Determinants of Successful Implementation of Selective Prevention of Cardio-metabolic Diseases across Europe

Final report on feasibility studies
Deliverable 8.3

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Abstract

Background
Cardiovascular are considered as the first cause of morbidity and mortality globally (WHO). The SPIM EU project ([http://spimeu.org/](http://spimeu.org/)) aims in contributing to the reduction of cardio-metabolic morbidity and mortality in EU Member States by implementing innovative evidence based on selective prevention actions in general practice in five EU Member States representing various health care systems.

Aim
The overall aim of the study is to test the feasibility of implementing the first steps of tailored selective prevention programs, in five EU Member States (SWE, DNK, CZE, NLD, GRE).

Methods
This is a feasibility study within the framework of the SPIMEU project with primary objective to identify factors that hamper or favor the implementation of the initial steps (i.e. identification, invitation and risk profiling of eligible persons) of a selective prevention program in specific primary care settings in five EU Member States representing different health care systems. The design is tailored to each of the primary care settings in the five EU Member States (SWE, DNK, CZE, NLD, GRE). A generic methodology was applied in all five EU Member States (the ‘core method’) and some aspects of the methodology were customized to each setting in the respective Member State (the ‘tailored method’). Ethical approval was essential and obtained from ethical committees within the five countries.

Results
Two hundred eligible individuals were identified and invited to participate in the selective prevention program in each country. The majority (65% to 100%) of participants accepted to complete the risk-assessment profile in all countries. This selective prevention program managed to identify in some extent (7% to 22%) healthy individuals who were at high-risk for CVD in all participating countries with exception of Sweden.
Most participants identified this prevention program as feasible and useful, while they stated that they were willing to try to change their life-style towards a healthier one. In parallel, participating GPs stated that they recognized such prevention programs as a legitimate part of their job and that they would continue to support this project.

**Conclusion**

The findings of the feasibility studies leaded to the formulation of certain recommendations regarding the acceptability and efficiency of selective prevention programs in different health care systems. The outcomes of this study provided input for the toolbox (WP2) of possible measures to tailor the implementation of selective prevention actions in all EU Member States taking their respective social, cultural, political and health care system contexts into account.
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FIRST PART: GENERAL PROTOCOL DESIGN

Introduction

Background and rationale

Cardiovascular diseases caused more than 17.7 million deaths worldwide in 2015 and they are considered as the first cause of morbidity and mortality globally (WHO). Furthermore, the guideline on cardiovascular risk management of the European Society of Cardiology states that “GPs have a unique role in identifying individuals at risk of, but without established CVD, and assessing their eligibility for intervention” (Piepoli et al, 2016). Selective prevention aims to identify high-risk individuals in order to provide preventive actions for them.

The SPIM EU project aimed in “contributing to the reduction of cardio-metabolic morbidity and mortality in EU Member States by establishing the feasibility of implementing innovative evidence based selective prevention actions in general practice in five EU Member States representing various health care systems” (http://spimeu.org/). Also, SPIMEU project intended to contribute to “the implementation of an innovative approach to identify persons-at-high-risk for cardio-metabolic diseases by establishing its feasibility in different EU Member States with their typical health care systems” (http://spimeu.org/). In order to facilitate this aim, selective prevention was selected serve as the most suitable option. By the end of the project, the consortium aimed to provide a toolbox for tailoring selective prevention actions that could be implemented in all EU Member States (please, find further information in D2.4).

For the needs of WP8 and in context of the study in the five participating countries of the project, quantitative data were collected. Two separate questionnaires (one for invited clients/patients and one for GPs) were created. Thus, two separate online forms were formed for each country (see image below).

This deliverable conveys three sections; the first part reports the introduction, aim and research questions that guided the design and implementation the feasibility studies in five participating countries. The second part conveys the specification for
the methodology that each participating country followed as well as references of the REDCAP online platform that was used for online data entry (https://redcap.med.auth.gr/ & https://www.project-redcap.org/). The third part reports the results of the feasibility studies. The results presentations follows the research questions and the outcomes that are presented in the “Methods” section, which makes the report easier to read and follow. Also, in the final part of the report the recommendation for the methodology and the health policy maker are included. Finally, in the appendix section all questionnaires, consent forms and copies of the bioethical approval that was retrieved in each country are included.

Aim

WP8 aimed in testing the feasibility of the implementation of the first steps of a selective prevention program, namely the identification, invitation and completed the risk assessment of eligible persons. The implementation was be based on above-mentioned principles, but tailored to the context of primary care in the countries represented in the SPIMEU project (the Czech Republic, Denmark, Greece, Sweden & the Netherlands).

Thus, the overall aim of the study was to test the feasibility of implementing the first steps of tailored selective prevention programs, (designed on the basis of the WP7 guiding principle) in five EU Member States (SWE, DNK, CZE, NLD, GRE).

The research questions that guided the feasibility study were meant to explore the acceptability and practicality of the identification, invitation and risk profiling of eligible persons as first steps of a selective prevention program, and more specifically:

1. How many of the invited participants accepted participation in the selective prevention program, and what were their characteristics?

2. How many of those who accepted participation completed the risk profile assessment and what was their risk profile?

3. To what extent did participants consider the first steps of the program as feasible, useful and relevant for their health status, do they intend to undertake risk-reducing actions and what barriers do they experience in understanding such actions?
4. To what extent did primary care professionals consider the program as feasible, useful and relevant, and what changes would they propose, if any, for a successful customised implementation?

Methods

Study design
The feasibility study within the framework of the SPIMEU project aims in identifying factors that hamper or favor the implementation of the initial steps (i.e. identification, invitation and risk profiling of eligible persons) of a selective prevention program in specific primary care settings in five EU Member States representing different health care systems. A distinction will be made in the Methods section between the generic methodology which will be applied identically in all five EU Member States (the ‘core method’) and aspects of the methods which can be customized to the setting in the respective Member State (‘tailored method’).

Study setting and sampling
Core method

Setting: general practice

Eligible participants: persons listed in (or regularly attending) a participating practice, aged 40-65 years without any known cardiometabolic disease or condition according to their medical record (hypertension, cardiovascular disease, diabetes mellitus, chronic renal disease, hypercholesterolemia).

Procedure to identify cardiometabolic risks
Core method
The following elements are the sequential steps that will be evaluated. It is expected that only a subgroup of the persons will flow to each subsequent step.

- Personal invitation of 200 eligible persons per country for participation (step A).
- Completing a risk assessment according to a validated tool based on the ESC guideline for cardiovascular risk management or a national guideline, endorsed by a relevant national society or authority (step B).
- Evaluation of the cardiometabolic risk of the patient in his/her general health status (step C).

**Tailored method**

- Size and number of participating general practices.
- Method of approaching eligible persons.
- Age range of eligible persons may be different (but must include 40-65 year olds).
- Selection of a validated risk assessment tool and performance of measurements accordingly.
- Ways of communication with the invited persons for performing measurements and discussing the results of the risk assessment (e.g. invitation for a consultation or telephone call, GP or practice nurse, etc.).

**Outcome measures and measurements**

**Core methods**

Primary outcome measures of this feasibility study will be:

a) The number of invited eligible participants who participate in the selective prevention program;

b) The average time per person whose risk assessment has been completed needed for the implementation of the selective prevention program in the practice. The amount of time they spend on: (1) selecting eligible patients, (2) inviting them, (3) performing additional tests or answering questions of patients due to this feasibility study. This will be the ‘denominator’, the numerator will be the number of persons who have completed the risk assessment. The amount of time used for CVD risk assessment is not part of the calculation of average time.

c) The extent to which participants who completed the risk assessment considered it useful and relevant for their health status, whether they are
willing to undertake any risk-reduction actions to modify their lifestyle (according to their risk assessment results), and the barriers they experienced in order to modify their lifestyle into a healthier one. To measure this outcome semi-closed questions on which patients can express their opinion will be used". (see Appendix 2).

d) The extent to which the implementation of such a selective prevention program is feasible, practical and acceptable according to primary care professionals.

**Specification of outcome measures**

- Proportion of invited persons who respond positively to the invitation for participation; this will be calculated on the basis of a careful administration in the participating practices;
- Proportion of participating persons whose risk assessment is completed (i.e. whose risk score can be calculated) and their risk score. The results and the scores will be calculated on the basis of a careful administration in the participating practices;
- Opinions of participating persons regarding the feasibility of the program and their willingness to decrease their cardiometabolic risk (if applicable); this will be measured by a written questionnaire to be completed at the moment of being invited (see below);
- Opinions of primary care professionals regarding the feasibility of the program; specifically they will be asked if consider it as an important element, to elicit their preference on integration and state their opinion on short- and long-term implementation. A written questionnaire would be used for that purpose. (see below).

**Participant questionnaire (see also appendix 1)**

All persons who are being invited to participate received, together with the invitation, a questionnaire/instrument to be completed. This questionnaire is meant to collect information on:

- demographic characteristics of participants (age, sex, education);
- life-style behaviors: smoking, physical exercise, diet factors, BMI, alcohol consumption;
- the acceptability of being invited for establishing a health-risk profile, as well as the experiences from its content and methods;
- the willingness to decrease their risk (if applicable) by changing their risk behavior.

As much as possible, items from validated surveys will be chosen, such as ESS (European Social Survey - http://www.europeansocialsurvey.org), translated to the national language (please, see the full report about the database in D8.2).

**Primary care professionals’ questionnaire**

The questionnaire for primary care professionals explored the extent to which the procedure to identify persons at high risk for a cardiometabolic disease can be performed in terms of resources, time, and commitment. Questions for professionals regarding the feasibility of implementing the selective prevention program in their daily practice, the time allocated to implement the program, the disciplines involved, and whether they consider the program as an important element of their services will be included. Practicality also, was assessed by evaluating the extent of missing data. In each participating practice the health care professional who was most involved with the implementation of the program (the contact person or ‘key performer’) was asked to complete this questionnaire after completion of the study activities in the respective practices. NOMAD questionnaire (Finch et., al, 2015) (please, see the full report about the database in D8.2).
SECOND PART: Specification for the implementation for each partner country

Netherlands
A total of 200 patients from 5 general practices were invited, 40 patients per practice. The patients were between 45-65 years old without (treatment for) cardiometabolic diseases. The selection was a random selection per practice.

The Dutch team used a 2-step approach. All invited patients received the questionnaire containing questions to number 29 (see appendix 1).

The last part of the questionnaire sent to all patients contained the question whether they would want to participate in a health check. If yes, they were asked to complete the risk score test. After completing the risk score test, patients were asked to return the questionnaire and the risk score test by the provided envelope. If the calculated risk score was above 30 (men) or 35 (women), patients were advised to make an appointment with their GP for a complete risk assessment.

Patients that made an appointment for this complete risk assessment obtained a second questionnaire containing the remaining questions (regarding willingness to change and relevance). The patient received an envelope to return the questionnaire. The GP completed also a small questionnaire about this consult.

The risk score test is the one included in the Dutch Guideline “Prevention Consultation Cardiometabolic Risk”, thereby already used in the Netherlands and familiar for GPs.

Czech Republic
A total of 200 patients from 10 general practices/ GPs were invited, 20 patients per practice/per one GP. The study took place in Prague region and in Central Bohemian region (five practices/GPs in each region). The patients were between 40-65 years old without (treatment for) cardiometabolic condition according to their medical records. (i.e. persons without treated hypertension or hypercholesterolemia, cardiovascular disease, diabetes mellitus, chronic renal disease). Eligible patients were invited personally by GPs during routine visits. Each GP included 20 patients. The first part of the questionnaire was presented personally by a GP or GP nurse. After the first
part, patients had the option of deciding whether to continue with performing measurements and discuss the results of the risk assessment. If yes: blood pressure, height, weight and waist circumference were measured followed by risk assessment using SCORE chart. After a discussion about a healthy lifestyle, the participants were given the second part of the questionnaire.

The validated risk assessment, which was used is the “SCORE Chart: 2016 ESC/EAS Guidelines for the Management of Dyslipidaemias”.

**Denmark**

We recruited two GPs from two clinics – one in Odense and one in Copenhagen. We then invited 200 patients (100 from each of the GPs’ patient lists) to participate. Our eligibility criteria for invitation to the study excluded patients who had been diagnosed with a cardiometabolic disease and/or were not between 40 and 65 years old. Of the original sample of 200 patients, 62 patients (31%) agreed to participate.

We mailed hard copy invitations, consent forms, and risk assessment materials, as well as pre-paid return envelopes to patients. The invitation informed prospective participants of the nature of the study, including the inherent possibility of participating in a health check at their GP. The risk assessment included all items up to question 29. If participants agreed to participate, they followed the instructions in the invitation and filled out the consent form and risk assessment questionnaire, and mailed it back to us.

We then assessed each participating patient’s risk of cardiometabolic disease based on validated algorithms. Health profiles based on these risk assessments were then generated and mailed back to each participant. Those participants who scored above a certain threshold were prompted to make an appointment with their GP for a health check. Those who scored below the threshold were informed that their participation in the study was complete.

Those participants who were deemed to be at risk and who made an appointment for a health check were given the rest of the patient questionnaire (tapping willingness to change and relevance of the intervention) by their GP to fill out and send back to us after their appointment. Similarly, the GPs were asked to fill out AUDITs after each patient health check.
Greece
The study took place in the Prefecture of Heraklion, one of the four districts of the region of Crete. The UoC research team recruited three different general practices (two in an urban setting and one in rural area). The data collection took place the Municipality of Heraklion (urban area) and the Municipality of Gortina (rural area) from December 2017 to February 2018. A total of 3 GPs participated. The Heraklion district, has 304,270 inhabitants (150,810 men and 153,460 women) (NSSG, 2011). The Municipality of Heraklion has 173,450 inhabitants (85,210 men and 88,240 women) and the Municipality of Gortina has 15,632 inhabitants. (NSSG, 2011).

A written informed consent was provided to all participants. The UoC research team provided all information about the developed online database for the data collection process. We invited 200 patients that were listed (or regularly attending) in the participating general practices, aged 40-65 years without any known cardiometabolic disease or condition, according to their medical records (hypertension, cardiovascular disease, diabetes mellitus, chronic renal disease, hypercholesterolemia).

The validated risk assessment tool was implemented entitled: “SCORE Chart: 2016 ESC/EAS Guidelines for the Management of Dyslipidaemias” (Eur Heart J. 2016; see appendix 2) and the performance evaluation was conducted based on “NOMAD measurement instrument” (Finch et. al., 2015).

Sweden
Two hundred patients 40-65 years old, listed on one health care center in Stockholm county, Stuvsta vårdcentral, were invited by letter to participate. They had not been at the care center for at least 18 months, to exclude all treated for CVD or diabetes, as we are not allowed to read patients records without patient consent for research purposes in Sweden.

Patients were sent an invitation letter and the questionnaire before the screening along with information regarding telephone hours to book an appointment at the health care center. Despite given specific telephone hours, the phone was answered at all hours to maximize participation. During the phone call the participants booked an appointment for the screening, were asked to come to the health care center at least one day before their appointment for glucose and total cholesterol tests and received information how
to prepare for the test. Furthermore, they were reminded to sign the consent form and fill in the questionnaire and bring them along for the screening appointment.

During the screening (or health dialog) it was made sure that the participants had signed the consent form and answered the questionnaire. Blood pressure, height, weight and waist circumference were measured followed by showing the participants their test results and SCORE (http://www.lakartidningen.se/Klinik-och-vetenskap/ Rapport/2017/04/Nya-Score-visar-med-hog-risk-att-do-i-hjartinfarkt- eller-stroke/). After a discussion about a healthy lifestyle, the participants were given the second part of the questionnaire.
THIRD PART: Results

1. Participants and their main characteristics
   i. Recruitment and participation rates

Two hundred eligible individuals were identified and invited to participate in the selective prevention program in each country. In the Czech Republic all 200 of invited persons accepted participation (response rate of 100%). In Denmark 62 of the 200 invited individuals accepted participation (response rate of 31 %), in Greece 107 of the 200 invited individuals accepted participation in the program (response rate 54 %), in the Netherlands 66 out of the 200 individuals accepted participation in the program (response rate 33 %) and finally in Sweden 39 out of the 200 invited individuals accepted participation (response rate 20 %). Details of this process can be found in the Flowchart of the study.

Flowchart diagram of the Study

- Eligible/Invited
- N=200 in all countries
- Accepted participation in the selective prevention program
- Completed risk profile assessment
- Identified as being at high-risk for CVD
- Czech Republic: 200/200 Response rate 100%
  Denmark: 62/200 Response rate 31.0%
  Greece: 107/200 Response rate 53.5%
  Netherlands: 66/200 Response rate 33.0%
  Sweden: 39/200 Response rate 19.5%
- Czech Republic: 174/200 (87.0%)
  Denmark: 58/62 (93.5%)
  Greece: 70/107 (65.4%)
  Netherlands: 58/66 (89.2%)
  Sweden: 39/39 (100.0%)
- Czech Republic: 12/174 (6.9%)
  Denmark: 5/62 (8.6%)
  Greece: 8/70 (11.4%)
  Netherlands: 21/57 (36.8%)
  Sweden: 0/39 (0.0%)
ii. **Main characteristics of participants**

The basic demographic characteristics of participants are summarized in Table 1. In all participating countries besides Denmark the majority of participants were females. The mean age of participants was 50.0 (± 8.8) years in the Czech Republic, 55.5 (± 6.3) years in Denmark, 52.7 (± 8.5) years in Greece, 54 (± 10.3) years in the Netherlands and 51.1 (± 6.3) years in Sweden.

In all participating countries the majority of participants were married with a median number of housemates of two (in Denmark and in the Netherlands) or three (in the Czech Republic, Greece and in Sweden). As regards the level of education in all countries except Greece most participants had attended either college or university while in Greece the majority of participants had completed a secondary education.

In all countries most participants were currently working either full-time or part-time and had a health insurance or were fully covered by the public health system of their country. Finally in all participating countries except Greece most participants stated that their income was correspondingly or higher compared to their country’s average. In Greece the majority stated that their income was below country’s average.

<p>| Table 1. Basic demographic characteristics of participants per country |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <strong>Country</strong>              | <strong>Czech Rep.</strong>  | <strong>Denmark</strong>     | <strong>Greece</strong>      | <strong>Netherlands</strong> | <strong>Sweden</strong>      |
|                          | n=200           | n=62            | n=107           | n=66            | n=39            |
| <strong>Gender (n,%)</strong>         |                 |                 |                 |                 |                 |
| Female                   | 121 (60.5%)     | 29 (46.8%)      | 34 (59.8%)      | 36 (54.5%)      | 24 (69.2%)      |
| Male                     | 79 (39.5%)      | 33 (53.2%)      | 43 (40.2%)      | 30 (45.5%)      | 12 (30.8%)      |
| <strong>Age (years)</strong>          |                 |                 |                 |                 |                 |
| Mean (SD)                | 50.0 (8.8)      | 55.5 (6.3)      | 52.7 (8.5)      | 54.0 (10.3)     | 51.1 (6.3)      |
| <strong>Marital status (n,%)</strong> |                 |                 |                 |                 |                 |
| Married/live in partner  | 142 (72.8%)     | 44 (71.0%)      | 85 (79.4%)      | 47 (71.2%)      | 33 (84.6%)      |
| Divorced                 | 32 (16.4%)      | 7 (11.3%)       | 7 (6.5%)        | 9 (13.6%)       | 4 (10.3%)       |
| Single, never married    | 16 (8.2%)       | 10 (16.1%)      | 6 (5.6%)        | 9 (13.6%)       | 1 (2.6%)        |
| Widowed                  | 5 (2.6%)        | 1 (1.6%)        | 9 (8.4%)        | 1 (1.5%)        | 1 (2.6%)        |</p>
<table>
<thead>
<tr>
<th></th>
<th>Median (min, max; IQR)</th>
<th>Median (min, max; IQR)</th>
<th>Median (min, max; IQR)</th>
<th>Median (min, max; IQR)</th>
<th>Median (min, max; IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of housemates</strong></td>
<td>3 (0.6;2)</td>
<td>2 (0.5;1)</td>
<td>3 (1.6;2)</td>
<td>2 (1.5;2)</td>
<td>3 (1.6;2)</td>
</tr>
<tr>
<td><strong>Number of children in the household</strong></td>
<td>1 (0.4;2)</td>
<td>0 (0.3;2)</td>
<td>1 (0.4;2)</td>
<td>1 (0.3;2)</td>
<td>1 (0.4;1)</td>
</tr>
<tr>
<td><strong>Highest educational level achieved (n, %)</strong></td>
<td>none</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>5 (4.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td></td>
<td>primary</td>
<td>1 (0.5%)</td>
<td>1 (1.9%)</td>
<td>19 (17.8%)</td>
<td>1 (1.5%)</td>
</tr>
<tr>
<td></td>
<td>secondary</td>
<td>34 (17.2%)</td>
<td>8 (14.8%)</td>
<td>52 (48.6%)</td>
<td>12 (18.2%)</td>
</tr>
<tr>
<td></td>
<td>college/university</td>
<td>163 (82.3%)</td>
<td>45 (83.4%)</td>
<td>31 (29.0%)</td>
<td>53 (80.3%)</td>
</tr>
<tr>
<td><strong>Years of full-time education</strong></td>
<td>mean (SD)</td>
<td>14.3 (2.9)</td>
<td>17.5 (4.9)</td>
<td>11.4 (4.5)</td>
<td>14.5 (4.7)</td>
</tr>
<tr>
<td><strong>Work status (last 7 days) (n, %)</strong></td>
<td>working full-time</td>
<td>131 (65.5%)</td>
<td>37 (59.7%)</td>
<td>62 (57.9%)</td>
<td>32 (48.5%)</td>
</tr>
<tr>
<td></td>
<td>working part-time</td>
<td>30 (15.0%)</td>
<td>11 (17.7%)</td>
<td>22 (20.6%)</td>
<td>17 (25.8%)</td>
</tr>
<tr>
<td></td>
<td>pensioner</td>
<td>11 (5.5%)</td>
<td>8 (12.9%)</td>
<td>9 (8.4%)</td>
<td>12 (18.2%)</td>
</tr>
<tr>
<td></td>
<td>unemployed</td>
<td>4 (2.0%)</td>
<td>4 (6.5%)</td>
<td>14 (13.1%)</td>
<td>3 (4.5%)</td>
</tr>
<tr>
<td></td>
<td>disabled</td>
<td>24 (12.0%)</td>
<td>2 (3.2%)</td>
<td>0 (0.0%)</td>
<td>2 (3.0%)</td>
</tr>
<tr>
<td><strong>Do you have health insurance? (n, %)</strong></td>
<td>yes</td>
<td>192 (96.0%)</td>
<td>26 (41.9)</td>
<td>84 (79.2%)</td>
<td>66 (100.0%)</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>3 (1.5%)</td>
<td>4 (6.5%)</td>
<td>21 (19.8%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td></td>
<td>not applicable/fully covered by public health</td>
<td>5 (2.5%)</td>
<td>32 (51.6%)</td>
<td>1 (0.9%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td><strong>How would you describe your income compared to your country’s average (n, %)</strong></td>
<td>lower</td>
<td>44 (22.0%)</td>
<td>21 (34.4%)</td>
<td>67 (62.6%)</td>
<td>5 (7.7%)</td>
</tr>
</tbody>
</table>
2. Participation in the risk assessment and risk profile

i. Participation in the risk-assessment

In the Czech Republic 87.0% of those who accepted participation completed the risk profile assessment, in Denmark this rate was 94 %, in Greece was 65 %, in the Netherlands 89 % and finally in Sweden all who accepted participation completed the risk profile assessment (100.0%). Details of this process can be found in the Flowchart of the study.

ii. Risk profile of participants

a. Physical activity

Details regarding the physical activity of respondents can be found in the Table 2 below. In the Czech Republic about 15% of participants were classified have a sedentary life-style, in Denmark this figure was 8%, in Greece 20%, in the Netherlands 12% and in Sweden 10%. Roughly one out of four participants were classified as under-active in the Czech Republic, Denmark, the Netherlands and in Sweden, while in Greece that figure was double where almost half participants (48%) were found to be underactive.

On the contrary, half or more of participants were classified as having an active life-style in the Czech Republic (46%), in Denmark (67%), the Netherlands (60%) and in Sweden (67%), whereas in Greece the respective figures were 21%. In activities to increase muscle strength were engaged 29% of respondents in the Czech Republic, 20% in Denmark, 6% in Greece, 38% in the Netherlands and 69% in Sweden. Finally in activities to improve flexibility (such as yoga or stretching) were engaged 48% of respondents in the Czech Republic, 23% in Denmark, 9% in Greece, 62% in the Netherlands and 59% in Sweden.
<table>
<thead>
<tr>
<th>Country</th>
<th>Czech Rep.</th>
<th>Denmark</th>
<th>Greece</th>
<th>Netherland s</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=200</td>
<td>n=62</td>
<td>n=107</td>
<td>n=66</td>
<td>n=39</td>
</tr>
<tr>
<td>Sedentary</td>
<td>29 (14.7%)</td>
<td>5 (8.1%)</td>
<td>21 (19.6%)</td>
<td>8 (12.1%)</td>
<td>4 (10.3%)</td>
</tr>
<tr>
<td>(I rarely or never do any physical activities)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underactive</td>
<td>62 (31.6%)</td>
<td>12 (25.0%)</td>
<td>51 (48.1%)</td>
<td>13 (20.0%)</td>
<td>10 (25.6%)</td>
</tr>
<tr>
<td>(I do some light or moderate physical activities, but not every week)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underactive/regular-light</td>
<td>146 (74.1%)</td>
<td>38 (67.9%)</td>
<td>75 (70.1%)</td>
<td>39 (60.9%)</td>
<td>33 (84.6%)</td>
</tr>
<tr>
<td>(I do some light physical activity every week)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underactive/regular</td>
<td>91 (46.4%)</td>
<td>29 (52.7%)</td>
<td>36 (33.6%)</td>
<td>29 (44.6%)</td>
<td>22 (56.4%)</td>
</tr>
<tr>
<td>(I do moderate physical activities every week, but less than 30 minutes a day or 5 days a week)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underactive/regular</td>
<td>59 (30.1%)</td>
<td>12 (23.5%)</td>
<td>10 (9.3%)</td>
<td>16 (24.2%)</td>
<td>16 (41.0%)</td>
</tr>
<tr>
<td>(I do vigorous physical activities every week, but less than 20 minutes a day or 3 days a week)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>58 (29.4%)</td>
<td>26 (47.3%)</td>
<td>13 (12.1%)</td>
<td>28 (42.4%)</td>
<td>15 (38.5%)</td>
</tr>
</tbody>
</table>
Active
I do 20 minutes or more a day of vigorous physical activities, 3 or more days a week.

<table>
<thead>
<tr>
<th></th>
<th>33 (16.8%)</th>
<th>11 (20.0%)</th>
<th>10 (9.3%)</th>
<th>11 (17.5%)</th>
<th>11 (28.2%)</th>
</tr>
</thead>
</table>

I do activities to increase **muscle strength**, such as lifting weights or calisthenics, once a week or more.

<table>
<thead>
<tr>
<th></th>
<th>58 (29.3%)</th>
<th>11 (19.3%)</th>
<th>6 (5.6%)</th>
<th>25 (37.9%)</th>
<th>27 (69.2%)</th>
</tr>
</thead>
</table>

I do activities to improve **flexibility**, such as stretching or yoga, once a week or more.

<table>
<thead>
<tr>
<th></th>
<th>94 (47.7%)</th>
<th>13 (23.2%)</th>
<th>10 (9.4%)</th>
<th>17 (62.2%)</th>
<th>23 (59.0%)</th>
</tr>
</thead>
</table>

b. Smoking and alcohol consumption

Results regarding smoking and drinking habits of participants are presented in Table 3. In the Czech Republic 61% of the respondents were never smokers, in Denmark this rate was 40%, in Greece 33%, in the Netherlands 56% and in Sweden 72%. The highest rates of current daily smokers was observed in Greece 43%, followed by Denmark (17%), the Czech Republic (14%), Sweden (5%) and the Netherlands (3%). Occasional smokers were 8% in Greece and Denmark, 7% in the Czech Republic, 5% in the Netherlands and none of the respondents in Sweden.

As regards alcohol consumption in Greek participants stated that they drink at a median of seven standard drinks per week, followed by participants from Denmark (four standard drinks per week), Sweden (three standard drinks per week), the Czech Republic and the Netherlands (two standard drinks per week in both countries). Furthermore, more than 10% of participants in all countries stated that they drink four/five standard drinks on a single occasion once/week or more frequent.
### Table 3. Smoking and drinking habits of participants per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Czech Rep</th>
<th>Denmark</th>
<th>Greece</th>
<th>Netherlands</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=200</td>
<td>n=62</td>
<td>n=107</td>
<td>n=66</td>
<td>n=39</td>
<td></td>
</tr>
<tr>
<td><strong>Do you smoke tobacco?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have never been a tobacco smoker</td>
<td>122 (61.0%)</td>
<td>24 (40.0%)</td>
<td>35 (32.7%)</td>
<td>36 (56.3%)</td>
<td>28 (71.8%)</td>
</tr>
<tr>
<td>I quit over six months ago</td>
<td>34 (17.0%)</td>
<td>20 (33.3%)</td>
<td>16 (15.0%)</td>
<td>22 (34.4%)</td>
<td>8 (20.5%)</td>
</tr>
<tr>
<td>I quit less than six months ago</td>
<td>3 (1.5%)</td>
<td>1 (1.7%)</td>
<td>1 (0.9%)</td>
<td>1 (1.6%)</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>Occasionally</td>
<td>13 (6.5%)</td>
<td>5 (8.3%)</td>
<td>9 (8.4%)</td>
<td>3 (4.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Everyday</td>
<td>28 (14.0%)</td>
<td>10 (16.7%)</td>
<td>46 (43.0%)</td>
<td>2 (3.1%)</td>
<td>2 (5.1%)</td>
</tr>
<tr>
<td><strong>On average, how many standard drink per week?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (min, max, IQR)</td>
<td>2 (0,40;6)</td>
<td>4 (0,60;8)</td>
<td>7 (0, 46;9)</td>
<td>2 (0,70;7)</td>
<td>3 (0,30;5)</td>
</tr>
<tr>
<td><strong>How often do you have more than four (if you are female) or five (if you are male) standard drinks on a single occasion?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Everyday or nearly everyday</td>
<td>4 (2.0%)</td>
<td>4(6.5%)</td>
<td>3 (2.8%)</td>
<td>2 (3.1%)</td>
<td>0(0.0%)</td>
</tr>
<tr>
<td>Once a week</td>
<td>29 (14.5%)</td>
<td>8 (12.9%)</td>
<td>12 (11.3%)</td>
<td>8 (12.5%)</td>
<td>4 (10.3%)</td>
</tr>
<tr>
<td>Once a month</td>
<td>48 (24.0%)</td>
<td>18 (29.0%)</td>
<td>11 (10.4%)</td>
<td>8 (12.5%)</td>
<td>8 (20.5%)</td>
</tr>
<tr>
<td>Rarely</td>
<td>86 (43.0%)</td>
<td>29 (46.8%)</td>
<td>31 (29.2%)</td>
<td>25 (39.1%)</td>
<td>24 (61.5%)</td>
</tr>
<tr>
<td>Never</td>
<td>33 (16.5%)</td>
<td>3 (4.8%)</td>
<td>49 (46.2%)</td>
<td>21 (32.8%)</td>
<td>3 (7.7%)</td>
</tr>
</tbody>
</table>
c. Dietary habits of participants

Questions regarding the dietary habits of participants are presented in Table 4. As regards the frequency of vegetables and/or root vegetables consumption, 82% of participants in Sweden, 80% in the Netherlands, 61% in Denmark, 44% in the Czech Republic and 12% in Greece stated that they consumed them once/day or more frequent. Regarding the frequency of fruit consumption, 71% of participants in the Netherlands, 56% of participants in Sweden, 54% of participants in the Czech Republic, 47% in Denmark and 22% in Greece stated that they consumed them once/day or more frequent. Eighty-five percent of participants in Sweden, 74% in the Netherlands, 50% in Denmark, 38% in the Czech Republic and 33% in Greece stated that they consumed a main of fish or shellfish once/week or more often. Finally, 36% of participants in the Czech Republic, 30% of participants in Greece, 17% of participants in the Netherlands, 10% of participants in Denmark and none in Sweden stated that they consumed pastries, chocolates, candy and/or soft drinks on a daily basis. The mean Body Mass Index (BMI) of participants was 26.7 (±5.7) Kg/m² in the Czech Republic, 26.5 (±4.2) Kg/m² in Denmark, 25.8 (±3.9) Kg/m² in Greece, 25.2 (± 4.1) Kg/m² in the Netherlands and 24.1 (± 3.1) Kg/m² in Sweden. In the Czech Republic 37 (19%) participants were classified as obese, 10 (16 %) in Denmark, 16 (15%) in Greece, 4 (6%) participants in the Netherlands and 2 (5%) participants in Sweden.

<table>
<thead>
<tr>
<th>Table 4. Dietary habits of participants per country</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>n=200</td>
</tr>
<tr>
<td>How often do you have vegetables and/or root vegetables (fresh or frozen)?</td>
</tr>
<tr>
<td>Once/week or less</td>
</tr>
<tr>
<td>A few times/week</td>
</tr>
<tr>
<td>Once/day</td>
</tr>
<tr>
<td>Twice/day or more</td>
</tr>
<tr>
<td>How often do you have fruit and/or</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
berries (fresh, frozen, preserved, juice/smoothie)?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once/week or less</td>
<td>21</td>
<td>10.5%</td>
</tr>
<tr>
<td>A few times/week</td>
<td>71</td>
<td>35.5%</td>
</tr>
<tr>
<td>Once/day</td>
<td>83</td>
<td>41.5%</td>
</tr>
<tr>
<td>Twice/day or more</td>
<td>25</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

How often do you have a main of fish or shellfish?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A few times/month or less</td>
<td>123</td>
<td>62.1%</td>
</tr>
<tr>
<td>Once/week</td>
<td>56</td>
<td>28.3%</td>
</tr>
<tr>
<td>Twice/week</td>
<td>13</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

How often do you have pastries, chocolate, candy, and/or soft drink?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once/week or less</td>
<td>28</td>
<td>14.0%</td>
</tr>
<tr>
<td>A few times/week</td>
<td>59</td>
<td>29.5%</td>
</tr>
<tr>
<td>Nearly everyday</td>
<td>41</td>
<td>20.5%</td>
</tr>
<tr>
<td>Everyday</td>
<td>72</td>
<td>36.0%</td>
</tr>
</tbody>
</table>

d. The risk-assessment tools

Risk assessment was performed using the Heart-Score instrument in the Czech Republic, Greece and Sweden, the KRAMRASK risk assessment score was used in Denmark and in the Netherlands the Prevention Consultation cardiometabolic risk instrument (PC CMR) was used. The median raw scores and the quartiles are presented in Table 5. In the Czech Republic 7% of individuals who completed the risk assessment were found to be of high risk. In Denmark this rate was 8.6%, in Greece 11.4% and in Sweden none of the participants was identified as being at high risk. In the Netherlands, 22% of participants were characterized as being at high risk according to the instrument and the cut-off scores that was applied. These results are presented in Table 5 below.
Table 5. Analysis of the instruments for risk assessment per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Czech Rep*</th>
<th>Denmark**</th>
<th>Greece*</th>
<th>Netherlands***</th>
<th>Sweden*</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=174</td>
<td>n=58</td>
<td>n=70</td>
<td>n=57</td>
<td>n=39</td>
<td></td>
</tr>
<tr>
<td>Heart SCORE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(European High Risk Chart)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (25%-75%)</td>
<td>1 (0 – 2)</td>
<td>-</td>
<td>1 (0 – 3)</td>
<td>-</td>
<td>0 (0 – 1)</td>
</tr>
<tr>
<td>Participants with Heart SCORE ≥ 5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n,%)</td>
<td>12 (6.9%)</td>
<td>-</td>
<td>8 (11.4%)</td>
<td>-</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>KRAMRASK risk assessment score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (25%-75%)</td>
<td>-</td>
<td>2 (1 – 3)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Danish participants at high-risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n,%)</td>
<td>-</td>
<td>5 (8.6%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dutch PC CMR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (25%-75%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>22.0 (13.5 – 39.5)</td>
<td>-</td>
</tr>
<tr>
<td>Dutch participants at high risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n,%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21 (36.8%)</td>
<td>-</td>
</tr>
</tbody>
</table>

* The Czech Republic, Greece and Sweden used the Heart SCORE (European High Risk Chart)
** Denmark used the KRAMRASK risk assessment tool
*** The Netherlands used the Prevention Consultation cardiometabolic risk (PC CMR)

3. **After the risk-assessment** (evaluation of the feasibility, usefulness and relevance for health status, intention to undertake risk-reduction actions and barriers)

i. **Participant’s assessment of the feasibility study**

After the risk assessment, participants were asked to evaluate the risk assessment. All questions were responded in a 10-point Likert-scale with 1 being the negative endpoint and 10 being the positive endpoint.

Participants in the Czech Republic and in Sweden replied that this risk assessment were quite relevant to them (median score 7.2 in the Czech Republic and 7.4 in Sweden) and respondents in Greece to a fewer extent (median score 5.9).
Furthermore, this risk assessment action was evaluated as quite useful in the Czech Republic (median score 7.5) and in Greece (median score 7.3) and to a smaller extent useful in Sweden (median score 6.1). Participants in all countries assessed this action as quite or very feasible (median score 7.5 in the Czech Republic, 7.4 in Greece and 9.2 in Sweden).

Finally participants stated that this risk assessment encouraged them to pursue a healthier lifestyle (median score 7.5 in the Czech Republic, 7.6 in Greece and 6.5 in Sweden). All the above results are presented in Table 6 below.

<table>
<thead>
<tr>
<th>Country</th>
<th>Czech Rep</th>
<th>Denmark</th>
<th>Greece</th>
<th>Netherlands*</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=174</td>
<td>n=62</td>
<td>n=70</td>
<td>n=66</td>
<td>n=39</td>
</tr>
</tbody>
</table>
| **To what extent do you think that this action/ risk assessment was relevant to you?**
| 1= not at all relevant | 10= very much |
| Median (25% - 75%) | 7.20 (5.10 – 8.63) | 5.85 (5.47 – 7.70) | 7.40 (5.10 – 8.00) |
| **To what extent do you think that this action/ risk assessment was useful for your health?**
| 1= not useful | 10= very useful |
| Median (25% - 75%) | 7.50 (6.20 – 9.20) | 7.30 (6.98 – 7.83) | 6.10 (5.00 – 7.40) |
| **To what extent do you think that this action/ risk assessment was feasible?**
| 1= not feasible | 10= very feasible |
| Median (25% - 75%) | 7.45 (5.10 – 7.45) | 7.35 (6.98 – 7.80) | 9.20 (8.20 – 9.90) |
| **Do you think that this action/ risk assessment encouraged you to pursue a healthier lifestyle?** | | | | | |
After the risk assessment, participants were asked whether they were willing to change their life-style behavior in order to reduce their risk for cardiovascular disease and/or type-II diabetes. Most participants all countries stated that they were willing to change their life-style behavior (85% of participants in the Czech Republic, 93% of participants in Greece and 82% of participants in Sweden). Main reasons that participants were willing to change included “I think I might have a high risk for CVD/diabetes” (31% in the Czech Republic, 7% in Greece and 26% in Sweden) and “I want to be healthier” (72% in the Czech Republic, 61% in Greece and 62% in Sweden). The above results are presented in Table 7 below.

**Table 7. Participants’ willingness to change lifestyle behavior and main barriers per country**

<table>
<thead>
<tr>
<th>Country</th>
<th>Czech Rep</th>
<th>Denmark *</th>
<th>Greece</th>
<th>Netherlands*</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=174</td>
<td>n=62</td>
<td>n=70</td>
<td>n=66</td>
<td>n=39</td>
</tr>
<tr>
<td>I am willing to change your life-style behavior in order to reduce your risk for cardiovascular diseases (CVD) and/or Type-2 diabetes</td>
<td>147 (84.5%)</td>
<td>64 (92.8%)</td>
<td>32 (82.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am willing to change because:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think I might have a high risk for CVD/diabetes</td>
<td>51 (31.0%)</td>
<td>5 (7.1%)</td>
<td>10 (25.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I want to be healthier</td>
<td>124 (71.3%)</td>
<td>43 (61.4%)</td>
<td>24 (61.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>my partner, family or friends insists to do so</td>
<td>14 (8.0%)</td>
<td>(8.6%)</td>
<td>0 (0.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the doctor persuaded me to do so</td>
<td>14 (8.0%)</td>
<td>15 (21.4%)</td>
<td>0 (0.0%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These questions were optional and were not asked in Denmark and the Netherlands as these countries followed a 2-step approach.
iii. Barriers experienced while undertaking risk-reduction actions

About one out of three participants who completed the risk assessment in the Czech Republic (35%) stated that they had encountered barriers in order to start to change their lifestyle, in Greece this rate was 13% and in Sweden 15%. Some of the main barriers that were reported were the lack of time (37% in the Czech Republic and 44% in Greece), lack of budget (7% in the Czech Republic and 67% in Greece), lack of motivation (36% in the Czech Republic, 22% in Greece, 33% in Sweden) and too difficult (22% in the Czech Republic, 100% in Greece and 50% in Sweden). The above results are presented in Table 8 below.

| Table 8. Participants’ main barriers to change lifestyle behavior per country |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| Country                    | Czech Rep (n=174) | Denmark* (n=62) | Greece (n=70) | Netherlands* (n=66) | Sweden (n=39) |
| Did you encounter any barrier in order to start to change your lifestyle into a healthier one? | 59 (34.5%) | 1 (1.7%) | 9 (12.8%) | 6 (15.4%) |
| Yes (n,%)                  | 59 (34.5%) | 1 (1.7%) | 9 (12.8%) | 6 (15.4%) |
| Which barriers:            |            |            |            |            |            |
| I don’t know how to start / where to begin | 4/59 (6.8%) | 0/1 (0.0%) | 3/9 (33.3%) | 1/6 (16.7%) |
| My family/surrounding did not support me | 3/59 (5.1%) | 0/1 (0.0%) | 1/9 (11.1%) | 0/6 (0.0%) |
| I don’t have the budget to change my lifestyle | 4/59 (6.8%) | 0/1 (0.0%) | 6/9 (66.6%) | 0/6 (0.0%) |
| I don’t have time to change my lifestyle | 22/59 (37.3%) | 0/1 (0.0%) | 4/9 (44.4%) | 0/6 (0.0%) |
| I lack the motivation to change | 21/59 (35.6%) | 0/1 (0.0%) | 2/9 (22.2%) | 2/6 (33.3%) |
| I tried, but it is too difficult | 13/59 (22.0%) | 0/1 (0.0%) | 9/9 (100.0%) | 3/6 (50.0%) |
| Other reason                | 0/59 (0.0%) | 1/1 (100.0%) | 0/9 (0.0%) | 4/6 (66.7%) |

*These questions were optional and were not asked in Denmark and the Netherlands as these countries followed a 2-step approach.
4. Health care professional’s assessment of the feasibility study

i. Assessment of the selective prevention program using the NoMAD questionnaire

Two dimensions of the NoMAD questionnaire were used; Coherence and Cognitive participation. Detailed responses per item and country can be found in Table 9 below. As regards the items found under the Coherence dimension, most health care professionals in the Czech Republic disagreed with the statement “I can see how prevention program differs from usual ways of working”, on the other hand health care professionals in Greece and Sweden agreed with the above statement. As regards the rest of the statements of the Coherence dimension, there was an agreement in all countries with the statements “Staff in this organization have a shared understanding of the purpose of prevention program”, “I understand how prevention program affects the nature of my own work”, and “I can see the potential value of prevention program for my work”.

As regards the Cognitive participation dimension of the NoMAD questionnaire, health care professionals in the Czech Republic and in Greece somewhat agreed with the statement “There are key people who drive prevention program forward and get others involved”. Finally, there was a good level of agreement in health care professionals in all participating countries with the rest of the statements of the Cognitive participation dimension namely “I believe that participating in prevention program is a legitimate part of my role”, “I’m open to working with colleagues in new ways to use prevention program” and “I will continue to support prevention program”.

Table 9. The NoMAD questionnaire

<table>
<thead>
<tr>
<th>NoMAD questions per dimension</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can see how prevention</td>
<td>CZ: 0/10</td>
<td>CZ:</td>
<td>CZ: 0/10</td>
<td>CZ: 7/10</td>
<td>CZ: 2/10</td>
</tr>
<tr>
<td>program differs from usual</td>
<td>GR: 0/3</td>
<td>1/10</td>
<td>GR: 1/3</td>
<td>GR: 0/3</td>
<td>GR: 0/3</td>
</tr>
<tr>
<td>ways of working</td>
<td>SW: 1/1</td>
<td>GR: 2/3</td>
<td>SW: 0/1</td>
<td>GR: 0/3</td>
<td>SW: 0/1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff in this organization</td>
<td>CZ: 3/10</td>
<td>CZ:</td>
<td>CZ: 0/10</td>
<td>CZ: 0/10</td>
<td>CZ: 0/10</td>
</tr>
<tr>
<td>have a shared understanding</td>
<td>GR: 0/3</td>
<td>6/10</td>
<td>GR: 0/3</td>
<td>GR: 0/3</td>
<td>GR: 0/3</td>
</tr>
<tr>
<td>of the purpose of prevention</td>
<td>SW: 1/1</td>
<td>GR: 3/3</td>
<td>SW: 0/1</td>
<td>GR: 0/3</td>
<td>SW: 0/1</td>
</tr>
</tbody>
</table>
### ii. Barriers encountered during implementation/use of this program in practice

In the Czech Republic eight out of ten health care professionals identified barrier during the implementation of the program. Most commonly reported barriers were lack of time (8/10), not enough remuneration (3/10), discrepancies in the recommendation and/or guidelines (3/10), not clear which professional is responsible for implementation (3/10), no support from government/policy (3/10) and staff shortage (2/10). In Greece all three health care professionals reported barriers during implementation of the program. Most commonly reported barriers included lack of time (3/3), staff shortage (2/3), not effective in their opinion as general practitioners (1/3) and no support from the (practice) management (1/3). In Sweden the health care professional reported not encountering any barriers during implementation.

Health care professionals were asked why not using this risk assessment in practice. In the Czech Republic most health care professionals reported not using this risk assessment due to lack of time (7/10), not enough remuneration (2/3), discrepancies in the recommendation and/or guidelines (2/3), not clear which professional is responsible for implementation (2/3), no support from government/policy (2/3) and staff shortage (1/3). In Greece all three health care professionals reported not using this risk assessment due to lack of time (2/3), staff shortage (2/3), not effective in their opinion as general practitioners (1/3) and no support from the (practice) management (1/3). In Sweden the health care professional reported not encountering any barriers during implementation.
assessment in practice due to lack of time (5/10), due to staff shortage (1/10), due to not enough remuneration available (1/10) and due not having the support from the practice management (1/10). In Greece all three GPs reported not using this risk assessment due to lack of time, one due to staff shortage and one due to the fact that there was no remuneration available at all. In Sweden the health care professional reported not using this risk assessment in practice due to the fact that she is a nutritionist.

5. Additional information about the risk-assessment program

i. Time required for identification and invitation

In the Czech Republic a total of ten (10) GPs participated in the selective prevention program. A median of two (2) (minimum one; maximum three) persons were involved in the process of identification and invitation of eligible participants. Four GPs stated that it took a few hours in order to identify and invite the eligible participants, three GPs stated that it took some days in order to complete this process and three GPs stated that it was a matter of a few minutes.

In Greece three GPs participated in the selective prevention program. Two of them sent invitations upon checking the eligibility criteria based on the electronic health records of their subscribed patients and the other GP based on consecutive visitors on his setting. The first GP stated that it required the effort of two persons for forty minutes in order to identify the eligible participants, the second GP stated that it required a total of ten (10) days in order to identify and invite the eligible participants and the other GP stated that it took five minutes per consecutive visitor in order to perform the required check for eligibility and make the invitation.

In Sweden a total of two persons participated in the process of identification and invitation of eligible participants and the total time that was required for that process was two days.

ii. Time required for risk assessment

In the Czech Republic each risk assessment lasted on average 12.0 (± 4.5) minutes, in Denmark 10.6 (± 6.1) minutes, in Greece 15.6 (± 5.2) minutes and in Sweden 12.6 (± 5.9) minutes.
Discussion

i. Summary of main findings

The majority (65% to 100%) of those who participated in the selective prevention program accepted to complete the risk-assessment in all countries. This selective feasibility prevention program has also managed to identify in some extent (7% to 22%) percentage of healthy individuals who were at high-risk for CVD in all participating countries with exception of Sweden.

Most participants identified this prevention program as feasible and useful, while they stated that they were willing to try to change their life-style towards a healthier one. In parallel to this, participating GPs stated that they recognized such prevention programs as a legitimate part of their job and that they would continue to support this project.

ii. Limitations

This was a feasibility study thus having all the limitation of such study-designs. Due to the fact that participating countries had different PHC systems, this study had a core design which all countries followed yet each country followed its’ tailored method of recruitment, invitation and instrument for identification of participants as being at high-risk for CVD. To this end, a direct comparison of results between participating countries is not recommended.
Recommendations

The findings of the feasibility studies that were implemented in the five EU Member States, can lead to the formulation of certain recommendations regarding the acceptability and efficiency of selective prevention programs in different health care systems. These recommendations could have input for creating a toolbox for implementing selective prevention programs (see WP2).

**Recommendations relevant to the implementation of selective prevention programs (issues on methodology)**

- The implementation of effective selective CMD-prevention should include a validated risk assessment tool for CMD;
- A selective CMD-prevention program that uses a validated risk assessment tool seems to be important when it is implemented in the age group of 40 to 65 years old. It manages to identify a portion of 10% (or greater) of otherwise healthy individuals as having a high risk in the Netherlands, Greece, Denmark and the Czech Republic;
- During a consultation in primary care, a personalized intervention plan in the framework of a selective prevention program, should be initiated based on the individual initial risk profile and the intervention should follow afterwards;
- In a selective CMD-prevention program implemented in the primary care setting with the involvement of GPs seems to be the most effective way of approach;
- The optimal time for the patients to complete the program, including the initial risk assessment and intervention seems to be 15 minutes;
- The implementation of selective CMD-prevention program should include approaches to change the lifestyle behavior of the patient within the daily practice without any additional financial cost.

**Recommendations relevant to the implementation of selective prevention programs (issues on health care policy)**

Specifications that should be undertaken by the health policy makers include the following:
- The implementation of a selective CMD-prevention programme in primary care that would be considered on a national level with the support of central and regional authorities.
- Cost for selective CMD prevention should be centrally allocated and coordinated by the national government.
- During the implementation of effective selective CMD-prevention, additional support to a multidisciplinary health care team in primary care should be provided in national level.
- A successful implementation of a selective CMD-prevention should include training of a multidisciplinary health care team in primary care by using a validated risk assessment tool with GPs having a leading role.

Ethical considerations

Obtaining Approval from ethical committees will be essential within the five countries. Ethical approval has to be sought as required by national and European law, and is required by many scientific journals. We plan to follow published guidelines for reporting of survey research (Kelley 2003; Bennett et al., 2011). The copies of the approvals from the ethical committees are in Appendix 5.
References


European Social Survey. Available at: http://www.europeansocialsurvey.org/


Moore et al BMJ 2015 350 258, www.mrc.ac.uk/complexinterventionguidance


RAPA questionnaire. Available online at: http://depts.washington.edu/hprc/rapa


The SPIMEU project webpage. Available online at: http://spimeu.org/

Appendixes

Appendix 1a. Client/patient ‘s questionnaire

Part 1. Sociodemographic data

1. What is your sex?
   Male ❑
   Female ❑

2. Please write down your exact age?
   ....... years old

3. What is your height?
   ....... centimeters

4. How much do you weight?
   ....... kilograms

5. Including yourself, how many people – including children – live here regularly as members of this household at this moment?
   ....... persons

6. Thinking about the people other than yourself who live in your house, what is your relationship with them?

   Spouse/partner ❑ Yes
   ❑ No

   Number of children .......

   Number of others (besides children, spouse/partner)..............

   Please specify relationship..............................................................

7. What is your current marital status?
   a. Married/live-in partner ❑
   b. Divorced ❑
   c. Single, never married ❑
   d. Widowed ❑

8. In which country was your father born? ..................................... .... ....

9. In which country was your mother born? .....................................
10. About how many years of fulltime education have you completed?

Number of years: ...................

11. And what is the highest educational level that you completed?
   a. No education
   b. Primary school
   c. Secondary school (up to 16 year old)
   d. College
   e. University

12. What is your most recent occupation? (For example “Plumber”)

................................................................................................................

13. Which of these descriptions applies most to what you have been doing for the last 7 days?
   a. Working full time
   b. Working part- time
   c. Pensioner
   d. Unemployed
   e. Disabled

14. Do you have health insurance?
   a. Yes
   b. No
   c. Not applicable (fully covered by public health)

15. How would you describe your income compared to your country’s average?
   a. Lower
   b. Correspondingly
   c. Higher
   d. Don’t know

16. Do you have any one or more of the following diseases or conditions?

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. High blood pressure?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. High cholesterol?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Angina?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Heart attack (myocardial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infarction)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Coronary surgery / PTCA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Percutaneous Transluminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angioplasty)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
f. Heart failure? □ □

g. Transient ischaemic attack (TIA)? □ □

h. Stroke? □ □

i. Depression? □ □

17. Does any member of your family have any one or more of the following diseases or conditions?

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. High blood pressure?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. High cholesterol?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. Angina?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d. Heart attack (myocardial infarction)?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e. Coronary surgery / PTCA (Percutaneous Transluminal Angioplasty)?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>f. Heart failure?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>g. Transient ischaemic attack (TIA)?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>h. Stroke?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>i. Depression?</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

18. Did or do any of your parents, brothers or sisters suffer from a cardiovascular disease (for example a myocardial infarction, stroke, TIA, heart failure) before the age of 60? Please tick one answer

■ Yes
■ No
Part 2. Physical activity

**Physical Activities** are activities where you move and increase your heart rate above its resting rate, whether you do them for pleasure, work, or transportation.

The following questions ask about the amount and intensity of physical activity you usually do. The intensity of the activity is related to the amount of energy you use to do these activities.

**Examples of physical activity intensity levels:**

<table>
<thead>
<tr>
<th>Light activities</th>
<th>Moderate activities</th>
<th>Vigorous activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• your heart beats slightly faster than normal</td>
<td>• your heart beats faster than normal</td>
<td>• your heart rate increases a lot</td>
</tr>
<tr>
<td>• you can talk and sing</td>
<td>• you can talk but not sing</td>
<td>• you can’t talk or your talking is broken up by large breaths</td>
</tr>
</tbody>
</table>

- Fast Walking
- Aerobics Class
- Strength Training
- Swimming Gently
- Stair Machine
- Jogging or Running
- Tennis, Racquetball, Pickleball or Badminton

19. How **physically active are you?** *(Check one answer on each line)*
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I rarely or never do any physical activities.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2</td>
<td>I do some <strong>light</strong> or <strong>moderate</strong> physical activities, but not every week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3</td>
<td>I do some <strong>light</strong> physical activity every week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4</td>
<td>I do <strong>moderate</strong> physical activities every week, but less than 30 minutes a day or 5 days a week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5</td>
<td>I do <strong>vigorous</strong> physical activities every week, but less than 20 minutes a day or 3 days a week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6</td>
<td>I do 30 minutes or more a day of <strong>moderate</strong> physical activities, 5 or more days a week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7</td>
<td>I do 20 minutes or more a day of <strong>vigorous</strong> physical activities, 3 or more days a week.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8</td>
<td>I do activities to increase muscle <strong>strength</strong>, such as lifting weights or calisthenics, once a week or more.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9</td>
<td>I do activities to improve <strong>flexibility</strong>, such as stretching or yoga, once a week or more.</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Part 3. Patient’s health risk assessment

20. Generally speaking, how would you define your health?
   - Excellent
   - Very good
   - Good
   - Not so good
   - Poor

21. Do you smoke tobacco?
   - Every day
   - Occasionally
   - I quit less than six months ago
   - I quit over six months ago
   - I have never been a tobacco smoker.

22. On average, how many standard drinks do you have per week?

   ![Image of standard drinks]

   Number of standard drinks per __________ week

23. How often do you have more than four (if you are female) or five (if you are male) standard drinks on a single occasion?
   - Every day or nearly every day
   - Once a week
   - Once a month
   - Rarely
   - Never

24. How often do you have vegetables and/or root vegetables (fresh or frozen)?
   - Twice a day or more
   - Once a day
   - A few times a week
25. How often do you have fruit and/or berries (fresh, frozen, preserved, juice/smoothie)?
   - Once a day or more
   - Twice a day or more
   - A few times a week
   - Once a week or less

26. How often do you have a main of fish or shellfish?
   - Three times a week or more
   - Twice a week
   - Once a week
   - A few times a month or less

27. How often do you have pastries, chocolate, candy, and/or soft drink?
   - Every day
   - Nearly every day
   - A few times a week
   - Once a week or less

28. Over the past year, how would you describe your level of physical activity in your spare time?
   - I work out and participate in competitive sports on a regular basis, several times a week.
   - I do sports and/or laborsome yard work at least three hours a week.
   - I walk, bicycle, or do other physical activity at least four hours a week (construction, housework, table tennis, bowling).
   - I usually spend most of my spare time engaging in sedentary activities such as reading, watching TV, going to the movies, etc.

29. Is there anyone in your immediate family under 70 years old who currently has, or have had (before they turned 70) any of the following conditions?
   - High blood pressure
   - High cholesterol
   - Heart attack
   - Stroke
   - Blood clot in lungs or legs
   - Type 1 diabetes
   - Type 2 diabetes

30. Optional additional questions on patients’ risk assessment:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.1 Are you a non-smoker?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.2 Do you drink between one alcoholic drink/month and three alcoholic drinks/day?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.3 Do you participate in moderate or intense physical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
activity once a week or more?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30.4</td>
<td>Do you eat processed meats as a main meal more seldom than once a week?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>30.5</td>
<td>Do you eat fish at least once every week?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>30.6</td>
<td>Do you eat fruit every day?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>30.7</td>
<td>Do you eat vegetables every day?</td>
</tr>
</tbody>
</table>

Part 4. Participation in a preventive health check for cardiovascular diseases (CVD) and/or diabetes.

31. Would you participate in a health check for diabetes or CVD?  
*Please tick one answer*

- ☐ Yes  ☑ Please continue to “Client/patient’s health check questionnaire”
- ☑ No  ☐ Thank you very much for completing this questionnaire. To subscribe to the newsletter or for more information about the SPIMEU project go to www.spimeu.org.
Appendix 1b. Client/patient’s health check questionnaire

Part 5. SCORE Chart: 2016 ESC/EAS Guidelines for the Management of Dyslipidaemias (to be completed with the guidance of the accountable Health Professional).

Please, complete the risk assessment according to a validated tool based on the ESC guideline for cardiovascular risk management or a national guideline, endorsed by a relevant national society or authority. For further information, please follow the HeartScore® Web-based version users’ guide: http://www.heartscore.org/static_file/HeartScore/Documents/heartscore-user-guide.pdf.

SCORE - European High Risk Chart

10 year risk of fatal CVD in high risk regions of Europe by gender, age, systolic blood pressure, total cholesterol and smoking status

Here is how the SCORE chart is used to assess CVD risk in target groups and patients:

1. Use the new risk charts in Appendix A, B, C, and D. They are easy to use and provide an estimate of 10 year risk of fatal CVD.
2. The new charts will help patients and healthcare professionals better understand and manage their cardiovascular risk.

Women
Non-smoker
Smoker

Men
Non-smoker
Smoker

Age
65
60
55
50
40

Systolic blood pressure (mmHg)
180
160
140
120
100
80
60
40
20
0

Total cholesterol (mmol/l)
0
1
2
3
4
5
6
7
8
9
10

Smoking status
Non-smoker
Smoker

Further information using SCORE. Guidelines

Primary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.

Secondary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.

SCORE - European High Risk Chart

10 year risk of fatal CVD in high risk regions of Europe by gender, age, systolic blood pressure, total cholesterol and smoking status

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1. Use the new risk charts in Appendix A, B, C, and D. They are easy to use and provide an estimate of 10 year risk of fatal CVD.
2. The new charts will help patients and healthcare professionals better understand and manage their cardiovascular risk.

Women
Non-smoker
Smoker

Men
Non-smoker
Smoker

Age
65
60
55
50
40

Systolic blood pressure (mmHg)
180
160
140
120
100
80
60
40
20
0

Total cholesterol (mmol/l)
0
1
2
3
4
5
6
7
8
9
10

Smoking status
Non-smoker
Smoker

Further information using SCORE. Guidelines

Primary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.

Secondary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.

SCORE - European High Risk Chart

10 year risk of fatal CVD in high risk regions of Europe by gender, age, systolic blood pressure, total cholesterol and smoking status

Here is how the SCORE chart is used to assess CVD risk in target groups and patients:

1. Use the new risk charts in Appendix A, B, C, and D. They are easy to use and provide an estimate of 10 year risk of fatal CVD.
2. The new charts will help patients and healthcare professionals better understand and manage their cardiovascular risk.

Women
Non-smoker
Smoker

Men
Non-smoker
Smoker

Age
65
60
55
50
40

Systolic blood pressure (mmHg)
180
160
140
120
100
80
60
40
20
0

Total cholesterol (mmol/l)
0
1
2
3
4
5
6
7
8
9
10

Smoking status
Non-smoker
Smoker

Further information using SCORE. Guidelines

Primary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.

Secondary Prevention
1. The risk should be assessed in the same way in everyone, taking into account all of the risk factors.
2. The risk should be reduced by the appropriate combination of lifestyle factors.
3. The risk should be reduced by treatment with drugs, as appropriate.
32. Please, write here the estimated SCORE number: _________________________

33. How much time did it take to complete this questionnaire? __________ minutes
Part 6. Willingness to change your life-style behaviour (smoking, exercise, eating habits, alcohol consumption, medication for reducing blood pressure or cholesterol level) during your health check for cardiovascular diseases (CVD) and/or diabetes

34. Would you be willing to change your life-style behaviour (smoking, exercise, eating habits, alcohol consumption, medication for reducing blood pressure or cholesterol level) in order to reduce your risk for cardiovascular diseases (CVD) and/or Type-2-diabetes. Please tick one answer.

☐ Yes ☐ please continue to question 35
☐ No ☐ please continue to question 36

35. Yes, I am willing to change. . .

Please tick all the reasons that were important in your decision to participate in the health check.

a. Because I think I might have a high risk for CVD/diabetes
b. Because I want to be healthier
c. Only because my partner, family or friends insists to do so
d. Only because the doctor persuaded me to do so
e. Other reason: .................................................................
f. None of the above mentioned reasons

36. No, I am not willing to change my life-style behavior because . . .

Please tick all the reasons that were important in your decision to not participate in the health check.

a. I think that I am healthy
b. The information and suggestions for the life-style change is offered online and I do not have access to the Internet
c. I think I am too young to benefit from a life-style change
d. I think I am too old to benefit from a life-style change
e. I did not have time to change
f. I can’t afford to change my life-style, it’s too expensive
g. I don’t want to change my life-style
h. Other reason: .........................................................

i. None of the above mentioned reasons

☐
**Part 7. Relevance, feasibility and barriers.** In the next 5 questions please mark on the line how you think about the mentioned subjects. For example, when you feel very worried to develop a cardiovascular disease you mark the line on the right side of the line (see example).

<table>
<thead>
<tr>
<th>Example question</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent are you worried about your risk to develop a cardiovascular disease such as a myocardial infarction, stroke or diabetes?</td>
</tr>
<tr>
<td>1 (Not worried)</td>
</tr>
</tbody>
</table>

37. To what extent do you think that this action/ risk assessment was relevant to you?

*Please mark on the line how relevant this action/ risk assessment were to you.*

| 1 (Not at all relevant) | 10 (Very much) |

38. To what extent do you think that this action/ risk assessment was useful for your health?

*Please mark on the line how useful this action/ risk assessment was to your health.*

| 1 (Not useful) | 10 (Very useful) |

39. To what extent do you think that this action/ risk assessment was feasible?

*Please mark on the line how feasible this action/ risk assessment was.*

| 1 (Not feasible) | 10 (Very feasible) |

40. Do you think that this action/ risk assessment encouraged you to pursue a healthier lifestyle?

*Please mark on the line how encouraged you feel to pursue a healthier lifestyle.*
41. Did you encounter any barrier in order to start to change your lifestyle into a healthier one?

☐ No
☐ Yes  ☐ Please, indicate the barriers you encountered, you can tick more answers
  ☐ I don’t know how to start / where to begin
  ☐ My family/surrounding did not support me
  ☐ I don’t have the budget to change my lifestyle
  ☐ I don’t have time to change my lifestyle
  ☐ I lack the motivation to change
  ☐ I tried, but it is too difficult
  ☐ Other barriers, namely__________________________
  ________________________________________________

Thank you very much for completing this questionnaire. To subscribe to the newsletter or for more information about the SPIMEU project go to www.spimeu.org.
Appendix 2. Primary care practitioners’ questionnaires

Background information for the participating primary care practitioners

This feasibility study within the framework of the SPIMEU project aims in identifying factors that hamper or favor the implementation of the initial steps (i.e. identification, invitation and risk profiling of eligible persons) of a selective prevention program in specific primary care settings in five EU Member States representing different health care systems.

Inclusion Criteria: Eligible participants are those persons listed in (or regularly attending) your participating practice, aged 40-70 years without any known cardiometabolic disease or condition according to their medical record:

- hypertension
- cardiovascular disease
- diabetes mellitus
- chronic renal disease
- hypercholesterolemia

Procedure: The following steps are required for this feasibility study:

- Personal invitation of 200 eligible persons per country for participation.
- Completing a risk assessment according to a validated tool based on the ESC guideline for cardiovascular risk management or a national guideline, endorsed by a relevant national society or authority.
- Evaluation of the cardiometabolic risk in the general practice
Part 1. Sociodemographic data of primary care professionals

1. What is your sex?
   
   Male  
   Female  

2. Please write down your exact age?
   
   ....... years old

3. What is your occupation?
   
   a. General Practitioner  
   b. Nurse  
   c. Other  

4. When did you receive your degree?
   
   Year: .................

5. How many years of experience do you have?
   
   Number of years: ...............  

6. What is your current work status?
   
   a. Working full time  
   b. Working part-time  
   c. Other  

7. Type of employment
   
   a. Private  
   b. Public  
   c. Mixed  
   d. Other  

8. What is your level of education?
   
   a. BSc  
   b. MSc  
   c. PhD  
   d. Other  
Part 2. Barriers

9. Which barriers did you encounter during implementation of this risk assessment protocol?  

Please tick all that apply

- Lack of time
- Staff shortage
- No remuneration available at all
- Not enough remuneration available
- Discrepancies in the recommendation and/or guidelines
- Not effective in your opinion as a general practitioner
- Not effective in opinion of patients
- Not clear which professional is responsible for implementation
- No support from (practice) management
- Competence in prevention and health promotion not sufficient
- No support from government/ policy
- No barriers at all
- Other

______________________________

10. Why do you not use this risk assessment tool in your practice?  

Please tick all that apply

- Lack of time
- Staff shortage
- No remuneration available at all
- Not enough remuneration available
- Discrepancies in the recommendation and/or guidelines
- Not effective in your opinion as a general practitioner
- Not effective in opinion of patients
- Not clear which professional is responsible
- No support from (practice) management
- Competence in prevention and health promotion not sufficient
- No support from government/ policy
- CMD prevention is not a priority in my practice
- Other

- I use this protocol in my daily practice
Part 3. Effort devoted for this project

11. How much personnel were utilized for identification and invitation of eligible participants?
   - One person
   - Two persons
   - Three or more persons

12. How much time was needed for identification and invitation of eligible participants?
   _____________ minutes or _____________ hours or _____________ days

Part 4. AUDIT after the dialogue with the client/patient

13. In your opinion, would the patient benefit from lifestyle advice and guidance from a health professional?
   - Yes
   - No

14. In terms of lifestyle change, how motivated do you believe the patient is at this point in time?
   - 1 Not at all motivated
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 9
   - 10 Very motivated

15. In your opinion, how resourceful is the patient in terms of lifestyle change at this point in time?
   - 1 Not at all resourceful
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 9
   - 10 Very resourceful
16. How confident are you that the patient will achieve his or her desired changes in lifestyle?

- 1 Not at all confident
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 Very confident

17. Did you and the patient plan next steps in terms of treatment following the health dialogue?

- We have scheduled a follow-up GP appointment.
- Guidance and advice in terms of lifestyle health factors.
- Assessment of vulnerability factors (stress, anxiety, depression, etc.).
- Other: __________________________________________________________

18. I have referred the patient to one or more municipal lifestyle-change programs.

- Yes
- No

19. If so, what is the focus/foci of the program(s)?

- Weight loss
- Exercise
- Diet
- Alcohol consumption
- Smoking
- Other: __________________________________________________________

20. Patient treatment has been finalized.

- Yes
- No
21. If so, with what justification has treatment been finalized?

- The patient is sufficiently capable of self-care.
- There are no appropriate lifestyle-change programs.
- Other:____________________________________________________

22. How long did the health dialogue take?

- 10 min.
- 20 min.
- 30 min.
- 40 min.
- 50 min.
- 60 min.

Part 5. NoMad questions after the dialogue with client/patient.
Please mark one answer with a tick (✔).

<table>
<thead>
<tr>
<th>Section C1</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>I can see how prevention program differs from usual ways of working</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Staff in this organization have a shared understanding of the purpose of prevention program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>I understand how prevention program affects the nature of my own work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>I can see the potential value of prevention program for my work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section C2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>There are key people who drive prevention program forward and get others involved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>I believe that participating in prevention program is a legitimate part of my role</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>I’m open to working with colleagues in new ways to use prevention program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>I will continue to support prevention program</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you very much for completing this questionnaire. To subscribe to the newsletter or for more information about the SPIMEU project go to www.spimeu.org.
Appendix 4. A. Written consents

Participant’s consent

PLEASE tick every box

☐ I have read the information, or it has been read to me. I have asked all questions about the project that I want. All my questions have been answered to my satisfaction.

☐ I consent voluntarily to participate in completing the questionnaire about implementation of a selective prevention program in specific primary care settings within the framework of the feasibility study of SPIMEU project

☐ What participants say can be used as anonymous quotations in the reports on the SPIMEU project.

Name of Participant

________________________________________

Signature of Participant

______________________________________

Date ___________________________

Day/month/year
Appendix 4. B. Consent form participation of SPIMEU project.

Primary care practitioners’ s consent

☐ I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands the purpose and scope of the study.

☐ I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability.

☐ I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Name of person taking the consent____________________________________________

Signature of person taking the consent___________________________________________

Date ___________________________

Day/month/year
Appendix 5. Copy of the received Bioethical approval per participation country in national languages.

Copy from the Czech Republic.

[Document content]
Copy from Greece.
πρόληψης και εκτίμησης του κυδώνου, θα χρησιμοποιηθούν ερευνητικοί, τηλεφωνικές
επικοινωνίες ή και συνεντεύξεις προσωπικά με πρόσωπα των επιστημόνων στα Κέντρα Υγείας
και των Επαρχιακών Ε.Ο.Δ.Υ. (Γενικών Υπηρεσιών και Νοσοκομείων).
Η έγκριση δίνεται με την δέσμευσή ήτα πριν τη δημοσίευση των αποτελεσμάτων της έρευνας,
θα προσκομίζεται περίληψη των αποτελεσμάτων της έρευνας στην Διοίκηση 7ης Υ.ΠΕ Κρήτης και
με την αριθμητική της ελέγχους όλων των κανόνων ιθαγένειας και διευθυντικής, των προσωπικών
tων προσωπικών δεδομένων και τη γραπτή συγκατάθεση των συμμετεχόντων, καθώς και της μη
οικονομικής επιβάρυνσης της 7ης Υ.ΠΕ Κρήτης και των Μονάδων Υγείας που εποπτεύει.
Έμαστε στη διαθέσεις σας για κάθε δημιουργία.

Ο ΥΠΟΔΙΟΙΚΗΤΗΣ

ΔΗΜΗΤΡΑΚΟΠΟΥΛΟΣ ΣΤΕΛΙΟΣ

Εσωτ. Διανομή: 1. Γραφείο Διοικήτριας 7ης Υ.ΠΕ Κρήτης,
2. Υποδιοικητές 7ης ΥΠΕ Κρήτης
Copy from the Netherlands.

---

Divisie Julius Centrum voor Gesondheidswetenschappen en Bovenaanzicht Geneeskunde
Afdeling huisartsenpraktijk

Datum: 19 oktober 2017
Onderwerp: METC-protocolnummer 17-702/C
Advisie niet-WMO onderzoek

Geachte mevrouw Hollander,

De Medisch Ethische Toetsingscommissie (METC), erkend op 11 november 1999 en artikel 16 van de WMO heeft zich in de vergadering van 17 oktober 2017 beraden over het onderzoeksoverzicht nummer 17/702, getiteld “SPIMEU project. Determinants of successful implementation of selective prevention of cardiometabolic diseases across Europe”, ingediend door prof. dr. N.J. de Wit, met als verrichter UMC Utrecht.

De METC van het UMC Utrecht heeft zich op het standpunt gesteld dat het ingediende onderzoeksoverzicht niet in de zin van de WMO geroepen hoeft te worden. Hierbij heeft de commissie oordwen dat er geen sprake is van het onderwerpen van proefpersonen aan handelingen of het oplegen van een gedragwijze zoals bedoeld in de definitie van medisch-wetenschappelijk onderzoek in de WMO (art. 1b).

De commissie aansluit er op dat zij alleen heeft beoordeeld of het onderzoek onder de reilwijdte van de WMO valt. Er heeft geen inhoudelijke toets van het onderzoek plaatsgevonden.

De commissie heeft de volgende documenten in haar afweging meegenomen:

<table>
<thead>
<tr>
<th>Onderwerp</th>
<th>Datum Ontvangst</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1. Formulier (niet-)WMO d.d. 09-10-2017</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>C1 onderzoeksprductieversie 1 dd 9 okt 2007</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>E1 versie 1 dd 9 okt 2017 Informatie brief voor patiënten</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>F1 versie 1 9 okt 2017 Vragenlijsten patiënt</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>C1 onderzoeksprductieversie 1 dd 9 okt 2007</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>F1 Risko test voor vrouwen</td>
<td>10-10-2017</td>
</tr>
<tr>
<td>F1 Risko test voor mannen</td>
<td>10-10-2017</td>
</tr>
</tbody>
</table>
Udtalelse


Det fremgår af anmeldelsen, at behandlingen rører sig om personoplysningsvarigheder, hvilket er generelt relevant for omsorgsbyggelsens kapitel 1-3. Derfor bedes rette henvendelse til Erik B. Madson (ekm@sdurudk) for at finde den bestemte tilfældes behandling.

Du skal i den forbindelse åndigt være opmærksom på følgende krav til behandlingen:

- Personoplysningsvarigheder må kun bruges til forskning eller statistik, og må ikke indgå i administrativ eller konkret sagstilling. Oplysningerne må heller ikke anvendes som grundlag for konkrete retlige eller faktiske foranstaltninger over for de omhandlede personer eller andre personer.
Kære Trine Thilsing,

De Videnskabelske Komitéer for Region Syddanmark har modtaget nedstæende forespørgsel om anmodning om tilknytning til det Videnskabelske Komitésystem.

Ud fra de oplysninger, der foreligger, har Komitéen besluttet, at projektet ikke er anmodning om tilknytning til det videnskabelske komitésystem, jf. § 14, stk. 1 i lov om videnskabelses behandling af sundhedsvidenskabelige forskningsprojekter.

Det er ved afgørelsen læg vægt på, at der synes at være tale om en spørgsmål – og interviewundersøgelse uden intervention i komitélovens forstand, hvorefter projektet falder uden for rammerne af komitélovens definition af et sundhedsvidenskabeligt forskningsprojekt.

Projektet skal muligvis anmeldes til Datastyrelsen indberettes til en eksisterende "paraplygodkendelse" og der skal muligvis indhentes tildeling til projektet fra Sundhedsstyrelsen, såfremt projektet indebærer videregivelse af patientjournaloplysninger – se mere her: [http://www.sst.dk/Tilsyn%20og%20patientsikkerhed/Patientjournaloplysninger.aspx](http://www.sst.dk/Tilsyn%20og%20patientsikkerhed/Patientjournaloplysninger.aspx)

Sagen er behandlet af formanden for Komité 1, dr. med. Birger Møller.

Denne afgørelse kan, jf. komitélovens § 28, stk. 1, indbringes for Den Nationale Videnskabelske Komité, senest 30 dage efter afgørelsen er modtaget.

Klager samt alle sagens dokumenter sendes til:

Den Nationale Videnskabelske Komité

Holbergsade 6
1057 København K
Tlf.: 72 26 95 70
Mail: D.Kleb@D.Kleb.dk

Venlig hilsen

Sige Rikstrup Jonson
Chefkonsekvent
Kvalitet og Forskning

E-mail: srg@freyd.dk
Direkt: 76638220
Mobile: 20599530

logo
Sökande: Karolinska Institutet
Behörig företrädare: Gunnar Nilsson
Projekt: SPIMEU - Ett sameuropeiskt forskningsprojekt om selektiva förebyggande åtgärder av kardiometaoba sjukdomar. Work Package (WP) 8 - Genomförbarhet av screening för kardiometaoba sjukdomar på vårdcentraler
Förskare som genomför projektet: Axel C Carlsson

BESLUT

Nämnden begär att sökanden kompletterar ansökan enligt följande:

1. Utlåta informationen om bakgrunden till den andra delstudiens i förhållande till den första studien om att identifiera risk för hjärt-kärlsjukdomar.
2. I studiens andra del om svåra bandomstrauman och med hänsyn till studiepopulationens storlek ifrågasätter nämnden om frågorna i denna delstudie kan besvaras.
4. Beskriv vilken beredskap som finns för deltagare i del 2 att få professionellt stöd och hjälp efter att ha fyllt enkäten, risk för oro?, 24-timmars hjälp per telefon?, profession hos den som besvarar telefon eller mail hos WONSA? Nämnden ifrågasätter om inte sådana frågor bör besvaras på plats och önskar en kommentar.
5. På information och samtycke till deltagande personer och personal ska studiens titel anges i sin helhet och de ska struktureras likartat enligt anvisningar och inkluderande information om personuppgiftslagen (PUL).
7. Försölda samtycket så att det blir tydligt att man kan delta i första, men avstå från andra delen av studien.
8. Inkludera information att vare sig man deltar i studien eller inte så påverkas inte framtida behandling.

Kompletteringen ska i ett exemplar ha kommit in till nämnden senast den 11 december 2017. Om kompletteringen inte kommer in i tid kommer ärendet att bedömas av nämnden i befintligt skick.

Nämnden lämnar över åt den vetenskaplige sekreteraren att avgöra ärendet sedan kompletteringen gjorts.
Final report on feasibility studies
Beslut

Datum: 2017/053-31

Sökande: Karolinska Institutet

Behörig företjänare: Gunnar Nilsson

Projekt: SPIMEU - Ett europeiskt forskningsprojekt om selektiva förbyggande åtgärder av kardiometabola sjukdomar, Work Package (WP) 8 - Genomförbarhet av screening för kardiometabola sjukdomar på vårdcentraler

Forskar som genomför projekten: Axel C Carlsson

Nämnden har vid sammansättet den 15 november 2017 lämnat över till den vetenskapliga sekretarien att avgöra ärendet sedan kompletteringar gjort.

Sedan sökanden kommit in med begärd kompletteringar fattar den vetenskapliga sekretarien följande

Beslut

Nämnden godkänner förkortningen.

På nämndens vägnar

2017-11-30

[Signature]

Agneta Nordenskjöld

 Vetenskaplig sekretarie