

14-15 June 2011  
Helsinki,  
Finland

# Report of the EHES Joint Action Cultural Adaptations Workshop



Prepared by Johanna Mäki-Opas, Katri  
Kilpeläinen, Tarja Tuovinen and Sanna  
Ahonen

## Participants

Country	Participant
Czech Republic	Ruzena Kubinova
Finland	Satu Männistö, Katja Borodulin, Laura Lund
Germany	Antje Gößwald
Greece	Androniki Naska, Elisavet Valanou
Italy	Amalia DeCurtis, Francesco Dima, Chiara Donfrancesco, Simona Giampaoli, Cinzia Lo Noce, Luigi Palmieri
Malta	Neville Calleja
The Netherlands	Monique Verschuren
Norway	Nina Hovland
Poland	Grazyna Broda
Portugal	Ana Paula Gil, Eleonora Paixão
Slovakia	Maria Avdicová, Katariná Francisciová
UK, England	Nicola Shelton
Commission, DG Sanco C2	Elvira Göbel
EHES RC, Norway	Johan Heldal, Susie Jentoft
EHES RC, Italy	Susanna Conti, Mark Kanieff
EHES JA Coordination, and EHES RC, Finland	Kari Kuulasmaa Hanna Tolonen Katri Kilpeläinen Georg Alfthan Päivikki Koponen Sanna Ahonen Johanna Mäki-Opas Tarja Tuovinen

## TUESDAY 14<sup>th</sup> JUNE, 2011

*(notes for 1-9 by Johanna Mäki-Opas)*

### **1. Opening and welcome Adoption of agenda**

Kari Kuulasmaa, Leader of EHES, opened the meeting by welcoming the participants. He described briefly the background of EHES. EHES is a system for standardization of national HESs in European countries. There are also HESs ongoing outside the Europe in Canada, USA and Australia. Russia is starting the national chronic disease programme, where the surveys have a big role.

EHES started with a feasibility study (FEHES), and now we are in the pilot phase. The next step is the full-size HESs.

Kari went through the objectives of the workshop. The main idea is to review and discuss cultural differences in the countries' pilot studies or in full-size HESs and learn from each other.

Participants presented themselves.

The agenda was accepted without changes.

### **2. Experiences from EHES pilots: Germany**

Antje Gößwald told about the experiences in the German EHES pilot study. The pilot was a part of the full-size DEGS study. The DEGS study follows quite closely the EHES protocol, but there are some differences. The biggest challenges are in measuring plasma glucose and in the EHES questions.

EHES Questionnaire was sent to the participants beforehand as a self-completed additional questionnaire. The differences between the EHES questionnaire and the DEGS questionnaire will be evaluated and the results will be presented in the EUPHA conference in November 2011. The question

on household income was found difficult; this is something that needs to be discussed more.

Legal, ethical and data confidentiality was not a big problem. The informed consent form was adapted so that it has additional information about the EHES, and the participants were able to mark whether or not they would like to participate in the EHES part.

### **General discussion**

Kari told about the status of EHIS. The EHIS questionnaire will be modified for the next EHIS wave. The EHES RC will work more closely with the EHIS group. More information about the questions which will be included into the EHIS questionnaire was received just week before this Workshop. The EHIS questionnaire will be finalized by the end of 2011, but this is probably too late for some countries which are planning to start their full-size HES soon.

### **3. Experiences from EHES pilots: England**

Nicola Shelton told about the experiences of the EHES Pilot in England. The pilot was conducted as a part of the annual Health Survey for England (HSE) study. The biggest challenges were the adjustments of the HSE protocol to be comparable with the EHES protocol and still to make it possible to assess long time trends.

In HSE, fasting glucose is not measured, instead the HbA<sub>1c</sub> is.

The sample is a household sample which also differs from the sampling design recommended in EHES. At home setting it might be quite difficult to standardize the measurements, because conditions at home vary quite a lot and cannot be changed. Advantages are that participants feel more comfortable at their own homes and the response rate is higher.

#### **4. Experiences from EHES pilots: Italy**

Simona Giampaoli told about their experiences of EHES pilot. Italian EHES pilot is part of the full-size HES: Osservatorio Epidemiologico Cardiovascolare Health Examination Survey 2008 -2011. In the survey the sampling has been quite challenging as there are 20 regions in Italy. The survey uses local health care workers to conduct the measurements. The training of the local health care workers is demanding because they are not used to preventive work; they are working in hospitals. Training requires extra effort in order to standardize the measurements. The training is time consuming and also costly.

In Italy, the HES protocol used to have only two blood pressure measurements but it has now been changed to three measurements as recommended by EHES. Earlier, the blood glucose has been determined from serum but now also plasma glucose is measured to get comparability with EHES.

Finding good examination sites has been found difficult. Also the availability of needed equipment in different locations varies.

Overall, a good collaboration with the local health care professionals (GPs) has helped a lot during the survey. One big issue is the participation rate, which in some regions is quite low. It varies from region to region (41-73 %). Something should be done to increase the participation rate.

#### **5. Differences in sampling**

Johan Heldal told about the differences in sampling between the pilot countries. There is no 'one-size-fits all' for sample design, but they vary from country to country. But it is good to remember that the sampling design will impact to the results and their accuracy. Most countries are adopting a 2-stage sampling design, but there was also 1-stage and 3-stage designs.

Challenges in countries have been that suitable administrative and statistical units for creating Primary Sampling Units (PSUs) have been difficult to access in many countries and health centres sometimes cover areas which are too large to be feasible for a PSU.

Detailed documentation of the sampling is essential for EHES and also for other future surveys. Guidelines for this are available at EHES Wiki (<https://www3.thl.fi/wiki03/x/Orr8>).

## **6. Group work on sampling + Discussion**

Topics for the discussions were: existing sampling frames and their quality, differences between one stage and multistage sampling, and individual versus household sampling.

### **Summary of the group work and discussion**

Johan Heldal

- The sample size should be documented carefully.
- Household vs. individual sample: Only in England and Greece have a household samples.
- Mobile vs. permanent examination site: This also has implications to the sampling. This affects the construction of primary sampling units.

Susie Jentoft

- There were a lot of discussion about the sampling frame and the advantages and disadvantages of different sampling frames..
- Different experiences on who takes the sample. It can be outsourced or done by the survey organization itself.

Kari Kuulasmaa

- During the group work there was discussion about the population covered by the sample. For example regions are used in Italy and in Finland, so they are not fully national surveys.

- Most of the countries have good population registers, but in Greece they are using household sampling. In Portugal they are using the national health care registers, but the problem is that they exclude the persons who use services of the private health care sector.

The primary sampling units need to be established carefully so that people do not need to travel too far for the examination site.

The EHES recommendation is that if the survey organization cannot manage the sampling, they should contact statistical offices. The owner of the sampling frame varies between the countries. For example in Finland, even though THL would be capable for drawing the sample, THL does not have direct access to the population register.

The question of who do not participate to the surveys was asked. Is it mostly people who have long distance to the examination site who do not come? In Finland sometimes the older women who are widowed and who do not have a car anymore are not willing to participate. In Germany the feeling is that if a person really wants to participate he/she will come despite the distance. In Germany there is also a possibility for taxi service.

## **7. Experiences from EHES pilots: Slovakia**

Maria Avdicová told about the EHES pilot in Slovakia. The pilot was done at Banská Bystrica. The pilot survey was widely promoted in local media, there was a press conference, information on web, leaflets, posters and information was given to the GPs.

Home visit were offered for those who were not willing to come to the examination site, but this was not very successful. As in many other countries, the participation rate is a challenge: 55%. The low participation rate can be partly explained by unattractive examinations. It seems that motivation of the male respondents and persons with low education is difficult. In Slovakia it is not possible to give money as an incentive to the participants.

## **8. Experiences from EHES pilots: Czech Republic**

Ruzena Kubinova told about the experiences of the EHES pilot in Czech Republic.

The biggest challenge was the low participation rate: 52 %. The problem seems to be that it is difficult to find valid addresses. Furthermore, people do are reluctant to participate, and there is a negative attitude towards home visits. In order to increase the response rate, for example incentive was increased from 12 € to 20 €, with no influence on the response rate. Also access to the examination site was done as easy as possible.

In Czech Republic people do not like to invite strangers to their home. Before home visits, a letter with an announcement of date and time of the visit was sent, but people were not at home anyway, blocks of flats were closed and nameplates on the doorbells were missing. So as a conclusion at least in this pilot, home visits were not feasible and they did not increase the response rate.

The main motivation for participation was an opportunity to receive up-to-date information on their own health status. The participants received the results from their blood samples already next day.

## **9. Experiences from EHES pilots: Poland**

Grażyna Broda told about the EHES pilot in Poland.

The check list used in the pilot to verify that all the measurements were done worked very well. The measurement order was flexible for the participant so that the time used for the survey was as short as possible. For some measurements, the measurement order was fixed. All the respondent's documents were kept in one folder during the whole examination time to prevent the loss of documents and to ensure confidentiality.

In order to increase the participation rate, additional measurements were conducted, like ECG.

**10. Differences in ethical approval and informed consent**  
*(notes for 10-17 by Katri Kilpeläinen)*

Susanna Conti (EHES RC) presented the ethical approvals and informed consents that have been used in the pilots. Ethical approvals and informed consents differ from country to country. In most cases the informed consent was sent to the participant in advance, together with the invitation letter. Many institutions used their own Ethics Committee. The length of the informed consents ranged from very concise versions (a few sentences) to very long “booklets”. The content ranged from very overall to very specific. Issues that were mentioned in all consent forms were the description of the survey voluntariness, withdrawal at any time without explanation, only minimal risk (in blood sampling), telephone number and/or website to obtain further information, anonymisation of data, use for public-health studies and scientific publications. Some also provided information about specific law on protection of personal information, HES in general, blood sampling, storage of samples, receiving test results, informing GP, re-contact for further studies, explicit consent for use of personal data, and genetic testing.

In many countries there was a specific consent, e.g. for receiving the results, informing the GP, re-contact for additional studies, storing blood and urine samples in biobank, use of personal data, and use of samples for genetic analyses. In most cases the participants were willing to sign also a specific consent. In conclusion, all procedures and documents regarding ethical and legal aspects in the pilot studies adhered to the recommendations of FEHES/EHES. However, different choices have been made regarding the balance of information in informed consent and the method of providing the material.

## **11. Group work on ethical approval and informed consent + Discussion**

The duration of the Ethics Committee's approval process varied a lot between the countries (up to 10 months). Questions on wordings, home visits, and data treatment were the main things discussed. Norway might have lost some participants because their Ethics Committee did not allow NIPH to confirm the suggested times to the participants by phone call. If the organization had its own Ethics Committee, the process was faster. In most countries, the Ethics Committees have to be 'taught', as HESs are totally different from the clinical trials that the Ethics Committees are more familiar with.

## **12. Data transfer from countries to the EHES RC**

Hanna Tolonen (EHES RC) presented the data transfer system of EHES as the EHES RC data manager Ari Haukijärvi was excused. Definitions of the data items are available at the EHES Extranet at <https://www3.thl.fi/wiki03/x/BjzQ>. The definitions are organized in four blocs: sampling, eligibility, EHES questionnaire, and measurement data. A variable name, type of data, length of the variable, and definition of the variable are defined for each data item. The countries should now prepare data files based on the given definitions. If local questions or data items for measurements are not identical to the EHES recommendations, an algorithm how EHES data items are derived from local data items should be provided in a separate document. The raw data has to be sent by using the JAVA application, which can be uploaded from the EHES extranet in around August-September 2011. Before any data are transferred to the EHES RC, a data transfer agreement (DTA) will be made between EHES RC and the provider of the data.

Kari Kuulasmaa told that a draft "EHES Data Sharing Policy" is available. He has sent it to the national coordinators of EHES JA, Antoni Montserrat, Elvira Göbel and the personnel of the EHES RC. The draft is based on THL's earlier experience in multinational data sharing in various large-scale projects, on

the good discussion in the EHES JA Coordinators' meeting in March 2011, and on the active recent public discussion on the issue. The comments are welcome to Kari Kuulasmaa by 28th June.

### **13. Experiences from EHES pilots: Greece**

Androniki Naska presented the pilot experiences from Greece, which has no previous experience on the national HES. The pilot survey was carried out in March-June 2011. 270 individuals aged 25-64 years were selected to the survey. A full-size national HES is expected to be started in February 2012.

Challenges: The participation rate (42%) was the biggest challenge, although the bioimpedance measurement was used to motivate the participants. As in many big cities, also in Athens the participation rate stayed low. 36% refused and 23% could not be contacted. Many participants refused to give blood and urine samples. The data collection period needs to be extended from the current 30<sup>th</sup> June 2011. Household sampling was used, but it will be replaced by individual sampling in the full-size HES in 2012.

### **14. Experiences from EHES pilots: Malta**

Neville Calleja told that Malta has not had HESs conducted regularly in the past. The HES pilot was conducted in November-December 2010. The sample size was 400 persons aged 18 years and over.

A full-size national HES is planned to be organized in 2014 and proposed to be conducted along with EHIS.

Strengths: 1) Ministerial launch for the fieldwork, 2) multiple chat show slots on national TV to promote the survey and encourage participation, and 3) reasonably good participation rate (62%).

Challenges relating to the EHES recommendations: 1) Blood pressure measurement: Silent waiting time between BP readings resulted in increased anxiety levels and with higher second and third BP readings. 2) Undressing: Respondents were not comfortable undressing completely for weight assessment. One layer of clothing was allowed, 3) Explanation for

using doctors instead of nurses in Malta: Maltese are more comfortable with doctors, nurses are not easily available, and salary costs are less than for fully qualified nurses.

## **15. Experiences from EHES pilots: Portugal**

National HESs have not been carried out previously in Portugal. The EHES pilot was conducted in May-June 2010 in the Health Centre of São Brás de Alportel in the Algarve Region. The sample size was 600 persons aged 25 years and over. It is open if Portugal can conduct a full-size national HES in the next few years.

Strengths: 1) Use of a participatory method involving all actors from central, regional and local administration in planning, data collection and evaluation; 2) completed health diagnosis of the population in S. Brás Alportel; 3) the selection of the local health centre; 4) well prepared field team, motivated and closely supervised; and 5) the selected method increased participation: letter/leaflet and telephone contact.

Challenges: 1) Low response rate (40%), 2) blood sample transportation, 3) size and detail of the questionnaire (international guidelines versus local interests), 4) too few training hours (interview) and physical exam, and 5) replication at regional and national level experience.

## **16. Differences in the fieldwork organization**

Päivikki Koponen presented differences that the EHES RC team has observed during the site visits.

Management: In most countries one organization was responsible for everything (survey management, fieldwork coordination and data analysis etc). In the Netherlands and England different organizations were responsible for the fieldwork. In Italy and Portugal the fieldwork was organized with the local health care using local staff. Building up the network has taken a lot of time in the new countries.

Clinic vs. home visits: Norway carried out the pilot using a survey bus, England using the home visits, and the others using examination centres. Home visits were not considered feasible elsewhere than in England.

The main problems at the field sites included difficult access for disabled persons (e.g. stairs, no elevator) and privacy problems: same room divided for two or several measurement "points", personal information revealed in reception or waiting room area, questionnaires and forms easily seen, rooms not sound proof, other persons entering the room during measurements.

Personnel: One nurse took care of all measurements and blood sample drawing in the Netherlands and England. Elsewhere there was a team with specific tasks.

Training: Length of training varied in the countries from one to 10 days depending on tasks and previous experiences of the fieldwork team.

Questionnaire administration: Four countries mailed the questionnaire in advance, England made a separate interview visit, most of the countries handed in the filled-out questionnaire during exam visit, and two countries after the examinations. Six countries used both self-administration and interview. Greece made only interview. Three countries had a self-administered questionnaire, and the interview was computer assisted in four countries.

Timing: Morning/afternoon/evening/weekend appointments were available in most of the countries, morning/afternoon/evening appointments in three countries, and only morning appointments in two countries. It seems that the more flexible the appointment times are, the higher is the response rate.

Feedback and service to participants: Most of the countries mailed the results to the participant personally after several weeks or months. Two countries provided them already in the same day. Health promotion or advice was given in seven countries, and a snack or breakfast was offered in eleven countries.

Feedback from participants: Feedback was generally very good. In Finland there was also a feedback questionnaire. We should concentrate on the ones who don't show up. Feedback questionnaire could help to learn how to motivate participants.

General impression of the pilots: Clear division of tasks, efficient coordination, well trained dedicated staff, friendly interaction with participants, teams with a mix of skills: everybody is equally important (at "central office" and in the field), good collaboration with local professionals and between national organizations.

## **17. Group work on fieldwork organization + Discussion**

Many countries want to keep the examination part short. Home visits are not seen feasible in most of the countries. Reaching working aged people is not cost-effective, and poor quality measurements do not give any extra value. Evening visits are the only way to attracting people in some countries. There are no negative experiences from the local GP's, just positive comments. More media campaigns should be used to promote the survey in advance. Getting good quality examination places gets more difficult all the time. One solution for that is using a survey bus.

## **WEDNESDAY 15<sup>th</sup> JUNE, 2011**

*(notes for 18-24 by Tarja Tuovinen)*

### **18. Used recruitment methods**

Sanna Ahonen presented the recruitment methods that have been used in the pilots. All countries had an invitation or advance letter sent to the selected persons as a first contact attempt. The main difference was that in some countries the invitation was sent with the appointment time and in some countries without the suggested time. In most of the surveys where the invitation was sent without the appointment time, the survey personnel called to schedule the visit. A reply card was used in two surveys; when the participant returned the card, he/she was contacted by the survey personnel.

In about half of the surveys, a reminder or confirmation of the appointment was used. The most common way was to make a reminder call to the participant one day before the appointment. A reminder text message was used in one survey (Finland) to test the effect for participation rate. There were different approaches to reach participants who did not show up: letters, phone calls and also home visits in few countries. In some countries it is not possible to call to participants due to restrictions set by Ethics Committee (e.g. Norway), and in some countries it is hard to find telephone numbers, since mobile phone numbers are not listed.

The non-participants were asked for information in about half of the surveys, either by a paper form that was sent home or over the phone, if the person refused to participate. A web non-participation questionnaire was used in Finland as an alternative to the paper form.

Most countries promoted their surveys in different ways. A leaflet was sent to participants with the invitation letter in most countries. Media campaigns on TV or radio were used in four countries and in about half of the countries there were articles in local or national newspapers. Other promotion action was used as well, such as posters, contacting the local mayor, GP's and health authorities and spreading the word in other ways. Incentives, such as vouchers, cash or small gifts were given to participants in eight countries. Vouchers were given in England, Czech Republic, Norway and Netherland (6-

50 €) and cash was given in Germany (30 €). Usually the incentives were given after the examination.

## 19. Group work on recruitment methods

The topics for the group work were importance and forms of publicity, how examination appointment been given and has it been confirmed, incentives, and non-participants and non-participant questionnaire.

### Summary of group work and discussion

- Importance of publicity; press releases, TV and radio were used to inform about a forthcoming or ongoing survey. Invited people should be aware of the survey preferably before they receive the invitation. If the news release is done while the examinations are already ongoing, the examinations may be finished before people have enough time to react.
- Some countries had posters about the survey in pharmacies, supermarkets, hospitals etc.
- Some countries found it useful to contact local general practitioners, mayors or priest to inform about the survey (at least in small towns).
- Internet site of the survey is a good place to share more information to participants in addition to leaflets.
- Incentives were not found very attractive to participants in all countries, but in some countries they may have attracted the people who do not show up otherwise.
- Social media was used to some extent (YouTube). Facebook, Twitter etc. may attract young people but negative publicity in social media is a possible drawback.
- Training of personnel that contact participants to answer common questions and convert the refusals may improve participation rates and give a uniform impression of the survey.
- Offering attractive measurements in addition to the core measurements such as body composition, bone density measures and dental examination may be interesting for some participants.
- Non-participants could be tried to reach by home visits, letters, phone calls or internet questionnaires. If the participant is not

- reached during a home visit, it may also be effective to leave a card which includes information on the survey. Track should be kept on which stage the participant was reached.
- Up to date addresses or phone numbers are hard to find in some countries.
  - Feedback questionnaire can be used to estimate the effect and attainability of publicity.
  - Many countries are planning to improve publicity and recruitment methods in full-sized surveys.
  - It was considered too easy to refuse if invitation letter includes a non-response questionnaire.

**20. Experiences from HES pilots: The Netherlands**

Monique Verschuren presented experiences from the survey in the Netherlands. At first different leaflets were made to different age groups but participants found it unnecessary. So materials were improved accordingly. After noticing that response rate was very low, the survey was interrupted. Changes were made to the survey protocol to improve participation. Increased incentive and intensified recruitment methods increased a participation rate, but it is still a challenge.

**21. Experiences from HES pilots: Norway**

Nina Hovland presented experiences from the pilot survey in Norway which was conducted in a small community of Sotra close to Bergen. Mobile unit (buss) was used in pilot study. Also a dental examination was included in the pilot. This was requested and financed by the Ministry of Health. A low participation rate was a problem.

**22. Reference laboratory - external quality assessment**

Georg Alfthan presented the EHES Reference Laboratory activities and preliminary results of external quality assessment for five laboratories. Quality of the results was good and biases acceptable.

### **23. Differences in pre-analytic factors of blood sample collection**

Georg Alfthan presented observed differences in the pre-analytic factors in the pilot surveys. The centrifugation of the samples is recommended to take place within one hour from the sample collection. In the pilot surveys the time varies to up to 8 hours. This may cause problems with haemolysis of the samples (from mild to moderate).

Hemolysis should be avoided. Storage of whole blood in room temperature causes it. Hemolysis interferes substantially with many laboratory measurements.

### **24. Group work on blood sample collection + Discussion**

- The problem of hemolysis was discussed.
- The cost and way of shipment of samples are critical issues in many countries.
- Anonymity of the laboratory quality results in pilots, identifiable in full-sized study.
- Plasma glucose test tubes with fluoride-citrate: only one manufacturer at the moment and cannot be used in all countries.
- Differences in ways to collect samples were discussed: large timescale of transportation, serum/plasma glucose, when participants get the results.
- Use of standard kits in clinical laboratories may increase cost or constrict measurements.
- Ways of keeping samples in cold were discussed: picnic refrigerators, ice water etc.

### **25. Differences in blood pressure**

*(notes for 25-28 by Sanna Ahonen)*

Hanna Tolonen presented issues relating to blood pressure measurements in the pilot surveys. The mercury sphygmomanometer was used in three

surveys and different types of automated device were used in other surveys. There were differences in the number of the available cuffs between countries: some countries had three cuffs (as recommended), others two or one cuff. Also the size of the used cuffs varied according to the manufacturers. Other differences that were observed during the site visits were: the time before and between measurements and the position of the subjects during the measurements. More attention in the training should be paid to the right position during the blood pressure measurement. Very good positions were also observed. Some disturbances were observed such as noise from the traffic or people entering the room during the measurements.

## **Discussion**

Training was seen very important, since nurses are used to measure blood pressure very quickly. The time to rest before the first measurement (5 min) should be paid more attention to. Efficient training is also important so that nurses learn the right procedure and do not have to repeat the measurements. Double stethoscope is also very useful when training the personnel to measure blood pressure using the mercury sphygmomanometer (used e.g. in Italy).

Some discussion rose about the waiting time before and between the measurements, since in some countries the 5 min resting before the measurements and 1 min silence between the measurements may feel uncomfortable and blood pressure may even raise. It was mentioned, that some calm small talk may be better than complete silence. Also, to have something in front of the participants (e.g. a poster) gives participants at least something to look at.

## **26. Experiences from HES pilots: Finland**

Katja Borodulin presented experiences from the Finnish pilot. In the Finriski pilot survey (5.5-10.6.2011), some new features were compared to previous Finriski surveys; such as a text message reminder, matrix tubes for blood storage and Internet based questionnaire.

Strengths of the pilot survey included: participation rate of 63 % (random sample), no big differences when compared to the EHES protocol, skilled

“old staff” in field, toll free telephone service, data management system –a fast and practical tool (appointments were changed in the field, if needed), genetic part of the survey raised interest and good media coverage. Weaknesses were for example poor height measurement device, poor internet access in the field and the fact that some people were suspicious towards the genetic part of the survey. As in many other countries, decreasing participation rates, especially young men, is a threat (). The text message (SMS) reminder seemed to raise the participation; 67 % of participants who received the SMS reminder participated and 58 % of those who did not receive the reminder.

Lessons learned: ensure internet access, training (two weeks needed for blood pressure measurement), use SMS in the future and consider Saturday visits to increase the flexibility for scheduling appointments.

## **Discussion**

The decreasing participation rate issue raised discussion. Not all countries have the opportunity to find mobile numbers, so participants can not be reached by phones. In the Finriski survey, the numbers were bought from a private company. In the invitation letter, the process of receiving the numbers was explained to the participants, and participants did not have negative attitude towards that information. People seemed to be pleased to receive the SMS reminder.

## **27. Differences in anthropometric measurements**

Johanna Mäki-Opas presented observations on anthropometric measurements in the pilot surveys. Different devices were used for height measurements, but the most common was the portable stadiometer. Other devices were: measuring tape fixed on the wall, height measurement device combined with scale and automated height device. The most common device for weight measurement was the electronic scale. Three of the countries used the beam balance scale. In Greece the bioimpedance device measured the weight.

More attention should be paid to checking the calibration of the devices, since only a few countries did it as recommended in the EHES Manual.

During height measurement, the position of the subject should be checked carefully. The waist measurement was done as recommended (from the bare skin) in most of the countries. More training is needed to find the right place for the measuring tape; the right place should be palpated according to the instructions.

## **Discussion**

It is challenging to find a better portable height rule to replace the Seca device that was used during the pilot surveys in most of the countries. The biggest problem of Seca device was the unsteadiness. The best way to measure height for the time being is to fix a measuring tape on the wall.

Undressing seems to be an issue in many countries. Only in few countries the participant was asked to wear underwear during the weight measurement. It was discussed that it should be recorded, if the participant is using clothes (other than underwear) during the weight measurement.

There is a new device available for blood pressure measurement: UM-101 Mercury-free sphygmomanometer, but it needs more testing. It may be one option as a blood pressure device in the future if the mercury device will be banned in Europe.

## **28. Summing up the workshop**

Kari Kuulasmaa made a summary of the discussions of the workshop. Recruitment of the participants is one of the key issues and it is very challenging due to the decreasing participation rates. During the workshop many good examples were presented (what works and what does not) and also some new ideas were shared. Participation rates will never be perfect, but it is necessary to find feasible methods to recruit those population groups which otherwise participate insufficiently in the survey. It is also important to evaluate how valuable are the data that have been collected with the existing participation rates.

During the workshop, the importance of training was stressed many times. Proper training is essential to be able to follow the same procedures in blood pressure measurement and also with other core measurements. The EHES Manual gives clear instructions for all measurements. The requirement of

fasting is problematic for the measurement of blood glucose. Measurement of glycated haemoglobin will solve the problem in the future, but for the time being it is quite expensive. The EHES RC will make recommendations as soon as possible about what test should be used in the future.

Questionnaire issues; It is desirable for EHES to use questions from EHIS where these meet the needs of EHES. However, the EHIS questionnaire is expected to be finalized only by the end of this year. EHES will have to make decisions on the questions earlier.

Sampling issues: It is recommended to seek professional help from the persons who know the local situation best and also from Johan Heldal/EHES RC.

Why do we need EHES? Many countries have expressed that there is a strong demand of results of health examination surveys. Collaboration between countries on the recruitment issues and on other issues in all levels gives more possibilities to solve problems and share fresh ideas. Furthermore collaboration is needed to achieve comparability between countries.