EHRM final report, Appendix 5:

European Health Risk Monitoring Project

First Meeting of National Principal Investigators

9-10 February 2001, Hotel Arthur, Helsinki, Finland

Minutes

Present:

Austria	Günter Diem, Hanno Ulmer
Belgium	Stefaan De Henauw
Denmark	Aushra Shatchkute (WHO/EURO), Torben Jørgensen
Finland	Arpo Aromaa (9 February, only), Zygimantas Cepaitis, Dimitrije Jakovljevic, Pekka Jousilahti, Päivikki Koponen (9 February, only), Kari Kuulasmaa, Tiina Laatikainen, Markku Mähönen, Pekka Puska, Marketta Taimi, Hanna Tolonen, Erkki Vartiainen, Tuula Virman-Ojanen
France	Philippe Amouyel, Michèle Montaye
Germany	Lothar Heinemann, Ulrich Keil
Greece	Antonis Kafatos
Ireland	Sharon Friel, Cecily Kelleher
Italy	Diego Vanuzzo
Netherlands	Monique Verschuren
Portugal	Leonor Murjal
Spain	Susana Sans
Sweden	Lars Wilhelmsen
United Kingdom	Alun Evans, Hugh Tunstall-Pedoe
Czech Republic	Renata Cifkova
Estonia	Mihhail Zemtsovski
Hungary	Endre Morava
Norway	Grethe Tell
Poland	Grazyna Broda, Stefan Rywik
Switzerland	Brigitte Bisig, Regina Winkelmann (WHO)

Officers:

Ulrich Keil was appointed Chairman on Day 1, Philippe Amouyel on Day 2. Alun Evans acted as Rapporteur.

Opening of the meeting

Ulrich Keil introduced the Meeting, handing over to Professor Puska who formally opened it. As Director General of KTL he welcomed Delegates to the Meeting. He explained that he would be shortly leaving to take up a post in WHO in Geneva and Kari Kuulasmaa would take over as Director of the European Health Risk Monitoring Project (EHRM).

Professor Puska related how EHRM would form one of the cornerstones of the incipient European Health Monitoring System which was being set up in conjunction with Health and Consumer Protection DG (SANCO) in Luxembourg, EU member states and the European Regional Office (EURO) of WHO in Copenhagen.

Adoption of agenda

The Agenda was adopted.

Health Monitoring Programme of EU

Arpo Aromaa, a member of the Programme Committee, gave an account of the Health Monitoring Programme of the EU. It is one of nine EU public health programmes, which also include health promotion, cancer, drug dependency, AIDS and other communicable diseases. The Health Monitoring Programme aimed to contribute to the establishment of a community health monitoring system which would measure health status and facilitate member states to gain appropriate information for drawing comparisons and to support national policies.

The Programme Committee is large with two members per country. He was critical of the current state of co-ordination. He wanted to see better dissemination of information on what is going on, and saw a desirability in developing a generic monitoring system. The Programme Committee had the job of deciding which applicants were the most appropriate in the member states to carry out research. Proposals were vetted and, where necessary, when projects overlapped, they were amalgamated, without taking into account the compatibility of the PIs involved.

The aims of the Health Monitoring Committee were to improve:

- Definitions.
- Information gathering.
- Analysis and interpretation of data.
- Dissemination of information.

The background of European Health Monitoring is:

- WHO: Programmes, Health for All indicators, MONICA and EUROHIS/HES.
- OECD: Reports, Databases, etc.
- EU: Public Health Policies, Agencies, Research Proposals, EUROSTAT.

From 1997-2001 the Programme attempted to:

- Establish European Community Health Indicators (ECHI).
- Develop a community-wide network for sharing health data.
- Analyse and report.

The budget is 2.8 million Euros per year. The Programme had funded a number of surveillance projects e.g., on breast feeding monitoring, collecting data on morbidity, hospitals, CVD, musculoskeletal disease and mental health. Indicators include demographics, socio-economic status, health status, personal and biological factors, lifestyle, disease prevention, health and social services and social security. Generic health statistics included self-assessed health, long-standing illness and general quality of life. Composite measures were for example, disability free life years. The EU Public Health Programme from 2003 onwards would be based on three strands:

- Health Promotion and Information.
- Rapid reaction to health threats.
- Health Monitoring.

Introduction for European Health Risk Monitoring Project: Current status and need for the risk factor surveys in Europe

Pekka Puska stated that there were survey programmes operating in the EU, MONICA and CINDI being most important. He pointed out that if we were to rely on setting up entirely new networks there would be no trend data until 2010. Therefore, continuation of the existing surveys would be important.

This was the first Principal Investigators meeting of EHRM and most were present, with Norway and Lithuania as observers. The original proposal for funding of EHRM had been made in May 1998 and word of success had come through in June 1999. The Project had begun in January

2000. The major aim of EHRM was to advise on risk factors for inclusion i.e. to make expert recommendations based on what has been done to date, and to plan indicators and mechanisms for co-ordinated, collaborative monitoring of populations. This would analyse existing data relevant to EU member states. It was thought that this would lead to a training meeting of some kind, which would have a high visibility.
It was important to avoid duplication as there were other programmes running covering alcohol, physical activity, nutrition etc.
The election of three Principal Investigators to the Steering Committee was to take place on Day

2. All three serving currently were eligible for re-election.
Pekka Puska continued that risk factors were of great importance but often not to the politicians. Ulrich Keil recalled the experience of EUROASPIRE where a systematic 13% difference between United Kingdom and Belgian cholesterol results was shown, and he felt that the absence of a Lipid Reference Laboratory in Europe was a serious disadvantage. Diego Vanuzzo stressed the importance of lobbying to make good such a deficiency. Hugh Tunstall-Pedoe stressed the importance of precision in risk factor measurement as small differences were highly important at a population level. Ulrich Keil thought that the organisation of NHANES was the approach which was desirable, i.e. quality control with a good definition of instruments. Diego Vanuzzo wanted standardisation on EUROASPIRE and wondered if there should be a representative on the Steering Committee but this did not receive support. Philippe Amouyel enquired as to how the EHRM recommendations might become the gold standard. Pekka Puska thought that building on MONICA methodology and then high visibility and marketing should do the trick. Mention was made of the forthcoming Third Edition of Cardiovascular Survey Methods. Ulrich Keil was to review it and had downloaded it with difficulty. It runs to 295 pages.
Arpo Aromaa raised the question of National focal points for monitoring. Erkki Vartiainen thought that that in future monitoring should not be done from research budgets, but it should be done in the civil service setting, although in the latter case, there tended to be a lack of expertise. Hugh Tunstall-Pedoe pointed out that then the unavailability of data to scientists was a problem in the UK. Susana Sans felt it was important not to be prescriptive as the best way of conducting the monitoring may be different in different countries. Collaboration between the civil service and academics is important. For the Product 1, various surveys had been looked at including MONICA, and in particular the Netherlands Survey, the German National Health Survey, the UK Surveys and the USA NHANES. Torben Jørgensen wanted to know why Tromso was not present. Other examples given were that of the Italian Epidemiological Surveillance System for CVD based on 50 centres in Italy, run by Diego Vanuzzo and Simona Giampaoli. Hugh Tunstall-Pedoe gave an overview of the surveys in Scotland and England and opined that a central mechanism for appointing the groups to carry out survey work was important. It was agreed that Finland was ahead of most other countries in monitoring, thanks to the efforts of the National Public Health Institute (KTL).

Objectives and current status of Product 1 and Product 2

Kari Kuulasmaa described the EU Health Monitoring Project's Co-ordinators Meeting which were held on a biannual basis. He then went on to describe Product 1 which was the review of surveys which were being carried out in Europe, i.e. analysis of experience so far. Product 2 would be in the form of recommendation for indicators, international collaboration, protocol and manual of operations, and particularly for recommendations for chronic disease risk factor surveys. Product 1 extended to 14 sections, with Measurements, Methods, Quality Assessment, Indicators used for reporting the results, Discussion and Conclusions.

Risk factors to be considered in the Project and recommended indicators

Kari Kuulasmaa described the draft list of indicators. Discussion took place as to the appropriate age range. It was felt that 35-75 was most appropriate in view of an ageing population. The inclusion of the 25-34 year age group would be taken up by the Steering Committee at a later date. Other categories by which the risk factors should be presented were geographical area, education and income. Susana Sans wanted to see weight at birth included as a measure of life-course events. This did not seem feasible although no decision was taken. Nationality was also considered but felt to be difficult but civil status, particularly to identify people living alone should be included. In respect of income Torben Jørgensen stated that Danes did not report their income accurately, but, in Finland, Erkki Vartiainen commented that strong gradients between health and income were present. Susana Sans wanted to see the use of simple measures of socio-economic status i.e. broad groups of income. Aushra Shatchkute described the experience in CINDI and that biological factors were extremely difficult to collect in children and, therefore, the thrust should be put upon behavioural factors in this age group. Kari Kuulasmaa commented that the minimum dataset was the most useful, Pekka Puska adding that 'less is more'. The suggestion was made by Susana Sans that the age range should be reduced to 20 years in order to learn more about smoking patterns in the young (particularly females). Torben Jørgensen wanted to see lists of new factors, e.g. self-perceived health. Hugh Tunstall-Pedoe saw practical difficulties in extending the age range e.g., mobility. Ulrich Keil inquired as to the decision process and after some discussion it was agreed that this lay with the Steering Committee. Endre Morava stressed the importance of extending the age range into the young. Pekka Jousilahti also saw importance in screening the young and Erkki Vartiainen felt it was useful for baseline purposes.

Kari Kuulasmaa discussed the 'primary' data which would be obtained in all future risk factor surveys and 'secondary' or optional data which was deemed useful but may be difficult to collect where the impact on risk was less clear. For blood pressure the 'primary' indicators would be mean systolic and diastolic blood pressure, prevalence of hypertension, treatment of hypertension and drug therapy. There was a general agreement to collect the data continuously, as, although cut-points could be recommended, they might change in the future. Diego Vanuzzo wanted the major drug groups identified and there was a suggestion to include non-pharmacological treatment of hypertension, although it was felt that this would be difficult to define. Susana Sans thought that awareness, treatment and control of blood pressure was of importance and should be seriously considered as a primary indicator.

The main lipid indicators were mean total cholesterol, prevalence of total cholesterol >5mmol/l, prevalence of drug prescription, awareness of raised total cholesterol, prevalence of raised total cholesterol in the last five years in the population. Pekka Puska declared that these indicators decided upon would be accepted by the EU. Torben Jørgensen remembered the problems of cloudy control HDL samples sent from Prague in the past. Hugh Tunstall-Pedoe recalled the problems with HDL and the MONICA results were very variable. Erkki Vartiainen agreed that there were similar problems with HDL in Finland but newer techniques were being developed. Diego Vanuzzo wanted to see the collection of types of cholesterol lowering drugs. Cecily Kelleher pointed out the power problems in assessing drug prevalence. Hugh Tunstall-Pedoe raised the subject of cholesterol lowering margarines - how should they be classified?

In the afternoon, Kari Kuulasmaa reviewed yet more indicators. Obesity would be defined as BMI $\geq$ 30 and optionally there would be other BMI categories. Waist/Hip should be included and possibly the prevalence of large waist/hip ratios, i.e. men 0.95, women 0.80 and mean height and girth (Waist would be the primary indicator). Ulrich Keil described a tidal wave of obesity which was approaching from the USA and threatening to engulf Europe. Endre Morava wanted to see very tall people categorised as he believed they are more disease susceptible. Antonis Kafatos stated that skinfold thickness was a good indicator. Hugh Tunstall-Pedoe didn't like the use of ratios such as waist/hip. Again the desirability of collecting continuous data was stressed. Susana

Sans thought that waist measurement on its own was a powerful indicator. Günter Diem wanted to see a firm list of indicators before he departed from the Meeting but was told that the Steering Committee would take the deliberations into account before deciding.
Kari Kuulasmaa next turned to smoking. The prevalence of daily smokers, never daily smokers and ex-daily smokers would be primary indicators. After discussion it was agreed that there should also be prevalence of such three measures for cigarette smoking. This would facilitate comparison with the past, when the emphasis was often on cigarette smoking. Also, other factors included health professionals' advice on quitting, environmental smoke exposure, whether at work or in the home. Antonis Kafatos wanted years of smoking added. Pekka Puska thought that how much was smoked and how much was inhaled was important, but difficult to measure. Torben Jørgensen wanted the amount of tobacco smoked recorded in grams.
The discussion then turned to daily aspirin, HRT in the 45-64 year old age group and glucose, indeed Jaakko Tuomilehto had wanted to see a glucose post-challenge i.e. a tolerance test. Torben Jørgensen wanted to see a measure of insulin as well as glucose. Kari Kuulasmaa saw glucose as a secondary measurement, as anything to do with fasting makes holding screening clinics more complicated. Lars Wilhelmsen suggested non-fasting glucose and then recalling subjects with suspicious results. Antonis Kafatos thought that HbA1c was useful and this was supported by Diego Vanuzzo. Cecily Kelleher suggested that this might not be useful at the population level.
Other indicators were reviewed such as homocysteine and fibrinogen. Monique Verschuren pointed out that homocysteine samples required rigorous preparation, and Hugh Tunstall-Pedoe said that fibrinogen measurement was hard to standardise. Philippe Amouyel pointed out the high cost and it was decided to omit these factors. Torben Jørgensen stressed the importance of past history etc. Pekka Puska wanted to include only straightforward factors. Susana Sans wanted parity to be recorded. Cecily Kelleher made a renewed plea for fibrinogen inclusion. Pekka Puska recommended cotinine for assessing environmental tobacco smoke. He reminded that EHRM would only be part of the overall European Health Monitoring System but it was up to EHRM to recommend the risk factors to be surveyed.

Surveys included in the review

Dimitrije Jakovljevic introduced the surveys which were chosen for the review of methods in Product 1. They included WHO MONICA and CINDI, MORGEN and other surveys from the Netherlands, the German National Health Survey, the national health surveys in England and the Health Survey for Scotland, the Health and Social Well-Being Survey in Northern Ireland and lastly, NHANES, USA. Hugh Tunstall-Pedoe pointed out that Scotland had started with the Scottish Heart Health survey in the 1980s, and the methods were changed for the current surveys. Diego Vanuzzo again gave a short account of the Italian Study involving 7,000 men and women reported for 30 of the 50 participating centres. Grethe Tell of Norway described the TB screening system which had been translated to CVD surveillance since the 1970s. It was country-wide and involved large population samples. There was a question whether these should be included in Product 1. Further surveys were discussed including Switzerland by Brigitte Bisig and Spain by Susana Sans. Several risk factor surveys had been carried out in different parts of Spain using MONICA methodology and trained personnel. Päivikki Koponen described the HIS/HES surveys in Finland, information was not yet available. Kari Kuulasmaa felt that all risk factor surveys which had national relevance should be listed. It should be made perfectly clear that the major studies listed above had been singled out in the general review. Pekka Puska pointed out that the main interest was in methodology rather than the overall review. The recommendations if based on good reviews would have the greatest relevance.

Representativeness of the survey sample

Kari Kuulasmaa then reviewed the representativeness of the target population. This was important, i.e. geographical region, age, population sub-groups, residence: permanent-temporary, citizen/non-institutionalised etc. Hugh Tunstall-Pedoe felt that everyone in a population should be included as they contributed to morbidity and mortality. Ulrich Keil described the over-sampling to bolster representation of minority groups in the United States. Kari Kuulasmaa pointed out the importance of the sampling frame, sample size and response rates. It was sufficient to have about 250 individuals in each 10 year age/sex cell. There wasn't much point in going for larger samples due to imprecision of measurement. The importance of standardisation and the good response rates was stressed.

Measurement of the risk factors

Blood pressure

Erkki Vartiainen discussed blood pressure measurement. Only the UK and Scotland used electronic devices. It was unclear to which sounds they are responsive. He recommended the standard mercury sphygmomanometer with the mean of the second and third measurement using phase I and V. Cuff size had to be discussed but 3 sizes seemed enough. Hugh Tunstall-Pedoe reviewed various techniques, the random-zero machine versus the standard Hg sphygmomanometer, and the dangers and problems of mercury were discussed. It was felt that this had been exaggerated although there were rumours that the EU might ban such devices. Ulrich Keil reported that Hans-Werner Hense was coming round to recommending automatic devices. Torben Jørgensen said that rest was important but subjects should not be rested for too long. He had also shown, counter-intuitively, that venipuncture before measurement actually resulted in a lower blood pressure reading as the reverse had always been thought to be true. Susana Sans stated that there was less digit preference with the random-zero device although there was systematic under-recording with its use.

Lipids and blood glucose

Kari Kuulasmaa turned to lipid and blood glucose measurement, discussing season, plasma versus serum, enzymatic methods, subject position, and storage which were all important determinants in MONICA. He recalled that the biggest change in serum cholesterol in the centres was associated with the poorest quality scores; HDL cholesterol had fared even worse. The problems of including LDL cholesterol were discussed. The major problem being that of fasting which had important implications for time of screening and also for blood pressure measurement. It seemed that the direct measurements of measuring LDL cholesterol was very variable but might improve. However, Hugh Tunstall-Pedoe said that it was shown in the Scottish Heart Health Survey that non-fasting triglyceride defined risk well. Also, non-HDL cholesterol might be of prognostic significance. It was again stressed that the lack of a European Lipid Reference Laboratory was a deficiency which should be remedied.

Smoking questionnaire

Pekka Puska defined smoking as at least once per day. The new smoking questionnaire was based on the latest WHO recommendations which he had helped draft. He stated that percentage who lie about their smoking was very small. Validation by a chemical method was unnecessary although it was agreed that in the secondary prevention setting it still had a place.

Anthropometric measurements

Tiina Laatikainen then reviewed the anthropometric measurements which were height, weight, waist and hip. The types of standard weights to be used for quality assurance would be discussed. Hugh Tunstall-Pedoe noted the problems of different types of scales i.e., screening in the home, usually meant small, domestic, inaccurate scales. It was recommended that the trousers should be

removed, and Susana Sans observed that the presence or absence of shoes has a large impact on the BMI: shoes must be removed.

Socio-economic status, awareness and treatment of hypertension, awareness and treatment of high cholesterol, use of aspirin, use of hormone replacement therapy and questionnaire design

Hanna Tolonen reviewed socio-economic factors. In MONICA these were years of education and highest educational level achieved. There were major differences between NHANES and the UK surveys (NHANES included the name of the employer). It was recommended that family income and occupation should be included. Hugh Tunstall-Pedoe inquired whether post codes might be used as these could be useful markers of socio-economic factors. Diego Vanuzzo wanted categories of income. Cecily Kelleher reported that there were two groups making recommendations, one EU based and the other was the European Science Foundation Social Variations Group. Kari Kuulasmaa would make specific enquiries about these. Susana Sans felt that income is a variable difficult to record in certain countries due to data protection and confidentiality laws, and that for this reason it would be hardly comparable, and its usefulness for this reason limited. Ulrich Keil wanted employment status to be kept.

Turning to questionnaire surveys of hypertension, there were large variations between the studies reviewed. For blood pressure measured in the past five years, the classification would be 'Yes', 'No' and 'Don't Know'. There would be also similar coding for drug treatment to lower blood pressure. Torben Jørgensen wanted to have raised blood pressure in pregnancy recorded although Pekka Puska felt that modification of the 'Have you been told that you have raised blood pressure in the past 12 months?' covered this. The aim was to raise concern about levels of awareness, treatment and control of hypertension. Non-pharmacological treatment was too variable to record. Stefaan De Henauw wondered if who measured their own blood pressure should be identified. Diego Vanuzzo again wanted to have a classification of the drugs employed. Susana Sans returned to the subject of hypertension in pregnancy and wanted to see special questions to cover this. Erkki Vartiainen wanted to see cholesterol value recorded. Alun Evans pointed out that if he had hypertension and it was controlled, and his doctor told him that his blood pressure was normal, he could not answer that a doctor told him he had hypertension in the past 12 months. Therefore, it was decided to recategorise the answers to 'Told by professional' question concerning blood pressure to 'Less than one year', 'Less than five years', 'Ever' and 'Never'.

Next aspirin was discussed and it was agreed that it was widely used in secondary prevention. Susana Sans thought that a large proportion might be taking it for other reasons than primary prevention. Pekka Puska wanted it kept in as it was a common drug. Kari Kuulasmaa said he would be very happy to drop out anything that was unnecessary. Erkki Vartiainen wanted it included as these data could not be derived from the Register. Cecily Kelleher suggested that if aspirin was included, HRT should also be included. Hugh Tunstall-Pedoe commented 'Why not a lot of other drugs'.

The HRT questions were reviewed and Hugh Tunstall-Pedoe said the question was ambiguous. Diego Vanuzzo stated that it could also be taken transdermally and indeed there were a number of other routes. It was suggested to include years on HRT.

Lastly, general aspects of good questionnaire design were discussed. Torben Jørgensen stated that diabetics status should be recorded.

Election of the members of the Steering Committee

Ulrich Keil and Philippe Amouyel were re-elected to the Steering Committee. Simona Giampaoli was elected in her absence, in place of Giancarlo Cesana.

WHO: Stepwise approach to risk factor surveillance

Regina Winkelmann of WHO, Geneva gave an account of WHO global NCD risk factor surveillance. She showed that the international trends in disease and disability would result in cardiovascular disease becoming dominant very soon, along with unipolar disease and road traffic accidents. WHO had a co-ordinating role and did not carry out research itself. She described the arrangements of the NMH (non-communicable disease and mental health cluster). The rationale of the risk factor proposal was that they predicted the diseases of tomorrow. They took a step-wise approach with data sets that could be supplemented locally. Step 1, minimum set questionnaire only, demographic age, sex, locality (smoking, alcohol, physical activity, self-reported weight and height). Step 2 measured weight and height, abdominal girth, waist and hip (blood pressure, finger prick cholesterol and glucose). Step 3 venipuncture-cholesterol, HDL cholesterol, triglyceride, glucose (fasting specimen). Training packages were being prepared and training centres designated with pilot studies being carried out. In addition, it was planned to network with existing risk factor activities and databases world-wide. Risk factor surveys would be repeated to assess trends. Issues of quality control, advice on choice of target populations and of sampling were being addressed.

Conclusions from the first day and discussion

Alun Evans with the assistance of Kari Kuulasmaa then reported on the first day and a half of the meeting and gave the main Action Items in relation to Indicators and Measurements:

1. Indicators
    - Breakdown
        - age range 35-74 years. Refer 25-34 years to Steering Committee.
        - Socio-economic status - use broad classes - work with other Projects
            - Income - reservations.
            - Education
            - Marital status - dwelling alone or not.
            - Employment - reconsider
    - Add weight (which is measured anyway). Waist circumference - primary . Cigarette smoking - primary. Glucose - secondary.
    - homocysteine and haemostatic - out.
2. Measurements
    - Surveys reviewed - provide info on other recent national surveys: Italy, Switzerland, Norway?, Scottish Heart Health Survey, Finnish Health 2000 survey.
    - BP standard mercury sphygmomanometer - three cuff sizes - discuss. Two measurements.
    - Lipids - proposal for a reference laboratory
    - Smoking, using the attached questionnaire, but discuss first with HIS Project which may make a competing proposal.
    - Anthropometric - removal of shoes and trousers.
    - Socio-economic status - bring feedback to other projects - use broad bands of income, occupation - questions to be tailored nationally to suit. Compare with questions in the HIS Project.
    - High blood pressure - last 1 year - five years - ever - never.
    - Aspirin keep, HRT- review, check with HIS Project

Organization of local surveys

Tiina Laatikainen opened a review of the organisation of local surveys. The time of day of screening was important. Hugh Tunstall-Pedoe stressed that it was wise to have continuity of staffing for quality control purposes. Diego Vanuzzo made a plea for more cohort surveillance and Ulrich Keil maintained that five years was a good interval between surveys. There was a general consensus for five-yearly screening. Again there were problems with continuity of staff. According to Susana Sans the answer was to do sub-studies in between. An alternative approach would be a rolling five-year strategy. Endre Morava ingeniously suggested that five years was good spacing as it matched the five year reporting of mortality data. Discussion ranged over the best survey sites. If early morning fasting samples were required, the subject's home would be suitable, although more precise, heavier, anthropometric equipment was effectively ruled out. Susana Sans felt it better to have one's own facilities for screening. Hugh Tunstall-Pedoe was worried about the effects of home versus office screening on blood pressure etc. Order of measurement was discussed. Hugh Tunstall-Pedoe said the topic of Informed Consent was a problem, whereas Brigitte Bisig was more concerned as to how to maintain a good response rate. Susana Sans pointed out that blood pressure should not be measured with patients fasting and, therefore, two visits might be necessary, circumstances which applied to the choice of service personnel with preferably central training; quality assurance was important. Susana Sans stressed the usefulness of site visits in the detection of problems. Kari Kuulasmaa observed that "The less you know about the data, the easier they are to analyse". Problems of local survey organisation such as transport of equipment, personnel and samples was discussed. Kari Kuulasmaa shrewdly commented "Preparation is everything". Other ethical and legislative issues were reviewed e.g., the European Commissions position on consent (or lack of it) for such surveys. Pekka Puska stated that EHRM would make authoritative statements on survey work. Hugh Tunstall-Pedoe wanted to see ethical issues and quality control discussed prominently at the beginning of the document.

International collaboration

Pekka Puska introduced international collaboration and stated that the core primary group of indicators should be small and essential. The European Commission was anxious that national focal points would set up to marshal the data, e.g. the National Public Health Institutes of Finland, Italy or the Netherlands. Quality control was crucial but how could it be strengthened? The EHRM Steering Committee was in a key position to achieve this. Diego Vanuzzo asked if the European Commission could invest in user-friendly software. Philippe Amouyel recommended EpiInfo, but then agreed that it was not perfect. Kari Kuulasmaa stated that the European Commission would like a proposal on how to organise the data, either locally or centrally or at some half-way house. Erkki Vartiainen wanted to see a European conference with a central team putting some data together, a European Lipid Reference Laboratory and international training. Stefan Rywik advised that information on the EHRM Project could be disseminated when the surveys started. Pekka Puska asked 'How was the decision making process going to take place?' and 'How long would it take to get formal documents?'. The collection would be at a national level. Training was critical. Was there to be a European health observatory with one central unit? What were the crucial indicators? He told the delegates that they represented the expertise. Cecily Kelleher said that if there was a lack of money in the member states, when things got tough, quality control would suffer. She wanted to see standardised laboratories in individual countries; lastly, what was planned was not a typical epidemiological study. Pekka Puska spelt out the reality of how the European Commission operates. Hugh Tunstall-Pedoe saw precedents in the training in ICD coding workshops and was worried about the ethics of disclosing results, benefit or otherwise to patients and to outsiders. He was pessimistic about the use of Family Medicine data and he was worried about how to diffuse training at home. Antonis Kafatos felt that the time was ripe for a European Health and

Nutrition Examination Survey. Cecily Kelleher wanted to see the approach integrated into public health policy. Susana Sans believed that the data must be collected purposefully. Aushra Shatchkute mentioned a current study rejoicing in the name 'GLORY'. Kari Kuulasmaa stated that monitoring in individual countries should be done by those who were motivated and also knew how to do it. Dimitrije Jakovljevic addressed the importance of co-ordination and lastly Aushra Shatchkute reported that EURO was preparing country health profiles based on the CINDI data.

Product 3 and training seminar

Kari Kuulasmaa discussed Products 3 and 4 and showed a flow diagram. Products 3 involved analysis of existing data e.g., based on the EU Public Health Information Network: Part of this included HIEMS or the 'Health Indicators Exchange and Monitoring System', and MONICA data were available. Product 4 was to involve training of national centres for carrying out the monitoring, and how to collaborate and use the data for national and community needs. These components did not now seem to be particularly relevant so how could Product 4 be modified to make it more valuable? Brigitte Bisig wanted non-MONICA data to be analysed. Kari Kuulasmaa thought that this could be carried out locally. Hugh Tunstall-Pedoe stated that the EU didn't own the MONICA data, and that there were problems of training and staff leaving, problems in age-standardisation, and that a 20% sub-set of data will be made available with the MONICA Monograph. Kari Kuulasmaa suggested using a simplified MONICA dataset to sell the concept of MONICA to the Commission. Susana Sans quoted T S Eliot. Kari Kuulasmaa felt the value of MONICA data should be made apparent to the European Commission by supplying them in a more easily digestible form. Erkki Vartiainen thought that the end product of EHRM would be the start of the political process and that Product 4 should be a risk factor profile of Europe. Sharon Friel was worried about a conflict between non-standardised and standardised data. Hugh Tunstall-Pedoe agreed. Kari Kuulasmaa summed up, saying that Product 3 would be a report based on MONICA data and that Product 4 should be a Workshop based on local inputs. Susana Sans wanted to see local MONICA centres as a resource for training national survey teams. Hugh Tunstall-Pedoe felt that there was a need to explain what data are for, and of what use they are. Kari Kuulasmaa repeated that it was necessary to get MONICA data into a simplified form.

Pekka Puska said in respect of Product 3 that there were no resources to collect and analyse from elsewhere, therefore, existing MONICA data should be used to exemplify the approach. Product 4 was somewhat more complicated, what were its terms of reference? These should be 'visible' advocacy of this type of work, producing high quality trend data. The question concerned the training, the priority, the type of people to be trained etc. The question of the type of people and the training should de facto become at another PIs' meeting with others attending, e.g. from the Ministries. Hugh Tunstall-Pedoe felt that things which had been discussed at the Meeting detailed well-known things and that more difficult issues had been put to one side. There was a need to plan the overall structure so that the workshop would be slanted at persuading people about the importance of collecting quality data, sampling frames, sampling methods etc. Erkki Vartiainen mentioned FINRISK 2002.

Future collaboration

Philippe Amouyel introduced future collaboration. This included:

- Completing Products 1 and 2. Kari Kuulasmaa commented that input would be appreciated. Lars Wilhelmsen recommended that newer technology e.g., measurement of homocysteine would be included in the future. Hugh Tunstall-Pedoe foresaw ethical difficulties with archived biological material.
- Preparing model reports for EU, national and community needs (Product 3). Hanna Tolonen said that when prepared it would be posted on the EHRM Website. The centres'

comments would be crucial. Hugh Tunstall-Pedoe felt that the web had advantages over glossy reports and that graphs were better than tables.

- Workshop on reporting and use of the data (Product 4). Cecily Kelleher wanted to know what the key messages were. Pekka Puska felt it was our duty to make the case for the surveillance of important non-communicable diseases in Europe. A basic set indicators were absolutely essential to public health. The quality of the data was crucial. Susana Sans wanted to see the use of composite scores or proportions with three risk factors etc. Aushra Shatchkute stated that a Report on CVD, Cancer and Nutrition, written by Philip James, was imminent.
- Centralised resources for quality control and standardisation of surveys. Aushra Shatchkute was to consider the issue of standardisation centres. Hugh Tunstall-Pedoe pointed out that quality control is an expense all the way through a survey. Reference centres were important but local efforts were also essential. Philippe Amouyel wanted to see verification of the data. Pekka Puska said that EHRM had only 10 months to run but the Steering Committee could function thereafter on an informal basis. Sharon Friel wanted to see satellite meetings around workshops. Kari Kuulasmaa discussed the timing of the workshop (Product 4) in September or October, possibly sited in Luxembourg. The decision would be left to the Steering Committee.

Closing of the meeting

In closing the meeting Pekka Puska said how very pleased KTL was with the meeting and it had been useful. The general framework of the European Health Monitoring System was still nebulous but he would keep in close contact, and that Kari Kuulasmaa would soon take over the leadership of the Project from him.

Action items

1. Indicators:
    - Age range 35-74 was agreed, 25-34 has to be discussed by Steering Committee.
    - Indicator list: Steering Committee to decide on a firm list.
2. Surveys considered for review: the list of national surveys to be completed.
3. Measurements:
    - Socio-economic variables: inquiries to be made to the EU Health Monitoring Project and European Science Foundation groups.
    - Questions on use of drugs to be checked with HIS/HES Project.
4. Standardization: Proposal also to be done on international collaboration in training and quality control. In particular, a European Lipid Reference Laboratory is needed.
5. Product 4: Steering Committee to decide on time, place and contents.
6. Products 1, 2 and 3 to be completed.
7. Steering committee to continue after end of EHRM project.

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