 to 150 million in 2020.

The number of people in the world who are aged 80 and over is expected to increase from 10 million in 1990 to 40 million in 2020.

The number of people in the world who are aged 85 and over is expected to increase from 2 million in 1990 to 10 million in 2020.

The number of people in the world who are aged 90 and over is expected to increase from 0.5 million in 1990 to 2 million in 2020.

The number of people in the world who are aged 95 and over is expected to increase from 0.1 million in 1990 to 0.5 million in 2020.

The number of people in the world who are aged 100 and over is expected to increase from 0.05 million in 1990 to 0.2 million in 2020.

The number of people in the world who are aged 105 and over is expected to increase from 0.01 million in 1990 to 0.05 million in 2020.

The number of people in the world who are aged 110 and over is expected to increase from 0.005 million in 1990 to 0.02 million in 2020.

The number of people in the world who are aged 115 and over is expected to increase from 0.001 million in 1990 to 0.005 million in 2020.

The number of people in the world who are aged 120 and over is expected to increase from 0.0005 million in 1990 to 0.002 million in 2020.

The number of people in the world who are aged 125 and over is expected to increase from 0.0001 million in 1990 to 0.0005 million in 2020.

The number of people in the world who are aged 130 and over is expected to increase from 0.00005 million in 1990 to 0.0002 million in 2020.

The number of people in the world who are aged 135 and over is expected to increase from 0.00001 million in 1990 to 0.00005 million in 2020.

The number of people in the world who are aged 140 and over is expected to increase from 0.000005 million in 1990 to 0.00002 million in 2020.

The number of people in the world who are aged 145 and over is expected to increase from 0.000001 million in 1990 to 0.000005 million in 2020.

The number of people in the world who are aged 150 and over is expected to increase from 0.0000005 million in 1990 to 0.000002 million in 2020.

The number of people in the world who are aged 155 and over is expected to increase from 0.0000001 million in 1990 to 0.0000005 million in 2020.

The number of people in the world who are aged 160 and over is expected to increase from 0.00000005 million in 1990 to 0.0000002 million in 2020.

The number of people in the world who are aged 165 and over is expected to increase from 0.00000001 million in 1990 to 0.00000005 million in 2020.

The number of people in the world who are aged 170 and over is expected to increase from 0.000000005 million in 1990 to 0.00000002 million in 2020.

The number of people in the world who are aged 175 and over is expected to increase from 0.000000001 million in 1990 to 0.000000005 million in 2020.

The number of people in the world who are aged 180 and over is expected to increase from 0.0000000005 million in 1990 to 0.000000002 million in 2020.

The number of people in the world who are aged 185 and over is expected to increase from 0.0000000001 million in 1990 to 0.0000000005 million in 2020.

The number of people in the world who are aged 190 and over is expected to increase from 0.00000000005 million in 1990 to 0.0000000002 million in 2020.

The number of people in the world who are aged 195 and over is expected to increase from 0.00000000001 million in 1990 to 0.00000000005 million in 2020.

Annex 3**Time table for the evaluation of five recommended instruments**1992

- Oct 31 Protocol (model) of the study completed by NCBS and sent to the three participants from the Netherlands, Australia and the USA for comments.
- Nov 15 Comments received, protocol changed if necessary, and sent to WHO.
- Nov 30 WHO to send requests for data on HFA indicators collected by recommended or comparable instruments, including information on question wording (original language and English) and recent outcomes, to European and selected non-European countries. Countries are also requested to submit their full questionnaires.

1993

- Jan 31 Responses from countries received and sent to the three principal evaluators to write their part of the report.
- Mar 31 The three partial reports to be completed and combined and a draft summary to be prepared by NCBS.
- Apr 15 Report and summary sent to the participants of the third consultation for comments.
- May 15 Comments (if any) received and taken into account by the three authors.
- Sep 30 Distribution of final report to participants of third consultation.

Annex 4

Illustrative questions on alcohol consumption

The next questions are about alcoholic drinks.

A1. How long ago did you last have an alcoholic drink?

- a. During the last week
- b. One week to 1 month ago
- c. One month to 3 months ago Go to 2
- d. Three months to 12 months ago
- e. More than 12 months ago End

A2. During the past [week, 2 weeks, etc]

On how many days did you drink alcohol, such as [list culturally specific illustrations]?

Number of days _____

A3. On the days that you drink alcohol, how many [drinks, glasses, etc.] did you have, on average?

A4. Was your drinking in the past two weeks typical of your usual drinking in the past year?

Yes _____ End

No _____ Go to 5

A5. Was your drinking in the past two weeks more or less than your drinking in the past year?

If the HIS is conducted during a short calendar period, and if that period is a period of a typical drinking patterns in the nation, the following questions are suggested.

B1. How long ago did you last have an alcoholic drink?

- a. During the last week
- b. One week to 1 month ago
- c. One month to 3 months ago Go to 2
- d. Three months to 12 months ago
- e. More than 12 months ago End

B2. Thinking about your drinking in the last year, did you usually drink alcohol, such as [list culturally specific illustrations] on some days of the week?

Yes _____ Go to 3

No _____ End

B3. On how many days during the week did you usually drink alcohol, on average?

Number of days _____

B4. On the days that you drink alcohol, how many [drinks, glasses, etc.] did you have, on average?

These questions allow a distinction between abstainers and drinkers, using question 1; by giving different durations since last drink, several definitions of abstainer may be operationalized. The questions also permit measures of frequency of drinking (days per period of time) and amount of drinking (drinks per day). Combining those two measures permits a measure of quantity per unit of time, as in drinks per week. If the culturally specific "drink" (glass, bottle, etc.) is known by separate and more detailed studies to contain a reliable average amount of alcohol (or ethanol), then an internationally comparable estimate of alcohol consumption per unit time can be calculated.

These questions represent one approach to a minimum basic set of questions on amount of alcohol consumption. More detailed questionnaires are available for more complete and accurate measurement of the amount of alcohol consumed, and for measurement of other important aspects of alcohol consumption, such as types of alcoholic beverages consumed and symptoms of alcohol dependence.

The next set of questions allow for a distinction between drinkers and abstainers not only based on the amount of alcohol consumed but also on the type of alcoholic beverages used in 1 year. The advantage of these questions is the possibility to include or exclude users of certain types of alcoholic beverages (such as for example low alcoholic beverages) from drinkers.

C1. Please indicate on the following list which *alcoholic beverages* you drank the last 12 months?" (even if only once)

- beer (excl non-alcoholic beer)
- wine, sherry, port, vermouth
- liqueur, advocaat, blackcurrant, lemon-flavoured gin
- gin, brandy, cognac, whisky, vodka
- longdrinks
- low-alcohol beverages
- I have not drunk any alcohol in the last twelve months

The advantages of these questions:

- 1 asking for the kinds of beverages can act as a reminder and allows for the distinction of categories of drinkers
- 2 the reference period is an unambiguous criterion to discriminate drinkers from abstainers

With respect to the *quantities of alcoholic beverages*:

- C2. During the last six months, have you ever had 6 or more drinks containing alcohol in one day?"
(yes/no)

If yes:

- C3. During the last six months, how often have you had 6 or more drinks containing alcohol in one day?"
- every day
 - 5-6 times a week
 - 3-4 times a week
 - 1-2 times a week
 - 1-3 times a month
 - 3-5 times in six months
 - 1-2 times in six months

This question allows for the detection of persons who are *incidentally* heavy drinkers. The answer categories allow for different cut-off points by which different types of *incidentally* heavy drinkers can be classified and added to different types of drinkers.

The following questions relate to frequency and quantity of alcohol consumption on weekdays and in the weekend separately and allow for a calculation of the total amount of alcohol consumed. Based on these results different cut-off points for classification of respondents into types of drinkers (e.g. moderate drinkers, heavy drinkers or harmful use) can be used.

- C4. Do you usually drink alcohol on weekdays? (i.e. Monday-Thursday)" (yes/no)
- C5. On how many of the four weekdays (i.e. Monday-Thursday) do you usually drink alcohol?"
- 1 day
 - 2 days
 - 3 days
 - 4 days
- C6. How many glasses on average do you drink on such a day? (i.e. Monday-Thursday)"
- 11 or more glasses, namely glasses
 - 7-10 glasses
 - 6 glasses
 - 4-5 glasses
 - 3 glasses
 - 2 glasses
 - 1 glass
- C7. Do you usually drink alcohol in the week-end? (i.e. Friday-Sunday)" (yes/no)

C8. On how many of the three weekend days (i.e. Friday-Sunday) do you usually drink alcohol?"

- 1 day
- 2 days
- 3 days

C9. How many glasses on average do you drink on such a day? (i.e. Friday-Sunday)"

- 11 or more glasses, namely glasses
- 7-10 glasses
- 6 glasses
- 4-5 glasses
- 3 glasses
- 2 glasses
- 1 glass

Annex 5

Recommended instruments.

(update of 1st, 2nd and 3rd Consultation)

Reference is made to the numbers of the HFA indicators as adopted by the WHO Regional Committee for Europe in September 1990.¹

2.2 Assessment of perceived health

How is your health in general?

- Very good
- Good
- Fair*
- Bad
- Very bad

* Fair - OK, average, moderate

3.2 Percentage of disabled persons of working age in regular occupational activities

The identification of disabled persons should be as set out in 4.2. Surveys should include a question or set of questions to establish current employment and occupational status. These should follow the pattern of countries' Labour Force Surveys or other ways of classifying employment status groups.

4.1 Number of days of temporary disability per person and per year

a. Physical disability:

Think about the two weeks ending yesterday; have you cut down on any of the things you usually do about the house, at work or in your free time because of illness or injury?

- Yes (ask a and b)
- No

- (a) How many days was this in all during these two weeks, including Saturdays and Sundays? (01-14)
- (b) On how many of these days were you in bed for all or most of the day? (00-14)

b. Temporary disability because of mental conditions:

Think about the two weeks ending yesterday; have you cut down on any of the things you usually do about the house, at work or in your free time because of an emotional or mental health problem?

Yes (ask a and b)

No

(a) How many days was this in all during these two weeks, including Saturdays and Sundays? (01-14)

(b) On how many of these days were you in bed for all or most of the day? (00-14)

4.2 Percentage of the population experiencing different levels of long-term disability, by age and sex

Handicap items (with reference to ICIDH-codes)

- | | |
|----------|--|
| Mobility | 1. Are you permanently confined to bed even though there may be help to get you up? |
| H3 | 2. Do you sit in a chair (not a wheelchair) all day even though there may be help for you to walk? |
| | 3. Are you confined to your house/flat and garden? |

Disability items (with reference to ICIDH-codes)

Severity level

- | | | |
|---------------|--|--|
| 1. Locomotion | What is the furthest you can walk on your own without stopping and without severe discomfort? | |
| D40 | <ul style="list-style-type: none"> - only a few steps - more than a few steps but less than 200 metres - 200 metres or more | <ul style="list-style-type: none"> Higher Lower No disability |
| 2. Transfer | Can you get in and out of bed on your own: | |
| D46.0 | <ul style="list-style-type: none"> - without difficulty - with some difficulty - or can you only get in or out of bed with someone to help you? | <ul style="list-style-type: none"> No disability Lower Higher |
| 3. Transfer | Can you get in and out of a chair on your own: | |
| D46.1 | <ul style="list-style-type: none"> - without difficulty - with some difficulty - or can you only get in or out of a chair with someone to help you? | <ul style="list-style-type: none"> No disability Lower Higher |

4. Dressing Can you dress and undress yourself on your own:
D35-36 - without difficulty No disability
- with some difficulty Lower
- or can you only dress and undress with someone to help you? Higher
5. Washing Can you wash your hands and face on your own:
D34.0+34.2 - without difficulty No disability
- with some difficulty Lower
- or can you only wash your hands and face with someone to help you? Higher
6. Feeding Can you feed yourself including cutting up food:
D(37+)38 - without difficulty No disability
- with some difficulty Lower
- or can you only feed yourself with someone to help you? Higher
7. Toilet Can you get to and use the toilet on your own:
D32.0+32.2 - without difficulty No disability
- with some difficulty Lower
- or can you only get to and use the toilet with someone to help you? Higher
8. Continence Do you ever lose control of your bladder?
D30+31 - No No disability
(+ I91) If yes:
Do you lose control of your bladder:
- at least once a week Higher
- less than once a week but at least once a month Lower
- or less than once a month No disability
9. Hearing Is your hearing good enough to follow a TV programme at a volume others find acceptable?
D23 - Yes No disability
If no:
Can you follow a TV programme with the volume turned up?
- Yes Lower
- No Higher

10. Seeing	Can you see well enough to recognize a friend at a distance of four metres (across a road)?	
D26	- Yes	No disability
	If no:	
	Can you see well enough to recognize a friend at a distance of one metre (at arm's length)?	
	- Yes	Lower
	- No	Higher

Optional disability items

1. Stairs	Can you walk up and down a flight of 12 stairs without resting?	
D42	- Yes	No disability
	If no:	
	Can you do this if you hold on and take rests?	
	- Yes	Lower
	- No	Higher
2. Retrieval	Can you when standing bend down and pick up a shoe from the floor?	
D52	- Yes	No disability
	- No	Lower
3. Speaking	Can you speak without difficulty?	
D21	- Yes	No disability
	- No	Lower

Summary score 1 - for handicap

It is recommended that the 3 handicap items be scored as follows

confined to bed	yes	3
	no	0
confined to chair	yes	2
	no	0
confined to house/flat	yes	1
	no	0

The summary score for handicap is then the highest of these values assigned to the person and takes a value in the range 0 to 3.

Summary score 2 - for disability

Each of the 10 disability items in the instrument is scored on a 3 point scale:

no disability	0
lower	1
higher	2

The summary score for disability is the highest value taken on any of the 10 items and takes a value in the range 0, 1 or 2. Optional addition to this 10 items score is a 13 items score when the 3 optional items are included.

4.5 Disability free life expectancy

It is recommended that DFLE be calculated using Sullivan's method. This is described in the extract below taken from the World Health Statistics Quarterly.²

In order to improve the accuracy of the estimates it is advised to have annual surveys with a 12 months retrospective question on health status, or two or three wave studies with a one or two year interval.

Example of the calculation of disability-free life expectancy (DFLE) by the Sullivan method:²

Taking the survivors (b) in a mortality table (Table 1), the number of years of life between each age (c), is first calculated. Rates of prevalence of disability (d) are then used to calculate the number of years lived with disability (e). By deducting these years from the number of years lived between each age (c), the number of active years (without disability) is obtained (f). The cumulative total of these years is then computed from any given age x (a) and related to the total number of survivors at that age (b) to obtain active life expectancy at age x (g).

The total number of years without disability from the age of 65 upwards is thus 1 087 653. This total is divided by the number of survivors aged 65 to estimate the DFLE for males at age 65 in Upper Normandy in 1979: 1 087 653 divided by 100 000 (b), i.e. 10.9 years (g).

From the age of 70 upwards the total number of years without disability is 660 108. This total is divided by the number of survivors aged 70 to estimate the DFLE at age 70: 660 108 divided by 85 486 (b), i.e. 7.7 years (g), etc.

Table 1. Male life expectancy without loss of mobility or autonomy in Upper Normandy in 1979 (Sullivan method).

Age x (a)	Survivors S _x (b)	Years of life between x and x+a (c)	Prevalence of disability between x and x+a (d)	Years of disability between x and x+a (e)	Years without disability between x and x+a (f)	DFLE from x (g)
65	100 000	463 715	0.078	36 170	427 545	10.9
70	85 486	376 533	0.137	51 585	324 948	7.7
75	65 127	266 085	0.243	64 659	201 426	5.1
80	41 307	147 690	0.310	45 784	101 906	3.2
85	17 769	59 025	0.615	36 300	22 725	1.8
90	5 841	19 043	0.522	9 940	9 103	1.6

4.6 Prevalence of selected chronic conditions

For **physical health**, recommended instruments to measure chronic conditions are not yet available.

For **mental health**, chronic conditions are best measured through specialised surveys, but may also be measured in health interview surveys. The following instruments are recommended to assess major chronic conditions:

1. Dementia:

For subjects of 55 years and above the Iowa dementia test is recommended, which consists of (a) the Measurement of Temporal Orientation, (b) the Controlled Oral Word Association test, and (c) the Benton Visual Retention test (MC-version).

Introduction:

"We would like to know the opinion of older people on a number of questions and investigate the performance on a few simple tasks. From time to time, everyone has trouble remembering the name of a familiar person, or learning something new, or they experience moments of confusion. However, do you have any ongoing problems with your ability to remember or learn?" (Yes/No)

"I should like to ask you some questions on this subject."

a. The Measurement of Temporal Orientation.

1. Can you tell me what is today's date? (The subject is required to give day, month and year)
2. Can you tell me what day of the week it is?
3. Please, will you not look at your watch. Can you tell me what time is it now? (Interviewer makes sure that subject cannot look at watch or clock)

Scoring:

- Day of week: one point for each day removed from correct day to a maximum of three points.
- Day of month: one point for each day removed from correct day to a maximum of 15 points.
- Month: five points for each month removed from correct month to a maximum of 30 points (with qualification that if stated date is within 15 days of correct date, no points are added for incorrect month, e.g. 29 May for 2 June is four points).
- Year: ten points for each year removed from correct year to a maximum of 60 points (with qualification that if stated date is within 15 days of correct date, no points are added for incorrect year, e.g. 26 December 1992 for 2 January 1993 is seven points).
- Time of day: one point for each 30 minutes removed from correct time to a maximum of five points.

Score 0 : perfect temporal orientation
 Score 1-3 : normal orientation
 Score ≥ 4 : inferior orientation

b. The Controlled Oral Word Association test

The test is explained as follows: 'I want to see how many words you can say beginning with a certain letter in one minute. Don't say proper names or numbers or the same word with a different ending. The letter is F, you can begin.'

If subjects have difficulty in understanding the task, it can be explained with examples, using a non-designated letter.

After the first (F) trial has been completed, the A and S trials are administered. The interviewer keeps record of the subject's verbal responses.

Scoring:

The total number of correct words during the three one-minute trials is recorded, constituting a raw score, which is adjusted for educational level, sex and age, by means of table 2. Normative data for subjects over 64 years of age are provided by Benton et al.³

A corrected score of 22 or less is classified as defective (This performance level is exceeded by 97% of normal subjects).

When this test is administered in another language than English, adjustment formula and cut-off point should be used cautiously. Ideally, comparable normative data should be developed for other (non-English) languages.

Table 2. Adjustment formula for education, sex and age.

Years of Schooling	Males		Females	
	55-59 years	60-64 years	55-59 years	60-64 years
9 or less	+15	+17	+10	+12
9-11	+ 7	+ 9	+ 7	+ 9
12-15	+ 5	+ 7	+ 5	+ 7
16+	+ 1	+ 3	+ 1	+ 3

c. The Benton Visual Retention Test⁴ (MC-version)

Both parallel tests of the multiple choice form (forms F and G) exist of 15 designs. Instruction M is recommended. Total administration time takes four to five minutes. The designs of the drawing form are used as stimuli. The subject is told that he/she will be shown a card with one or more figures and that he/she is allowed to study it for 10 seconds. After the card has been removed, he/she will be shown a card with four designs, of which one has been shown before. Scores (number correct) range from 0 to

15. For all different forms norm tables exist. Abnormal scores range from lower than 6 (for children of 7 years of age) to lower than 10 (adults).

The test and manual are supplied by the 'Psychological Corporation', 304 East 45th Street, New York, 10017, U.S.A.

Proxy-informant questions for the screening of dementia:

1. Does subject (S.) usually know today's date? (Yes/No)
2. Does S. usually know what day of the week it is? (Yes/No)
3. Has S. problems with his memory? (Yes/No)
If yes: Does S. forget things after a few minutes which should have been remembered? (Yes/No)
4. Is S. capable to take completely care of him/herself? (Yes/No)

If the questions 1, 2 or 4 are answered negatively or if question 3 is answered affirmative, the following question should be asked:

5. Has a health professional ever given a diagnosis of dementia or Alzheimer's disease? (Yes/No)

If question 5 is answered affirmative, a diagnosis of dementia can be established. In case of a negative answer on this question only a diagnosis of probable dementia can be given.

2. Mental retardation:

Only for subjects with lower education (elementary school or less) and younger than 55 years:

a. The following screening questions are recommended:

1. Did you finish school? (Yes/No)
2. How are (were) your grades at school? (Good/Poor)
3. Have you been held back more than once at school? (Yes/No)
4. Has a school or health professional ever told you that you have (had) a learning disability? (Yes/No)

If answer to (1) is "No", or answer to (2) is "Poor", or answer to (3) is "Yes", or answer to (4) is "Yes": proceed with (b).

b. Instruments:

- For subjects 14-55 years the Mini-Mental State Examination is recommended (see p. 52, 53).

Scoring:

Each item is scored by the interviewer as correct or incorrect. Refusals to answer specific items or 'don't know's' are scored as incorrect. The number of correct answers is summed, with a range of 0-30 points.

Subjects with a score of 17 or less are considered to be mentally retarded.

MINI-MENTAL STATE EXAMINATION:
(Add points for each correct response.)

(Points)

Orientation

- | | | |
|------------------|-------------------------|-----|
| 1. What is the | Year? | (1) |
| | Season? | (1) |
| | Date? | (1) |
| | Day? | (1) |
| | Month? | (1) |
| 2. Where are we? | State? | (1) |
| | Country? | (1) |
| | Town or city? | (1) |
| | Hospital?/This address? | (1) |
| | Floor? | (1) |

Registration

3. Name three objects (apple, table, penny), taking one second to say each. Then ask the patient all three after you have said them. Give one point for each correct answer. Repeat the answers until patient learns all three. (3)

Attention and calculation

4. Serial sevens. Give one point for each correct answer. Stop after five answers. Alternate: Spell WORLD backwards. (5)

Recall

5. Ask for names of three objects learned in Q.3. Give one point for each correct answer. (3)

Language

6. Point to a pencil and a watch. Have the patient name them as you point. (2)
7. Have the patient repeat 'Not ifs, ands or buts'. (1)
8. Have the patient follow a three-stage command: 'Take a paper in your right hand. Fold the paper in half. Put the paper on the floor'. (3)
9. Have the patient read and obey the following: 'CLOSE YOUR EYES'. (Write it in large letters). (1)
10. Have the patient write a sentence of his or her choice. (The sentence should contain a subject and an object, and should make sense. Ignore spelling errors when scoring). (1)
11. Enlarge the design printed below to 1.5 cm per side, and have the patient copy it. (Give one point if all sides and angles are preserved and if the intersecting sides form a quadrangle). (1)



 (Total= 30)

INSTRUCTIONS FOR ADMINISTRATION OF MINI-MENTAL STATE
EXAMINATION:

Orientation

(1) Ask for the date. Then ask specifically for parts omitted, e.g. "Can you also tell me what season it is?" One point for each correct.

(2) Ask in turn "Can you tell me the name of this hospital?" (town, county, etc). For non-institutionalised subjects, the question after the name of the hospital should be replaced by "What is the address?". One point for each correct.

Registration

Ask the patient if you may test his memory. Then say the names of 3 unrelated objects (apple, table, penny), clearly and slowly, about one second for each. After you have said all 3, ask him to repeat them. This first repetition determines his score (0-3) but keep saying them until he can repeat all 3, up to 6 trials. If he does not eventually learn all 3, recall cannot be meaningfully tested.

Attention and calculation

Ask the patient to begin with 100 and count backwards by 7. Stop after subtractions (93, 86, 79, 72, 65). Score the total number of correct answers.

If the patient cannot or will not perform this task, ask him to spell the word "world" backwards. The score is the number of letters in correct order. E.g. dirow=5, dlorw=3.

Recall

Ask the patient if he can recall the 3 words you previously asked him to remember. Score 0-3.

Language

Naming: Show the patient a wrist watch and ask him what it is. Repeat for pencil. Score 0-2.

Repetition: Ask the patient to repeat the sentence after you. Allow only one trial. Score 0 or 1.

3-Stage command: Give the patient a piece of plain blank paper and repeat the command. Score 1 point for each part correctly executed.

Reading: On a blank piece of paper print the sentence "Close your eyes", in letters large enough for the patient to see clearly. Ask him to read it and do what it says. Score 1 point only if he actually closes his eyes.

Writing: Give the patient a blank piece of paper and ask him to write a sentence for you. Do not dictate a sentence, it is to be written spontaneously. It must contain a subject and verb and be sensible. Correct grammar and punctuation are not necessary.

Copying: On a clean piece of paper, draw intersecting pentagons, each side about 1 in., and ask him to copy it exactly as it is. All 10 angles must be present and 2 must intersect to score 1 point. Tremor and rotation are ignored.

- For subjects 7-13 years and illiterate adults the Benton Visual Retention Test⁴ is recommended (for details see section 1c of 'Dementia').

Proxy-informant questions:

1. What do you think about the intellectual facilities of S.? (Good/Poor)
2. Does he/she seem to understand everything? (Yes/No)
3. Can he/she read, write and calculate? (Yes/No)

If answer to (1) is "Poor", or answer to (2) or (3) is "No", the following question should be asked:

4. Has S. ever been diagnosed as being mentally retarded? (Yes/No)

If question 4 is answered affirmative, a diagnosis of mental retardation can be given.

3. Mental disorders:

- a. As screening instrument the 12-item version of the General Health Questionnaire (GHQ) is recommended (the instrument is set out in 12.2).

If the GHQ-score is 2 or less, the following additional questions are recommended:

1. Do you take any tablets or medicines for your nerves? (Yes/No)
2. Do you consider that you suffer from a nervous illness? (Yes/No)
3. Do you feel that somebody has been trying to harm you in some way? (Yes/No)
4. Are you a much more important person than most people think? (Yes/No)
5. Have you noticed any interference or anything else unusual with your thinking? (Yes/No)
6. Do you hear voices without knowing where they come from or which other people cannot hear? (Yes/No)

If one of the six questions is answered affirmative, the remaining questions can be skipped and the interviewer can proceed with (b).

For proxy-informants the GHQ is not administered. Proxy-informants are asked the following questions:

1. Does S. take any tablets or medicines for his/her nerves? (Yes/No)
2. Do you consider that S. suffers from a nervous illness? (Yes/No)
3. Did S. ever tell you that he/she had the idea that somebody has been trying to harm him/her in some way (without obvious reasons)? (Yes/No)

4. Did S. ever tell you that he/she is a much more important person than most people think? (Yes/No)
5. Have you noticed anything unusual with S.'s thinking? (Yes/No)
6. Did S. ever tell you that he/she hears voices without knowing where they come from or which other people cannot hear? (Yes/No)

For these questions the same screen-skip procedure applies.

b. Instrument:

For adults and proxy informants the Diagnostic Interview Schedule (DIS) is recommended, selected chapters on Anxiety disorders, Schizophrenia and Affective disorders only.⁵

For children aged 6-18 years the selected chapters of the DIS-C (Children version) is recommended. The proxy-informants version for children is the DIS-P (Parent version).

For the use of the DIS there is a manual with extensive instructions (64 pages). Total administration time is 20-30 minutes.

12.2 Emotional well-being of the population (- recommended new indicator)

To measure the emotional well-being of the population the 12-item version of the General Health Questionnaire is recommended:

Introduction:

'We would like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks. Please answer all the questions simply by marking the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past'.

	<u>Score</u>
1. Have you recently lost much sleep over worry?	
- Not at all	0
- No more than usual	0*)
- Rather more than usual	1
- Much more than usual	1
2. Have you recently felt constantly under strain?	
- Not at all	0
- No more than usual	0*)
- Rather more than usual	1
- Much more than usual	1
3. Have you recently been able to concentrate on whatever you are doing?	
- Better than usual	0
- Same as usual	0
- Less than usual	1
- Much less than usual	1

4. Have you recently felt that you are playing a useful part in things?
- More so than usual 0
 - Same as usual 0
 - Less useful than usual 1
 - Much less useful 1
5. Have you recently been able to face up to your problems?
- More so than usual 0
 - Same as usual 0
 - Less able than usual 1
 - Much less able 1
6. Have you recently felt capable of making decisions about things?
- More so than usual 0
 - Same as usual 0
 - Less capable 1
 - Much less capable 1
7. Have you recently felt that you couldn't overcome your difficulties?
- Not at all 0
 - No more than usual 0*
 - Rather more than usual 1
 - Much more than usual 1
8. Have you recently been feeling reasonably happy, all things considered?
- More so than usual 0
 - About same as usual 0
 - Less so than usual 1
 - Much less than usual 1
9. Have you recently been able to enjoy your day-to-day activities?
- More so than usual 0
 - About same as usual 0
 - Less so than usual 1
 - Much less than usual 1
10. Have you recently been feeling unhappy and depressed?
- Not at all 0
 - No more than usual 0*
 - Rather more than usual 1
 - Much more than usual 1
11. Have you recently been losing confidence in yourself?
- Not at all 0
 - No more than usual 0*
 - Rather more than usual 1
 - Much more than usual 1

12. Have you recently been thinking of yourself as a worthless person?
- | | |
|--------------------------|----|
| - Not at all | 0 |
| - No more than usual | 0* |
| - Rather more than usual | 1 |
| - Much more than usual | 1 |

The GHQ-score is the sum of the scores on the 12 questions.

*³) In order to measure also chronic complaints, the score on these answers should be modified from 0 to 1. Alternatively, the questions mentioned in section 3a of indicator 4.6 can be added to the GHQ-12 for this purpose.

16.2 Nonsmoking population patterns

1. Do you smoke?
 - Yes, daily
 - Yes, occasionally (go to Q5)
 - No (go to Q3)
2. How many cigarettes do you usually smoke on average each day?
 - Does not smoke cigarettes (go to Q5)
 - Less than 20 (go to Q5)
 - 20 or more (go to Q5) [heavy smoker]
3. Have you ever smoked?
 - Yes, daily
 - Yes, occasionally
 - No (end)
4. How long ago did you stop smoking?
 - Less than 2 years ago (end)
 - Two years ago or more (end)
5. To current smokers identified by question 1.

Compared with two years ago would you say you now have reduced smoking?

 - Yes (reduced)
 - No

16.3 Average daily availability of energy (in kcal), lipids, proteins and carbohydrates (in grammes and as percentage of total energy intake), per capita (= recommended revised title)

Since food balance sheet data from FAO are used as instrument, it is advised to revise the original title of this indicator from "intake" to "availability" of nutrients. This to illustrate the contrast with a proposed new indicator for adequate nutrition (16.11), concerning the intake of nutrients.

16.4 Percentage of neonates having a birth weight of at least 2500g or more at birth

1. Is the child a twin or triplet?
 - Yes (multiple birth)
 - No
2. Was the child born before it was due?
 - Yes
 - No (Go to Q4)
3. Was that less than one month before it was due or more than that?
 - Less than a month
 - One month or more
4. How much did the child weigh at birth? (Record in grams)

16.6 Percentage of children breastfed at six weeks, three and six months of age

For each child between six months and four years of age, ask:

Was the child breastfed (include partial breastfeeding) at the age of:

	Yes	No
6 weeks	1	2
3 months	1	2
6 months	1	2

16.7 Physical activity patterns (- recommended revised title)

Leisure-time activity:

1. What describes best your leisure-time activities during the last year?
 - hard training and competitive sport more than once a week
 - jogging and other recreational sports or heavy gardening, at least 4 hours a week
 - walking, bicycling or other light activities at least 4 hours a week
 - reading, watching TV or other sedentary activities
2. At least once a week do you engage in any regular activity, such as jogging, cycling, etc. long enough to work up sweat? If yes, how many days per week?

Questions on occupational and household physical activity can be added (recommended instruments not yet available).

If a detailed assessment of physical activity is required, the Canada Fitness Survey Questionnaire⁶, adapted as necessary for different countries is recommended.

16.10 Distribution of body mass index (- recommended revised title)

What is your height without shoes? cm

How much do you weigh without clothes and shoes? kg

Pregnant women should be asked what their height and weight was before pregnancy.

Calculate BMI (kg/m^2) and classify into five categories:

BMI (kg/m^2)	under 18	(severe underweight)
	18 and under 20	(underweight)
	20 and under 27	('normal')
	27 and under 30	(overweight)
	30 or over	(severe overweight (obesity))

16.11 Average daily intake of fat (total and saturated) relative to total energy intake, by age and sex (- recommended new indicator)

Recommended instrument not yet available. Prior to measurement, it is advised to ask whether the respondent has a special diet or follows a particular dietary regimen (minimum answer categories: yes/no), and (for female respondents) whether the respondent is pregnant or breast-feeding.

Instruments for socio-economic classification

A Education

1. Number of years of full time education

For how many years did you attend school full time (exclude college)?

Not yet finished X
 No schooling/less than one year.. 0
 No. of years.. ...

Did you attend college or other full time further education once you completed school? How many years did this last?

No. of years.. ...

Note: in some cultures the difference between school and college may not be clear. A single question covering both provides the required data if such a question will work.

2. Qualifications

Do you have any of the qualifications shown on this card? A showcard and coding frame to be developed by each country with the aim of providing a 4 category classification:

No qualifications..	1
Qualifications at or below a lower secondary school level..	2
Qualifications at higher secondary school level..	3
Higher qualifications..	4

B. Occupation

1. IF EMPLOYED

(i) What was your job last week?

IF NOT EMPLOYED

(ii) What was your most recent job?

IF RETIRED

(iii) What was your main job?

Job title:

Describe fully (what do/did you do actually do in your job?):
.....

2 Are/were you an employee or self-employed?

employee	1	-(a)
self-employed..	2	-(b)

(a) IF EMPLOYEE

ASK OR RECORD:

manager.....	1
foreman/supervisor..	2
other employee.....	3

(b) IF SELF-EMPLOYED

Do (did) you employ any other people?

Yes..	1
No..	2

The answers to this question should be coded to 3 categories:

non-manual non-agricultural
manual non-agricultural
agricultural.

Preferably there should be 8 categories:

professional, senior officials
managers, associate professionals
junior non-manual, clerks
skilled manual
semi-skilled manual
unskilled manual
farmers
farm workers.

C. Economic position

1. Are you doing any paid work at present?

Yes..	1	- end
No..	X	- Q2

2. Do you have a paid job that you are away from at present?

Yes..	1	- end
No..	X	- Q3

3. Are you at present

waiting to take up a job..	X	- Q5
looking for work..	X	- Q4
unable to seek work because of		
temporary illness or injury..	3)
permanently unable to work..	4)
retired..	5) - end
at school or college..	6)
looking after the home or family..	7)
other..	8)

4. Have you looked for paid work at any time in the last 4 weeks?

Yes..	X	- i
No..	8	- end

i. If a job became available would you be able to start it within 2 weeks?

Yes..	2	- end
No..	8	- end

5. If the job was available now would you be able to start it within 2 weeks?

Yes..	2
No..	8

Code Category

1	working
2	unemployed
3	unable to seek work because of temporary illness or injury
4	permanently unable to work
5	retired
6	at school or college
7	looking after home or family
8	other

D. Income

1. I now want to ask about your total income (that is, the total income of all the people in your household).

i. One adult household

First, are you doing any paid work at present?

Yes.. 1
No.. 2

ii. Two or more adults

First, how many people in your household are doing paid work?

None.. 0
one or more.. 1

2. Are you (Is anyone in the household) receiving a pension from a previous employer?

Yes.. 1
No.. 2

3. Are you (Is anyone) receiving any state benefits?

Yes.. 1
No.. 2

4. Do you (Does anyone) have any other source of income such as interest, payment from other people, etc?

Yes.. 1
No.. 2

5.

i. One adult household

Can you please look at this card and tell me which group your total net income falls into.

I want you to include all your income - earnings, pension, benefits and so on - after deduction of tax, national insurance.

group no.. 1
refused.. 1
does not know.. 2

ii. Two or more adults

Can you please look at this card and tell me which group the total net income of all the people in your household falls into.

I want you to include all income - earnings, pension, benefits and so on - after deduction of tax, national insurance.

group no.,	
refused..	1
does not know..	2

It is recognised that to collect all the classification variables listed here may be too much. It is recommended that at least education be measured and if possible occupation and/or income as well.

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