



EUPAP Feasibility Study

Final Report

EUPAP FEASIBILITY STUDY.

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Summary

The Swedish Physical Activity on Prescription (PAP-S) method is to be transferred in other nine European regions through the EUPAP Project (Catalonia-Spain, Denmark, Flanders-Belgium, Germany, Italy, Lithuania, Malta, Portugal and Romania). The PAP-S five core components are individualised patient-centred counselling, evidence-based physical activity recommendation, written prescription and documented in clinical records, community support, and follow-up. Feasibility studies assess the preparedness in local health services and communities and can help implementers prepare the implementation of new methods in their regular management.

The goal of this feasibility study is to know the context towards physical activity prescription from 10 European regions to make them accessible, communicable and ease the transfer from the Swedish context, specifically to: a) determine relevant indicators and variables related to PAP-S to be used in the planning and monitoring of the implementation process, b) create common guidelines to proceed with the data collection, c) provide an overview of the situation in 10 European regions, and d) compare the situation of each region with the PAP-S model.

Data was collected and processed using a four-stage modified Hybrid e-Delphi process by representative experts of the project consortium from the 10 European countries. In the first stage representatives decided to undergo with the EUPAP project assuming partially costs for it. The second stage was to define procedures for data collection and editing a Feasibility Study Guide for keeping rigor in the procedures of data collection. Data comprised two dimensions (i.e., macro level for an early diagnosis and micro level for preparedness for implementation). The third stage was for data collection and, finally, the fourth stage was for analysing and discussing the data.

Thirty-five experts participated in the modified Hybrid e-Delphi process for the EUPAP Feasibility Study. Results are shown globally for the 10 countries to provide a snapshot for the early diagnosis, which include: a) EUPAP-relevant policy documents, b) profiles of physical activity prescribers and allied professionals, c) past and current programmes, materials and training on HEPA programmes or physical activity prescription, d) norms and regulations, e) budget on physical activity and health. Results about the preparedness for implementation include list of specific: a) stakeholders, b) settings, c) agents, and d) end-users. Country-specific results and discussion is also provided together with discussion on each regional situation in relation to the five core components of PAP-S and other relevant findings.

Data showed regions with solid background and strong network to launch the EUPAP implementation, others with less experience and specific material or weak or underdeveloped network. This information may provide policy-makers and local health services and communities to better set short- mid- and long-term goals for the PAP-S transfer and implementation in different settings. Future studies may address the transferability of the PAP-S, that is, to collect practice-based evidence of what (if any) works in physical activity and exercise prescription in real contexts and to study core elements for scaling up public health programmes.

Keywords

physical activity, exercise, e-Delphi, process evaluation, implementation research, public health, fitness, European Union, policies.

Introduction

The EUPAP Project – *A European Physical Activity on Prescription model* aims to transfer the Swedish Physical Activity on Prescription method (PAP-S) to nine European regions, Catalonia (Spain), Denmark, Flanders (Belgium), Germany, Italy, Lithuania, Malta, Portugal and Romania as well as to support its continuing development in Sweden. The relatively high number of regions and that there are large variations in health services, and social, economic and cultural context between the countries the project will inevitably face important challenges, but there will also be good opportunities for learning and sharing experience. The project includes three phases: a) feasibility study, b) education activities, translation and adaptation of supporting materials, and c) local implementation. The feasibility study focuses on the context readiness for implementation in each European region.

The Consortium Agreement of the EUPAP Project stated that the partners should develop the design of the feasibility studies jointly, to assess the preparedness in local health services and communities in selected regions for introducing physical activity on prescription. Feasibility studies may be as broad as any sort of study that can help researchers prepare for full-scale research (1), and also implementers prepare the implementation of new methods into their regular management. This broad view combines acceptability, demand, implementation, practicality, adaptation, integration, expansion and limited efficacy testing (1). Since the consortium members include professionals with experience in public health administration, health promotion, practitioners and researchers, parts of the preparedness in each European region have already been done during the planning phase of the EUPAP Project. The first 12 months of the project has focused on dissemination, material translations and adaptations, education and training which has oriented the way on how each region could transfer the PAP-S.

A less broad view of feasibility studies is the approach of Wang, Moss, & Hiller (2) who suggest 'Feasibility', or applicability, to be understood as "*whether the intervention process could be implemented in the local setting, no matter what the outcome is.*", in contrast to 'Transferability' which refers to the effectiveness of the new intervention in comparison with the original study setting, that is, after evaluating the outcomes. They suggest that when transferring interventions to a new setting there is a need to consider several standard attributes from the setting of which the intervention originated from. These attributes are the political environment, sound knowledge of public health interventions, the epidemiological situation, resources availability, skills of local people, organisational factors and characteristics of the target population.

A previous experience in transferring a part of the PAP-S in another European region was studied in Lleida, Catalonia during 2010-2012 led by one of the EUPAP Project consortium partners (3). The Catalan feasibility study was based on Foster's Guidelines for HEPA promotion programmes (4), Wang (2) attributes for feasibility studies and was evaluated using the RE-AIM framework (5).

This feasibility study report collects and unifies information from different regions to make them accessible and communicable, as done in the Catalan experience (3). The feasibility study includes a focus on two levels in the health care system and in community settings – health policies (organisational, macro level) and local health care provider (particular, micro level), as explained in the EUPAP Feasibility Study. A Guide for Data Collection (www.eupap.org).

The Swedish PAP-S

The Swedish Physical Activity on Prescription (PAP-S) method has shown to be effective in increasing physical activity levels, but also in improving quality of life and cardio metabolic risk factors in several populations (6–13). The Swedish National Institute of Public Health, the predecessor to the Public Health Agency of Sweden, coordinator of the EUPAP-project, was assigned by the Swedish government to develop and implement PAP-S in the beginning of the 21st century (14–17). Other organisations, like the National Board of Health and Welfare, in Sweden was and is also involved in the implementation and promotion of PAP-S (18). The Board states in their national guidelines that “healthcare services should offer counselling as well as written prescriptions or pedometers and special follow-ups to individuals with insufficient levels of physical activity” (19,20).

The health sector in Sweden is the gate for citizens to receive physical activity on prescription, mostly primary healthcare settings, but also hospitals and psychiatric clinics. The first option is that the physical activity is performed outside the healthcare setting, as everyday activities or more structured exercise. The PAP-S has five core components, which must be implemented to some extent for full transfer of the method.

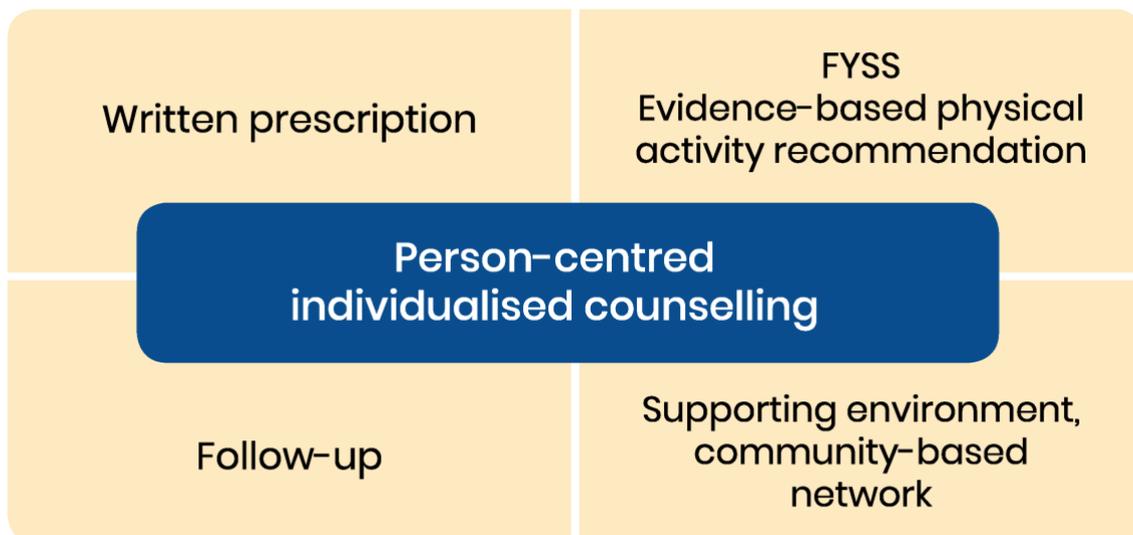


Figure 1. The five core components of the method. Adapted from Kallings (6).

1. The **individualised patient-centred counselling** is central in the PAP-S model (22). The overall goal is to integrate physical activity into everyday life, and to support behaviour change. It is built on patient's health, symptoms, diagnoses, potential risk factors, motivation, prior experiences, preferences and need of support. It concludes with a written prescription form which is also an agreement.
2. The **prescription** should be documented in the patient's clinical record and, if feasible, printed out. It must state of components of physical activity (type, dose, specific activities) possible contraindications and a plan for follow-up. It often includes part of an anamnesis, such as, current physical activity levels, reason for prescription, patient's ambition. Also, a physical activity diary or a pedometer can be attached to it.
3. The **FYSS handbook** summarises the scientific knowledge on how to prevent and treat various diseases and conditions using physical activity. It can be used within the

healthcare services, for physical activity organisers and for educational institutions (23). It is used to ensure evidence-based prescription.

4. The **follow-up** is to adjust the prescription and foster motivation if necessary. The prescriber is responsible for ensuring that the follow-up is done for both, the health outcome(s) and the levels of physical activity. The contact can be through return visits, by phone, letter, e-mail, text message and be done by the same prescriber or other healthcare agents.
5. **Collaboration with activity organisers** (PAP-coaches) is important since the prescription may include structured exercise. Activity organisers can be NGOs like sports, pensioners' or patient associations, public-driven facilities or private businesses like gyms and fitness centres.

These five core components, however, have been adapted to the local and regional circumstances in Sweden. Since the county councils and regions are self-governed with autonomy they can also decide on how to implement and work with PAP-S. Some of the variations in use of PAP-S include:

- Guidance or support functions, such as PAP-S-coaches (who carry out the prescription) or PAP-coordinators in places either within or outside the healthcare setting.
- Collaborations between healthcare services and activity organisers are regulated by agreement or contract, or developed together with local neighbourhoods (a collaboration rather than contract).
- There may be specially trained leaders for supervised activities, and/or activity organisers who also monitor physical activity levels and provide feedback to the prescriber.

A challenge to address is the decline of physical activity behaviour when there is no structural and regular follow-up or feedback to the end-users after the initial counselling and prescription (24).

Table 1 shows the relationship between the feasibility study attributes and examples from the Swedish experience by 2018.

Table 1. Relationship between the EUPAP Feasibility Study dimensions, attributes and examples from the Swedish method.

ATTRIBUTES OF FEASIBILITY STUDIES	EXAMPLES FROM THE SWEDISH PAP-S METHOD (2001-2018)
Political environment.	<p>Methods of promoting Physical Activity, A systematic Review. SBU. (2007)</p> <p>Physical Activity in the Prevention and Treatment of Disease. Swedish National Institute of Public Health. (2010).</p> <p>Government Bill 2007/08:110. Renewed Swedish Public Health Bill.</p> <p>The healthcare act (about responsibilities of agents and bodies).</p> <p>National guidelines for the prevention of Non-Communicable Diseases (2011). These specific guidelines focus on effective methods for changing patients' lifestyle habits, including physical activity, and recommends health care to offer PAP-S. National guidelines help the decision-makers to allocate resources in accordance with the population's needs. The guidelines were revised and updated 2018 and now emphasise the need for directing the work towards vulnerable groups to tackle health inequalities.</p>
Knowledge of public health interventions.	<p>The PAP-S is outstanding at a national level. No other national-broad programme exists.</p> <p>PAP-S includes clear routines and patient flow, also a regional coordination for supporting healthcare settings. There are national, regional and local networks for sharing experiences and development work within healthcare and between healthcare and activity organisers.</p> <p>There is regular education and training. No compulsory courses but each agent decides from a variety of options.</p> <p>Healthcare agents may allocate time for clinical work in PAP. PAP-S provides feedback to politicians and healthcare managers.</p> <p>Some strategies: involvement of the pharmaceutical committee, providing an activity catalogue at municipality-level and supporting clinicians to find suitable activities for their patients.</p>
Skills of local people.	<p>Prescribers:</p> <p>All licensed healthcare professionals working in the system with adequate expertise and knowledge of: patients health status, use of FYSS, the PAP-S method and local routines, behavioural change and motivational interviewing approach.</p> <p>Specifically, in Primary health care: General Practitioner, community nurse, physiotherapist, occupational therapist, midwife, healthcare counsellor, dietitian. Others: Specialist doctors, psychologist.</p> <p>Physical activity organisers:</p> <p>In community sector: PAP-coach with a background on BSc in Physical Therapy, or 1-y college education in personal training, or technical education in personal training, mostly.</p> <p>5-week PAP-S training for healthcare professionals. 10-week Course for in-depth knowledge of PA for prevention and treatment for nurses, physiotherapists and occupational therapists. 2-day course for regional implementation of PAP-S. 4-hour training for specific professions (nurses, midwives). 4- to 8-hour training for activity organisers.</p>

ATTRIBUTES OF FEASIBILITY STUDIES	EXAMPLES FROM THE SWEDISH PAP-S METHOD (2001-2018)
Epidemiological situation	
Resources availability	<p>Healthcare is largely tax-funded. It ensures equal access to healthcare services. Financial support is not linked to a program. It is part of a regular undertaking. Some examples include: funding for specific projects or certain diagnoses; support for PAP-S structures (e.g., Centre for PA, Academic Primary Healthcare Centre, Public Health Centre); agreements between regions and sports federations for financial compensation; subsidies to patients.</p> <p>FYSS handbook. Electronic prescription form in the medical records system (including the inclusion of PA treatment recommendations in Drug Therapy Recommendations). Supporting materials (behavioural counselling addressed by selected agents -Physiotherapists, medical doctors, Nurses, Midwives, Occupational therapists, Clinical dietitians), Guide for PAP-coaches, slide presentations</p>
Organisational factors	<p>Governmental bodies: Ministries of Culture and of Health and Social Affairs, Swedish Association of Local Authorities and Regions.</p> <p>Health administration and organisations: Public Health Agency of Sweden. Swedish Council on Technology Assessment. National Board of Health and Welfare. Swedish Network of Health Promoting Hospitals & Health Services. National Programme for lifestyle behaviours.</p> <p>Swedish professional associations: Occupational Therapists, Clinical Dietitians, Healthcare counsellors, Midwives, Physiotherapists, Medicine, Nursing, for Physical Activity.</p> <p>Sport-related organisations: Swedish Sports Confederation, Regional associations.</p> <p>Disease-related organisations: Diabetes, Cancer, Overweight/obesity, CVD and respiratory.</p> <p>Others: Swedish National Pensioners' Organisation. Swedish Outdoor Association.</p> <p>Primary healthcare settings. Psychiatric clinics. Hospitals.</p> <p>Note that the 21 county councils are self-governed. Many of them develop guidance or support within or outside the settings (PAP-coaches, PAP-coordinators).</p>
Characteristics of the target population	<p>Disease-related organisations (e.g. Diabetes, Cancer, Overweight/obesity, CVD and respiratory) are already part of the Stakeholders in PAP-S.</p>

Objectives

The overall goal of this feasibility study is to know the context towards physical activity prescription from 10 European regions to make them accessible, communicable and ease the transfer from the Swedish context.

The specific aims are:

1. To determine relevant indicators and variables related to PAP-S to be used in the planning and monitoring of the implementation process.
2. To create common guidelines to proceed with the data collection.
3. To provide an overview of the situation in 10 European regions.
4. To compare the situation of each region with the PAP-S model.

Methods for data collection

Data was collected using a modified Hybrid e-Delphi process (25,26). Delphi methods are characterised of being a “*systematic collection and aggregation of informed judgement from a group of experts on scientific questions and issues*” (Reid, in (25)). The main content is the iterative process, keeping the anonymity of the replies from the experts to the research coordinator, controlled feedback and finally all opinions form part of the final outcome (26).

The process in this study included **four stages** in which different experts and/or stakeholders participated (see Table 2). **First**, representatives from 10 European countries decided to undergo with the EUPAP Project, which implied that they accepted a funding of 40% of the total cost. That required a prior evaluation of the possibilities to transfer the PAP-S method and a preliminary analysis on how feasible it would be to join the project. The participating organisations are in the field of Public Health, Health care and Research/Education, and the EUPAP Consortium includes an Assembly and a Steering Committee whose members are experts in the beforementioned fields and/or project management and policy making. This first stage lasted 10 months.

The **second stage** was to define procedures for data collection. The project coordinator for the feasibility study provided information and suggested the approach together with supporting documents to the expert partners from the other countries. The dimensions, indicators and items to be collected was decided by all partners through consensus discussions. The experts involved at this stage could have taken part in the previous stage or not. A EUPAP Feasibility Study Guide (www.eupap.org) was edited and aimed to keep rigor in the procedures, as suggested (25).

The feasibility study for EUPAP transfer comprised two dimensions, that is, data related to the macro level for an early diagnosis and micro level for preparedness for implementation. All information included in the database had to include a score of relevance for EUPAP implementation (1-low, 2-medium, 3-high).

Early diagnosis (macro level) aimed at identifying local, regional or national political priorities (HEPA-related aims, specific diseases or groups of patients, Health-in-all policies) with the support of previous studies and reports (27–31); and EUPAP-related professionals, that is, profiles with sufficient knowledge, skills and experience that may be part of the EUPAP implementation working directly with the end-users. Different contexts may require different professionals but previous experience shows that for a successful implementation of physical activity on prescription the work needs to be interdisciplinary and cannot solely rely on the GPs or other prescribers. (32–37). This dimension included also the task to collect current or past experiences related to HEPA prescription programmes or Physical activity prescription to recognise what was already in place prior to the PAP-S transfer, including materials and education. The early diagnosis also provided knowledge on legal basis for the implementation (competence of professionals, data protection, liability).

Preparedness for implementation (micro level) defined specific description of the stakeholders involved in the planned EUPAP implementation (including public authorities), while considering the social, cultural and political context in which they appear. Identification of potential stakeholders and placing of the contribution of the programme within existing national, regional and local strategy and policy documents are key points to prepare HEPA programmes (4). This micro level also included identifying and characterising the healthcare settings that are going to be the arena for the implementation, the agents who will implement EUPAP and the activity organisers, when applicable. End-users (groups of patients) had to be recognised to plan their involvement in the implementation processes (make them understand the content, the process of delivery and to establish how the program best can be integrated within consultations), see <https://www.eu-patient.eu> as example. See Figure 2.

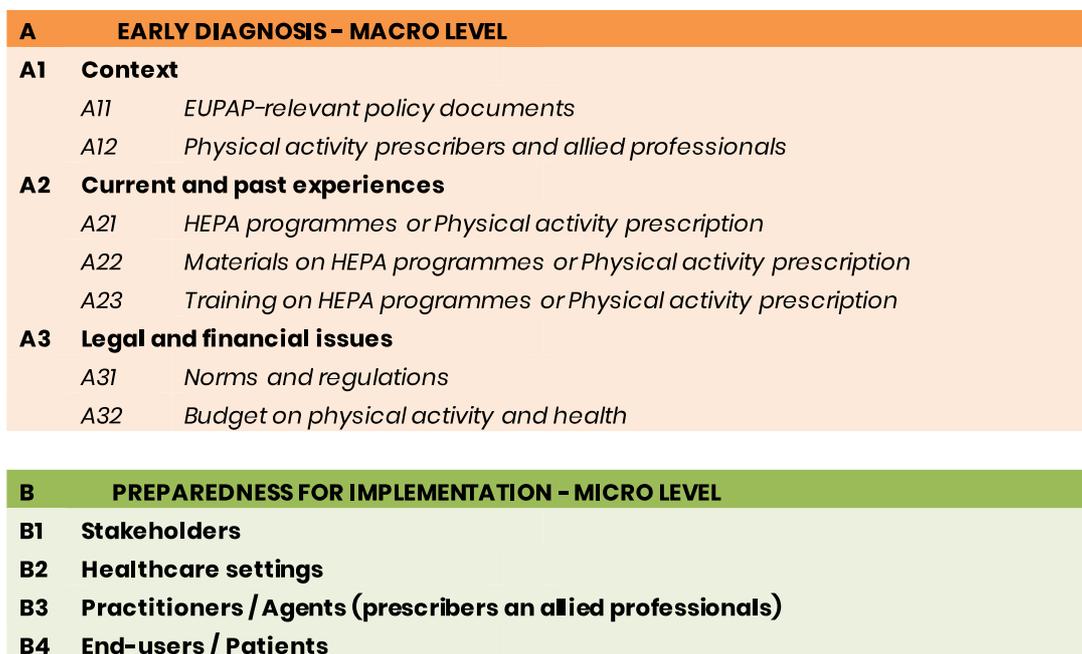


Figure 2. Dimensions for the EUPAP Feasibility Study.

An on-line database was created ad hoc for this study [<https://eupap.inefc.es>] (restricted site). The project coordinator for the feasibility study and the experts of the second stage convened the Delphi panel of corresponding experts, which may be the same persons or other, to collect data, based on their criteria (opinion and expertise). The **second stage** lasted 10 months.

The **third stage** was the data collection. Eighteen experts from 10 countries formed the e-Delphi panel to collect data and feed the online database with information from her/his country only. The project coordinator for the feasibility study provided two rounds of feedback to address specific bugs or questions about the information provided establish standardisation of content. All data was available to the experts through the whole process. This was to secure trustworthiness of data (reliability and validity) (25). The third stage lasted three months.

Finally, the **fourth stage** included information processing (including analysing and discussing) by the project coordinator and three external experts who did not take part in any of the previous stages. A first draft of the final results, discussion and conclusions was reviewed by the second e-Delphi panel formed by the experts who collected data, who processed data and the EUPAP Project Coordinator. This stage ended with an interactive discussion and conclusion of the feasibility study report, and lasted five weeks.

Data was analysed globally, to offer a snapshot of the current picture and common aspects of all the 10 countries. Furthermore, a specific analyses and discussion was performed per country identifying the specific a) scope and b) grounds prior to implementation, c) what features are already achieved in comparison with the PAP-S, and d) relevant findings related to readiness.

Table 2. Modified Hybrid e-Delphi process.

STAGE	TIMEFRAME	PARTICIPANTS	ACTIONS	OUTPUTS
1. Internet face-to-face meetings. E-mail communication. <i>EUPAP Project description.</i>	June 2018 to March 2019	Partnership of organisations from 10 European countries, represented by experts in Public Health, Project management, Health care, Education and Research	Project delivery and signature of Consortium Agreement. 40% of total cost provided by the partnership	Commitment to implement the Swedish method in 10 European settings, at national, regional or local levels.
2. Internet and physical face-to-face meetings. E-mail communication. <i>Feasibility Study Guide.</i>	March to December 2019	All WP-partner leaders physically met in Luxembourg (Mar) and Treviso, Italy (Nov). All WP-partner leaders met online (June). PC and responsible of WP Evaluation, WP Coordination and WP Implementation online (June). PC and RO, BE representatives (June, Dec) PC and MT (Feb) ₁	From PC to experts: information, approach of the study, identification of fields (other studies provided) Design and setting up an ad hoc database.	Dimensions and indicators. Guides for the Feasibility Study. Identification of corresponding experts to collect data. Online database.
3. e-Delphi 1 st Round <i>Data collection.</i>	January to March 2019	PC and corresponding experts from the 10 European countries.	Data collection. Two rounds of feedback from PC to corresponding experts (Feb and Mar).	From raw data to standardisation. Seek for trustworthiness.
4. e-Delphi 2 nd Round <i>Data analysis.</i>	April 2019	PC, three experts who did not collect data, corresponding experts from the 10 European countries, EUPAP Project Coordinator.	Information processing by PC and three experts who did not collect data. Feedback from PC to corresponding experts. Consensus and dissensus.	Agreement in data discussion and conclusions.
<i>Note: WP, Working Package; PC, Project Coordinator; RO, Romania; BE, Belgium; MT, Malta. 1 Due to a change in country representatives the meeting was held later.</i>				

Results and discussion

The specific organisation for the feasibility was set when experts were appointed responsible in their specific country for the study, which actually was in stage 2. Prior to that, the consideration of the implementation to be feasible relied on the expertise of the country organisations' managers, who eventually considered the work worthy to carry out and that it also implied a co-funding of 40% from own budget and resources.

Twenty-six experts participated in one or several of the Stages 2-4, with expertise in Public Health, Health Care, Health-enhancing physical activity (HEPA), Exercise Training, Management, Project Management, Research (Health or Social Sciences) and Education. See Table 3. All experts participated in the online meetings that they were invited to and in addition received added email instructions by the project coordinator, in between meetings. The experts continued their participation to the end of the process, unless they left the project and were replaced by another expert. The information provided by the expert partners to the project coordinator by email was mostly consistent with the information that was required, which suggests that the experts took the task seriously. Low commitment of experts is a common challenge to face to do Delphi right (38).

Table 3. List of experts for the modified Hybrid e-Delphi process for the EUPAP Feasibility Study. ($n = 35$)

Country	Stage 1	Stage 2	Stage 3	Stage 4
Catalonia (Spain)	JSG _{1,2} , PMG _{1,2}	SMA (PC) _{1,4}	SMA (PC) _{1,4}	SMA (PC) _{1,4} , EIFT * _{1,7} , APA * ₁ , SMG * _{1,8}
Denmark	MP ₃	JBA ₃	NBHE ₃ , LLT ₃	LLT ₃ , MMC ₃
Flanders (Belgium)	LD ₃	DD ₄ , LL _{3,4}	DD ₄ , LL _{3,4}	DD ₄ , LL _{3,4}
Germany	EF _{1,4}	EF _{1,4}	WB _{1,4,5}	WB _{1,4,5}
Italy	PS ₅	NC ₅	NC ₅ , LM ₅	NC ₅ , LM ₅
Lithuania	NM ₃	KA ₃	KA ₃	KA ₃
Malta	PV ₆	JZ ₆	JZ ₆ , RZA ₆	JZ ₆ , RZA ₆
Portugal	PT ₄	BA _{3,7}	BA _{3,7} , CG ₇ , CS ₇	BA _{3,7}
Romania	AC _{3,6} , CU _{3,4,6} , CD ₆ , IV ₆	CU _{3,4,6} , AC _{3,6}	CU _{3,4,6} , AC _{3,6}	CU _{3,4,6} , AC _{3,6} , CD ₆ , IV ₆
Sweden	MF _{1,6}	PL _{1,6}	PL _{1,6} , LH _{1,6}	PL _{1,6} , LH _{1,6}

* Experts who did not take part in any previous stage and proceeded with data analyses and discussion.
₁ Research and Education, ₂ Management, ₃ Project Management, ₄ Health-Enhancing Physical Activity, ₅ Health Care, ₆ Public Health, ₇ Research (Social), ₈ Exercise training.
 Note. PC, Project Coordinator.

Other weaknesses of the method used are related to rigor or trustworthiness (25). One threat to the result could be that the project coordinator manipulated the information provided by all the experts out of self-interest or misunderstanding (26). All data inserted in the online database was available for consultation by all experts throughout the timeframe of the project, and blinding was applied to the user who collected each item. Also, on-line meetings were set up to address specific questions that arose during the Feasibility Study Guide edition (www.eupap.org). The Study Guide included Frequently Asked Questions (FAQ) which experts could use to get support in how to register the information in the database. When the data collection (stage 3) was finished, all experts received feedback on the imported data after it had been standardised. This

was done to validate the information and if necessary partners could define more precisely the information that was previously inserted and even adding or deleting items.

It should be noted that the consensus -or agreement- in each stage was used as a means of approaching the truth, quoting Landeta (26), and that “*Delphi results do not offer indisputable fact and that instead they offer a snapshot of expert opinion, for that group, at a particular time, which can be used to inform thinking, practice or theory.*” (25). For that reason, our findings can also be compared with other relevant evidence in several dimensions, highlighting European Commission or WHO documents (28,31,39–41), and outstanding research in the field of physical activity, health and policy making (27,42). Reis et al. used for instance a Delphi method as a complement to a literature review to get a fuller picture of factors influencing the scalability of physical activity interventions. This allowed them to integrate the knowledge and experience of experts and key stakeholders from all the regions in their study (42).

Global results

EUPAP-relevant policy documents

A total of 74 relevant policies were identified globally in the 10 regions, being Lithuania and Flanders the regions with the largest number of relevant policies identified. The oldest policy document dates back to 1995 and is from Lithuania and the newest is a draft of National Policies of the HEPA strategy and Action Plan for Malta to be launched in 2020. The most common scope of relevant policies was at the national level (57%) followed by the regional (36%). Just two (3%) European policies were considered relevant globally. Policies may address one or more sectors, and most of the policies (82%) were for the Health or Public Health sector followed by the Sport (63%) sector. See Table 6.

The guidelines for the EUPAP feasibility study (www.eupap.org) instructed partners to identify national, regional and/or local political priorities, with no further detail of what should be considered a “policy document”. This meant that each partner experts had to consider for themselves whether a document issued by any public body would be relevant for EUPAP implementation or not. Some useful resources were provided to assist in what specific policies was regarded as relevant or not (27–31,39). The indicators determined after the e-Delphi panel meeting were not exactly the same as those beforementioned resources. Still, the health sector was the most covered by 82% of the collected policy documents and only 5% were health-in-all policies. The lack of policies addressing physical activity and/or exercise out of the health or sport sectors is common knowledge in European Union member states (39).

Physical activity prescribers and allied professionals

One-hundred fifty profiles of physical activity prescribers and allied professionals were identified¹, 62% of them were working in the public sector. Lithuania (100%), Denmark (86%), Italy (80%) and Sweden (70%) were the regions with higher proportion of profiles in the public sector. Profiles with the same educational background can differ according to the sector (public/private) or setting (health/community/other) where they work. Quantitatively, the most common professions were grounded in medicine (28%) or exercise science (i.e., holding a BSc/BA/MSc/MA Degree) (28%). medical doctors were the only profile which was common in all the 10 European Regions. Physiotherapists, which are highly relevant in the Swedish context, are also a relevant profession

¹ Data collection was not comprehensive in Germany. Both sectors were possible (private/public) for exercise scientists and not dependent of their university degree level (MSc, MA, BSc, MA). This results in 64 different professional profiles without filtering which ones are most relevant for future EUPAP implementation. For the analyses 16 profiles of exercise scientists were included, including all settings and employers possible according to the EUPAP Feasibility Study Guide. (www.eupap.org)

in three other regions. Having different profiles does not mean that these would finally be the most common EUPAP implementers (as prescribers and/or coaches), this is a snapshot to show the variety of professionals who may eventually become EUPAP implementers between the 10 European regions. Other common educational backgrounds are within nursing (nine regions) and nutrition (three regions). The setting in which these profiles work is mostly health-related (73%), such as primary healthcare settings, private clinics or hospitals. Community settings (26%) included sport/fitness specific centres and unspecific settings. See Table 7.

The diversity of educational background and yet identified as relevant skills for EUPAP implementation (as prescribers and/or coaches) may be explained by the diversity in higher education programmes between European countries and also by country- or region-specific regulations on competences of specific professionals. The profession of medical doctors has been shown to be clearly regulated by the identification of specific norms in eight out of the ten countries, and it can be expected that specific regulations exist as well in the remaining two countries (Italy and Germany). However, regulations on responsibilities of actions within the scope of EUPAP implementation (individual counselling, specific decision-making regarding physical activity and exercise prescription) and also the setting in which the actions can be done (health / community settings) are unclear and, in turn, specific educational programmes are not as common as they are in medicine. Previous studies suggested the importance of existing allied health professionals to work in physical activity and exercise prescription besides medical doctors (32–35,43), but to date there is no common profile among the 10 European countries.

Past and current programmes, education and materials on HEPA or Physical activity prescription

A total of 37 relevant programmes, 59 materials and 49 education and training programmes have been identified in the 10 European countries. Portugal identified 11 relevant programmes of which five were past programmes funded under the European Commission funds, followed by Catalonia and Italy with six programmes each. On the opposite, one relevant programme was collected in Sweden, Romania and Denmark. See Table 4.

As was found with the number of relevant policies or professionals' profile, a higher number does not correlate with a larger implementation and impact, for instance, Sweden just identified one programme to be relevant on Physical activity prescription, the FaR@ / PAP-S which is the one to be transferred to the other European countries. However, having previous or current experience in HEPA or Physical Activity prescription related programmes may suggest more sensitive stakeholders, better readiness of settings, trained agents and literate end-users.

Three countries collected 10 or more relevant materials (Flanders, Sweden and Denmark), whereas Lithuania identified only one, followed by Malta and Romania with two. These three countries did not identify any educational programme related to HEPA or Physical Activity Prescription, whereas Portugal and Catalonia identified all together 26. Most of educational programmes in these countries refer to Postgraduate programmes (MSc) addressed to health and exercise professionals.

The selection of programmes, education and materials may not have been comprehensive in any of the 10 countries. There are large differences, for instance, between the number of education courses between Portugal and Catalonia and the rest, because these two countries collected Postgraduate programmes and this sort of degrees may be offered as well in some of the other countries. Besides this bias, there is some consistency between the number of EUPAP-relevant past and current programmes, education and materials on HEPA or Physical activity prescription collected by each country. That is, having previous or current experience of programmes seems to be associated with having materials and education courses at hand.

Norms and budget

Forty-five norms and regulations were recognised that may be of importance for the legal framework of EUPAP implementation. Romania, Lithuania and Flanders had all together 22 documents compiled, while Denmark and Germany identified only one each. Most of the regulations were of the type, responsibilities and practice of health professionals. The data collection was maybe not comprehensive enough since specific actions within EUPAP implementation may not be clearly stated in regional or national regulations and are therefore open for interpretation. Some countries identified national regulations on data protection in spite of the recent publication of the EU General Data Protection Regulation (GDPR) which affects all EU member states².

Data on specific budget on physical activity and health was scarce. Two countries could not identify any relevant information, and specific amounts of earmarked funds was found in four programmes out of 30 (13%). Information of specific amounts of the rest of the 27 programmes was unknown, mostly because there were no specific earmarked funds for programmes that are part of broader plans. See Table 4.

Table 4. EUPAP-relevant past and current programmes, materials and education on HEPA or Physical activity prescription. Norms and regulations and programmes with specific budget on physical activity on health.

Country	Programmes	Materials	Education	Norms	Budget
CAT-ES	6	5	13	5	6
DE	2	3	2	1	3
DK	1	10	2	1	1
FL-BE	4	18	5	9	1
IT	6	4	5	5	2
LT	3	1	0	7	3
MT	2	2	0	2	0
PT	11	4	13	4	10
RO	1	2	0	8	0
SE	1	10	9	3	4
Total	37	59	49	45	30

Note: CAT-ES, Catalonia-Spain; DE, Germany; DK, Denmark; FL-BE, Flanders-Belgium; IT, Italy; LT, Lithuania; MT, Malta; PT, Portugal; RO, Romania; SE, Sweden.

Micro level – Stakeholders, Settings, Agents, End-users

One-hundred stakeholders have been targeted for EUPAP transfer, that is, organisations beyond the EUPAP consortium partners that may directly be part of the implementation by the period 2020-2022 or will be relevant for future sustainability. See

² Regulation (EU) 2016/679 of the European Parliament and of the Council. <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

Table 8. The EUPAP partners may have a formal agreement (52%) or not (48%). Most of stakeholders are from the Health sector (70%) followed by the Sport and exercise sector (18%). The WHO recently highlighted the importance to include a variety of stakeholders related to physical activity programmes in real settings³.

Ninety-two specific settings are targeted to specifically address the EUPAP implementation, located in 390 different cities, towns or villages. Note that three countries did not provide specific data on the number of settings (Flanders, Malta, and Sweden) and three countries did not provide the number of cities, towns or villages (Germany, Malta and Sweden). The reason for this indeterminate number is that some specific settings are still to be determined although there is an estimation of a number (Germany), preliminary work is still being done (Malta), or is already implemented nation-wide with no specific target (Sweden).

One-hundred nine agents have been targeted to implement EUPAP in 2020-2022, and 94 (86%) confirmed their participation; 51% of the agents are medical doctors (of those, 48 GPs, 7 sport physicians and 1 sports medicine resident), 28% Registered Nurses (of those, 28 Community Nurses and 2 in a Sports Department), 20% exercise scientists and 1% a health educator. Three countries did not collect data on any agent (Germany, Malta and Sweden) and it should be noted that Flanders included two agents which will implement EUPAP directly to end-users and are also part of the coordination team, but the full list of agents that will take part in EUPAP implementation into the 300 cities, towns and villages is not available. In contrast with the potential EUPAP physical activity prescribers and allied professionals, which options are varied (see Table 7), targeted agents to start implementation include professionals with a background mostly in medicine, nursing and exercise, also one health educator. However, agents who will finally take part in EUPAP implementation are not yet decided and therefore may vary from the list provided herein.

Potential end-users who may receive EUPAP during 2020-2022 are shown in Table 5. Three countries target a large variety of chronic conditions (Catalonia, Lithuania, Romania), five target few chronic conditions and/or inactive or sedentary patients (Flanders, Germany, Italy, Malta, Portugal), one country targets one specific profile of end-users (Denmark), and there is no data from one country (Sweden). The selection of these profiles has been shown to be in line with relevant public policies identified previously. Related associations were collected from three countries (Catalonia, Italy and Denmark), although Sweden includes this sort of organisations as stakeholders of PAP-S. Representatives of patients and disease associations during the process of practice transfer is getting common as it is intended to improve adoption.⁴

³ The 2020 Physical activity and sedentary behaviour guidelines for children, adolescents, adults and older adults by the WHO included individuals with specific health conditions in the process of drafting the guidelines [<https://www.who.int/news-room/articles-detail/public-consultation-on-the-draft-who-guidelines-on-physical-activity-and-sedentary-behaviour-for-children-and-adolescents-adults-and-older-adults-2020>]

⁴ The 2020 Physical activity and sedentary behaviour guidelines for children, adolescents, adults and older adults by the WHO included individuals with specific health conditions in the process of drafting the guidelines [<https://www.who.int/news-room/articles-detail/public-consultation-on-the-draft-who-guidelines-on-physical-activity-and-sedentary-behaviour-for-children-and-adolescents-adults-and-older-adults-2020>]. More examples on patients' organisations can be found at <http://www.eu-patient.eu/>

Table 5. Potential end-users for EUPAP implementation 2020-2022.

Country	Target end-users. -- Patients / disease associations
Catalonia (Spain)	Diabetes, Mental Health, HIV-AIDS, Musculoskeletal Diseases, Fragility, Ageing-related, Social health (low SES, newcomers, minorities), COPD, Metabolic Disorders, CV risk factors, CVD, Cancer, Back pain, Stroke, Kidney Failure, RA, Fibromyalgia, Parkinson Disease, Osteoporosis, Alzheimer Disease, Spinal Cord Injury, Addictions. -- 16 Associations (Spanish, Catalan, Local scope).
Denmark	Mentally vulnerably. -- Active Patient Support.
Flanders (Belgium)	Inactive people / Sedentary with or without disease such as Overweight / Obesity, Low back pain, Diabetes, Burnout, Psychosomatic complaints, stress, heart and CVD. -- No contacts with patients / disease associations.
Germany	Inactive, sedentary patients of both sexes and all ages. -- No contacts with patients / disease associations.
Italy	Inactive people / Sedentary, Diabetes, Metabolic Syndrome. -- Diabetes Association.
Lithuania	Anxiety, chronic back and neck pain, coronary artery disease, depression, DM type one and two, chronic heart failure, hypertension, lipid disorders, metabolic syndrome, migraine, osteoarthritis, osteoporosis, overweight and obesity, PCOS. -- No contacts with patients / disease associations.
Malta	Obesity, Diabetes. -- No contacts with patients / disease associations.
Portugal	Diabetes, Depression. -- No contacts with patients / disease associations.
Romania	High blood pressure, Overweight / Obesity, Diabetes, Osteoporosis, Depression, Anxiety, Cancer. -- No contacts with patients / disease associations.
Sweden	No data available.

Table 6. EUPAP-relevant policies. Global results ($n = 74$).

Country	CAT-ES	DE	DK	FL-BE	IT	LT	MT	PT	RO	SE	Total ^a
YEAR (range)	2005-2020	2001-2015	2003-2018	2003-2018	2014-2017	1995-2019	2010-2020	2016-2018	2001-2017	2012-2019	1995-2020
SCOPE											
European	--	--	--	1 (9%)	--	1 (8%)	--	--	--	--	2 (3%)
National	3 (25%)	2 (100%)	5 (100%)	--	2 (50%)	11 (92%)	3 (100%)	4 (100%)	6 (100%)	6 (40%)	42 (57%)
Regional	6 (50%)	--	--	10 (91%)	2 (50%)	--	--	--	--	9 (60%)	27 (36%)
Local	3 (25%)	--	--	--	--	--	--	--	--	--	3 (4%)
SECTORS											
Health / Public Health	9 (75%)	1 (100%)	5 (100%)	11 (100%)	4 (100%)	9 (75%)	3 (100%)	2 (50%)	4 (66%)	12 (52%)	60 (81%)
Sport	3 (25%)	--	--	1 (9%)	2 (50%)	11 (92%)	2 (67%)	1 (25%)	2 (33%)	5 (22%)	27 (36%)
Children and Young people	--	--	--	--	2 (50%)	3 (25%)	--	--	--	1 (4%)	6 (8%)
Education	--	--	--	--	--	5 (42%)	--	--	--	--	5 (7%)
Health-in-all Policies	1 (8%)	--	--	2 (18%)	--	--	--	1 (25%)	--	--	4 (5%)
Environment	--	--	--	--	--	1 (8%)	2 (67%)	--	--	3 (13%)	6 (8%)
Other*	1 (8%)	--	--	--	--	--	--	--	--	2 (9%)	3 (4%)
^a Policies may address more than one sector. * Governmental or Economy. Note: CAT-ES, Catalonia-Spain; DE, Germany; DK, Denmark; FL-BE, Flanders-Belgium; IT, Italy; LT, Lithuania; MT, Malta; PT, Portugal; RO, Romania; SE, Sweden.											

Table 7. Potential EUPAP physical activity prescribers and allied professionals. Global results ($n = 150$).

Country	CAT-ES	DE	DK	FL-BE	IT	LT	MT	PT	RO	SE	Total
SECTOR											
Public	14 (52%)	12 (60%) ^a	12 (86%)	9 (64%)	8 (80%)	4 (100%)	4 (57%)	13 (50%)	10 (56%)	7 (70%)	93 (62%)
Private	13 (48%)	8 (40%)	2 (14%)	5 (36%)	2 (20%)	--	3 (43%)	13 (50%)	8 (44%)	3 (30%)	57 (38%)
EDUCATIONAL BACKGROUND											
Medicine	9 (33%)	1 (5%)	2 (14%)	4 (33%)	4 (40%)	1 (25%)	3 (43%)	7 (27%)	10 (56%)	1 (10%)	42 (28%)
Nursing	4 (15%)	--	2 (14%)	1 (8%)	2 (20%)	1 (25%)	1 (14%)	1 (4%)	1 (5%)	1 (10%)	14 (9%)
Exercise / Sport	9 (33%)	16 (80%)	2 (14%)	4 (33%)	2 (20%)	--	1 (14%)	6 (23%)	1 (5%)	--	41 (27%)
Physiotherapy	1 (4%)	--	2 (14%)	3 (25%)	--	2 (50%)	2 (29%)	5 (19%)	--	1 (10%)	16 (11%)
Nutrition	--	--	--	--	--	--	--	5 (19%)	1 (5%)	1 (10%)	7 (5%)
Technical Ed.	4 (15%)	--	--	--	--	--	--	2 (8%)	--	1 (10%)	7 (5%)
Other *	--	3 (15%)	6 (43%)	2 (17%)	2 (20%)	--	--	--	5 (28%)	5 (50%)	23 (15%)
SETTING											
Health ^a	17 (63%)	14 (70%)	12 (86%)	9 (75%)	7 (70%)	3 (75%)	6 (86%)	20 (77%)	14 (78%)	7 (70%)	109 (73%)
Community ^b	10 (37%)	6 (30%)	2 (14%)	4 (33%)	2 (20%)	1 (25%)	1 (14%)	6 (23%)	3 (17%)	3 (30%)	38 (25%)
Other ^c	--	--	--	1 (8%)	1 (20%)	--	--	--	1 (5%)	--	3 (2%)
<p>^a Data collection was not comprehensive, both sectors were possible by exercise scientists with no regards of their university degree level. That results in an exponential number of 64 different professional profiles without filtering which ones are most relevant for future EUPAP implementation.</p> <p>* Health Sciences, Midwifery, Occupational Therapy, Physio-kineto-therapy, Psychology, Kinetic Therapy, Social Education, Social Work, other tertiary-level undetermined education.</p> <p>^a Hospital, primary health care, private clinics. ^b Sport specific and not-sport specific. ^c Local health district, occupational medicine, Schools (primary to secondary).</p> <p>Note: CAT-ES, Catalonia-Spain; DE, Germany; DK, Denmark; FL-BE, Flanders-Belgium; IT, Italy; LT, Lithuania; MT, Malta; PT, Portugal; RO, Romania; SE, Sweden.</p>											

Table 8. Target stakeholders (Global results $n = 100$), settings ($n = 92$) and agents ($n = 109$) to implement EUPAP 2020-2022.

Country	CAT-ES	DE	DK	FL-BE	IT	LT	MT	PT	RO	SE	Total
STAKEHOLDERS											
Health	6 (33%)	3 (100%)	9 (90%)	10 (84%)	4 (80%)	3 (60%)	6 (86%)	7 (64%)	6 (100%)	16 (70%)	70 (70%)
Sport & exercise	7 (39%)	--	1 (9%)	1 (8%)	--	--	1 (14%)	4 (36%)	--	4 (17%)	18 (18%)
Education	--	--	--	--	1 (20%)	1 (20%)	--	--	--	--	2 (2%)
Cross-sectional	5 (28%)	--	--	1 (8%)	--	1 (20%)	--	--	--	--	7 (7%)
Other*	--	--	--	--	--	--	--	--	--	3 (13%)	3 (3%)
SETTINGS											
Number	15	40	2	NA	6	1	NA	15	3	NA	92
Cities / towns	70	NA	1	300	4	1	NA	12	2	NA	390
AGENTS											
Medical doctors	19 (43%)	NA	--	1 (50%)	11 (79%)	3 (100%)	NA	18 (58%)	4 (100%)	NA	56 (51%)
Nurses	17 (39%)	NA	11 (100%)	--	2 (14%)	--	NA	--	--	NA	30 (28%)
Exercise scientists	8 (18%)	NA	--	1 (50%)	--	--	NA	13 (42%)	--	NA	22 (20%)
Other **	--	NA	--	--	1 (7%)	--	NA	--	--	NA	1 (1%)
* Senior citizens, outdoor experience, Interest group for the local authorities at regional and local level within several sectors. ** Health educator.											
Note: CAT-ES, Catalonia-Spain; DE, Germany; DK, Denmark; FL-BE, Flanders-Belgium; IT, Italy; LT, Lithuania; MT, Malta; PT, Portugal; RO, Romania; SE, Sweden; NA, not available.											

Catalonia, Spain

The country member in the EUPAP Consortium is the National Institute of Physical Education of Catalonia (*Institut Nacional d'Educació Física de Catalunya*, INEFC), located at the city of Lleida. INEFC is a Research and Academic organisation.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Catalonia focus on the Lleida region (Lleida city and counties) and Tarragona region (counties).

EUPAP-relevant policy documents

The highest score for relevant policies is for the Catalan-wide health plans, its analysis by the WHO⁵, the Plan on Physical Activity, Sport and Health⁷, and the specific Health Plan for Lleida⁸. The Health Plan and the PAFES target physical activity levels as a health outcome and provide indications on how it should be addressed. Spanish-wide policies scored lower because they are not specific for HEPA prescription but general orientations for physical activity promotion.

Physical activity prescribers and allied professionals

Twenty-seven different profiles have been considered relevant for EUPAP implementation, with the highest score for primary healthcare professionals staffed by a public provider (GP, Community Nurse, Administrative staff), exercise scientist working in primary healthcare settings but not staffed by a public provider, and Sport Physician working in both, a Hospital and public bodies within the sport sector.

Past and current programmes, education and materials on HEPA or Physical activity prescription

The 'Let's Walk Programme', an adaptation of the Swedish PAP was implemented in the city of Lleida (2010-2012), which provided materials that can be used in EUPAP (44). Two Master Degree Programmes are organised by the national EUPAP partner. The regulation of health professions is Spanish-wide⁹ but the regulation affecting exercise scientists is Catalan-wide, currently the prescription (after a diagnose) can be done by medical doctors, and eventually by registered nurses but the exercise planning (i.e., fitness evaluation, setting of exercise components, follow-up and monitoring) by the exercise scientist¹⁰. Two programmes have specific funds for the implementation, the 'Let's Walk Programme' -which ended in 2012- and the Sport equipment for

⁵ The Health Plan for Catalonia 2016-2020. http://salutweb.gencat.cat/web/_content/_departament/pla-de-salut/Pla-de-salut-2016-2020/documents/Pla_salut_Catalunya_2016_2020.pdf

⁶ Thirty-year retrospective of Catalan health planning (2020). <http://www.euro.who.int/en/health-topics/Health-systems/health-systems-financing/publications/2020/thirty-year-retrospective-of-catalan-health-planning-2020>

⁷ Plan on Physical Activity, Sport and Health in Catalonia (PAFES). http://salutpublica.gencat.cat/ca/sobre_lagencia/Plans-estrategics/pla-dactivitat-fisica-esport-i-salut-pafes/

⁸ The Regional Health Plan for Lleida 2016-2020. http://www.icslleida.cat/webroot/files/noticies/pla-salut-territorial-lleida_2016-2020.pdf

⁹ Law 44/2003, November 21, of regulation of health professions. <https://www.boe.es/eli/es/l/2003/11/21/44/con>

¹⁰ Law 3/2008, April 23, of sport professionals. https://portaljuridic.gencat.cat/ca/pjur_ocults/pjur_resultats_fitxa/?action=fitxa&documentId=490794

active ageing¹¹ which, however, is aimed at promoting physical activity using the build environment and not exercise prescription.

Micro level – Ground prior implementation

Stakeholders

Collaboration agreement exists with public stakeholders in the health sector (Ministry of Health and the largest health providers in Lleida and Tarragona regions), the sport and exercise sector (Catalan Secretariat of Sport and the Professional Association of Physical Activity and Sport), other public bodies (Lleida Region administrative council, City Council) and with private entities (Sports Councils and Clubs). Other stakeholders of similar aims are found relevant without existing agreement yet.

Healthcare settings

Four settings have confirmed its EUPAP implementation, all primary healthcare managed by the Catalan Health Institute (public institution). These settings provide health services in two neighbourhoods of one city (Lleida) and 24 towns and villages, with a total population of 60 900 inhabitants (48 000 potential end-users), and staff 94 licensed health agents which 48 may prescribe exercise. Health priorities include the most prevalent NCDs and social determinants of health (equity and related to ageing). These settings have links with community organisations, no specific budget for HEPA programmes and provided rooms for EUPAP implementation both inside the setting and outside in the community.

Practitioners / Agents (prescribers an allied professionals)

Forty-four agents have confirmed their participation in EUPAP implementation (16 GPs, 17 Community Nurses, 8 Exercise scientists and 3 Sport physicians), of which 32 are with the confirmed settings. Thirty of the 44 agents work full-time and are experienced professionals, whereas 8 labour situations are unknown. Some exercise scientists are freelance and others are staffed full time by organisations out of the health sector. The stable position of most agents may be positive for practice transfer and sustainability. Two medical doctors are within organisations that may be or are EUPAP stakeholders – Spanish Society of Family Medicine, Catalan Ministry of Health, Spanish High Council of Sport. Ten agents participated in the EUPAP Education and Training course in Goteborg and three more are about to participate (3 GPs, 2 Community Nurses, 7 Exercise scientists and 1 Sport Physician).

End-users / Patients

Twenty-five target end-users have been identified, all above 18 years. Seventeen of these profiles are in line with the Health Plan for Catalonia strategy, four with the regional Health Plan for Lleida, two with the Catalan Health-in-all policy and two more specific with the specific plan for physical activity promotion. Also, 16 patients / disease associations have been identified.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

Primary healthcare settings and professionals, together with other allied professionals (exercise scientists) have specific experience and training for EUPAP implementation -support behaviour

¹¹ Sport equipment for active ageing. <https://www.diputaciolleida.cat/231-municipis/serveis-per-al-mon-local/salut-publica/ajuts-per-als-ajuntaments-per-espais-ludics-de-salut-per-la-gent-gran-2010/>

change and counselling build on individual's situation. Most of professionals have been involved in prior HEPA prescription programmes.

Written prescription

The electronic medical record used in the confirmed settings include items on sedentary behaviour and physical activity advising (not prescription). One previous experience in two settings included a written prescription form attached to a physical activity diary (walking).

Evidence based physical activity recommendation

The Ministry of Health and Sport Secretariat edited a HEPA Prescription Guidelines (Guia PEFS) in 2007 (45), which includes basics of exercise training, protocols for interdisciplinary work, disease factsheets and document templates (reports). However, it has not been broadly used by practitioners, probably linked to lack of implementation of HEPA prescription programmes in Catalonia. A new edition is to be launched in 2020.

Follow-up

The EUPAP implementation would not rely only in GPs, since the prescription referral may be done by a licensed health professional (according to Spanish laws) and the specific counselling be done by an exercise scientist (according to Catalan laws), including follow-up and periodic reports to the referrer / prescriber.

Supporting environment, community-based network

Two existing materials are part of the community network, that is, the 'Walking urban routes' and the 'Health assets'¹². The urban routes can be promoted by anybody from the community and also part of the counselling, as it were in the previous Catalan HEPA prescription programme. The 'Health assets' directory collects salutogenic community resources, including physical activity organisers. 'Health assets' directory are available publicly and currently promoted by the Ministry of Health to be used by primary healthcare professionals. There are not specific agreements with specific sport or fitness facilities to link EUPAP counselling with.

Other

A major difference that future PAP-S transfer would be in Catalonia is the prescribers' profile. Seldom Catalan public primary healthcare settings staff physiotherapists, occupational therapists or dietitians. Healthcare counsellor does not exist itself. Also, none of the beforementioned, nor GPs or community nurse, have formal education in exercise prescription. On the other hand, exercise scientists, that is, graduated in sport sciences, are educated in specific HEPA prescription skills but are not staffed in the public health sector. Postgraduate Degree programmes as well as shorter courses exist on HEPA prescription.

The Catalan PAFES programmes have been implemented broadly (46) and it included physical activity advise and monitoring, but it did not include exercise prescription. It did not have earmarked funds rather than the salary of public workers working in the Catalan Public Health Secretariat. The PAFES programme was governmental-run and thus provided feedback to politicians and healthcare managers. The Catalan government is also supporting EUPAP implementation.

¹² Health assets. http://salutpublica.gencat.cat/ca/sobre_lagencia/Plans-estrategics/pinsap/Accions-eines-i-projectes-relacionats/actius-i-salut/cercador-dactius-i-salut/index.html

A minor difference is that disease-related organisations are not stakeholders in EUPAP implementation yet.

Relevant findings

There is a solid background for EUPAP transfer and implementation in Catalonia. Past and existing HEPA programmes, materials and education plans addresses a common barrier of 'don't know what to do and how' (34). An integration of existing Catalan materials and those from the PAP-S is recommended to not overlap existing resources.

Stakeholders include public and private bodies, from the health and the community sector. A relatively large number of licensed healthcare agents commit to participate in the implementation and the link with exercise prescribers exist. Potential funding sources -regional administrative councils and municipalities- are current stakeholders and the initial EUPAP transfer implementation may foster commitment by the stakeholders, settings, agents and end-users.

A pilot programme initiated in August 2019 named EUPAP-Cat with funding from the Lleida Region Council, and almost 300 end-users were referred by their GPs or Community Nurse before the COVID-19 lockdown (as of March 13th 2020).

Denmark

The country member in the EUPAP Consortium is the Central Denmark Region (*Region Midtjylland*).

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Denmark focus on the Region of Central Jutland (municipalities of Favrskov, Norddjurs, Randers and Syddjurs), and for mentally vulnerable people by the Randers Regional Hospital and the 'Active' Health Management.

EUPAP-relevant policy documents

The highest score for relevant policies is for health profiles¹³, national clinical guidelines¹⁴ and specific prevention packages – mental health¹⁵ and physical activity¹⁶. Another relevant policy is the National action plan against obesity¹⁷, issued by the Danish Health Authority. All of them are quite recent (since 2017).

Physical activity prescribers and allied professionals

Fourteen different profiles have been considered relevant for EUPAP implementation. Six working in public-run hospitals, six in primary healthcare and two in the sport and fitness sector. The highest score of relevance has been nurses working in the Emergency Department of the Randers Regional Hospital and in the Active Health Management. These nurses may prescribe physical activity to the patients. Other groups are working directly in the health sector (hospitals and primary healthcare settings). There is a broad variety of professional backgrounds (medical doctor, Nursery, Physiotherapy, Occupational Therapy and Social Work). The two profiles from the community sector are BSc in Exercise Science working in both, the public and the private sector.

Past and current programmes, education and materials on HEPA or Physical activity prescription

The 'Physical Activity on Prescription' programme, already adapted from the Swedish FaR® (aka PAP-S), was implemented in 11 municipalities in Denmark during the 2000s. That experience provided know-how and recommendations for future PAP-S implementation. Then, the target end-users were physical inactive people at risk of development, or already with lifestyle diseases, mostly implemented in primary healthcare settings with the participation of GPs, Community Nurses, Physiotherapists and Occupational Therapists. The Danish Health Authority issued six low- to high relevant materials for EUPAP transfer – guides and reports about HEPA prescription, including a 2018 book on physical activity as a treatment for 31 diseases or risk conditions (47). This adds to another relevant book edited back in 2005 aimed at healthcare professionals to identify benefits of PA as an alternative to medicine (48). Two courses have been identified as being relevant for EUPAP transfer, both of short duration, from 1,5 days to 7,5 ECTS (12h to 180h approx.) meant both for licensed healthcare professionals and exercise scientists.

¹³ The national health profiles. <https://www.sst.dk/da/Udgivelser/2018/Danskernes-Sundhed-Den-Nationale-Sundhedsprofil-2017>

¹⁴ National Clinical Guidelines. <https://www.sst.dk/da/Opgaver/Patientforloeb-og-kvalitet/Nationale-kliniske-retningslinjer-NKR>

¹⁵ Prevention package - Mental Health. <https://www.sst.dk/da/Udgivelser/2018/Danskernes-Sundhed-Den-Nationale-Sundhedsprofil-2017>

¹⁶ Prevention package - Physical activity. <https://sst.dk/da/Udgivelser/2018/Forebyggelsespakke-Fysisk-aktivitet>

¹⁷ National action plan against obesity. https://www.sst.dk/da/udgivelser/2003/~/_media/52B80D9AD80E4FADA4E130C24F7E0CC2.ashx

The Danish Health Care Act regulates responsibilities in the healthcare system. Its sections 3 and 9 specifically focuses on the responsibilities of prevention and health.

No earmarked funds exist for PA programmes, but a number of health settings offer PA activities from their own budgets and also it is common that sport societies offer programmes on a voluntary basis.

Micro level – Ground prior implementation

Stakeholders

The highest score for stakeholders is for municipalities, which coordinate physical activity programmes, and also the local Management of Strategic Health in Randers as main decision-maker of the implementation. Other governmental stakeholders include The Region of Central Jutland which have responsibilities of healthcare in the Region, the Danish Health Board as a health professional authority and the Ministry of Health, responsible for prevention and treatment both at a national level. Two other stakeholders are from the sports and exercise sector (Danish Gymnastics and Sports Association) and the health sector (Active Health Management), both aimed at providing Physical Activity options. Official agreement already exists with all stakeholder except the two at national level.

Healthcare settings

Two settings have confirmed EUPAP implementation, the Emergency Department of the Randers Regional Hospital and the Active Health Management from the same city, with whom an agreement exists. The hospital staffs over 100 agents and addresses to over 37 000 patients, and 1 000 patients are with the Active Health Management (500 potential participants of EUPAP) which employs 10 agents, of whom 5 are potentially prescribers of exercise. Both settings also have links with the surrounding municipalities, already stakeholders of the EUPAP implementation. Active Health Management have a budget for coaching mentally vulnerably patients, some of these patients may be in the EUPAP project. They do not have a separate budget for the project.

Practitioners / Agents (prescribers an allied professionals)

One community nurse from the Emergency Department confirmed the participation in EUPAP implementation, being responsible of screening patients to become end-users. Ten other community nurses may participate by prescribing PA and motivate end-users. The 11 agents are experienced (from 11 to 35 y of experience) and have stable position. Two of them participated in the EUPAP Education and Training course in Goteborg.

End-users / Patients

The target end-user is an adult aged 18-65 attending the Emergency Department of the Hospital Randers, being mentally vulnerable, in line with the National Health Profile, by the Danish Health Authority and also with the collaboration of the Active Health Management.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

A Community Nurse in the Emergency Department would screen patients and refer them to other Community Nurses working in the Active Health Management, who already have training in

coaching and motivation. They do not have experience nor education in HEPA prescription. Nurses in the Emergency Department will be trained in coaching and motivating the patients.

Written prescription

It is unknown whether the settings have already materials and protocols on how to record and provide written prescriptions on physical activity.

Evidence based physical activity recommendation

The Danish Health Authority edited a HEPA Prescription Guidelines in 2018, and Danish academics published a study on HEPA benefits and the previous implementation in Denmark (47–49).

Follow-up

The EUPAP implementation would rely on Community Nurses with education in behavioural counselling, after patients being referred by another Community Nurse. There exists a formal agreement between the two settings. The responsibility of the follow up will lie with the nurses in Active Health Management or relevant staff in the municipalities.

Supporting environment, community-based network

One stakeholder is from the community sector (Danish Gymnastics and Sports Association) and another already prescribes PA and guide patients to increase their PA level. Since Denmark has a tradition for sports societies where people practice together at a low price, the sport stakeholder seems relevant according to the context.

Other

A major difference between future Danish PAP-S transfer is that it is focused on one specific setting for one specific target group, that is, mentally vulnerable patients attending a hospital. Physiotherapists, who are able to manage physical activity have not been targeted as potential agents to participate in EUPAP implementation, nor in hospitals or primary healthcare settings.

Governments and other policy makers are stakeholders, so that may facilitate feedback to politicians and healthcare managers.

Relevant findings

There is a solid background for EUPAP transfer and implementation in Denmark. The scope for intervention is very specific, stakeholders are both from the health and community sector including relevant organisations responsible for health policies. Denmark already implemented a version of the PAP-S in primary healthcare settings, so protocols for referral or follow-up used then may be considered.

The EUPAP Education and Training courses, together with local courses may address the lack of specific HEPA education and training of the selected agents as well as the EUPAP Prescription Form, in the case that the previous PAP in Denmark did not use any standard form. An integration of the existing Danish physical activity on prescription guidelines and the Swedish FYSS is recommended to not overlap existing resources.

Flanders, Belgium

The country member in the EUPAP Consortium is The Flemish Institute of Healthy Living (*Vlaams Instituut Gezond Leven*). It is a recognised partner of the government of Flanders for health promotion.

Macro level – Scope of the Feasibility Study

The EUPAP implementation is meant to be in the whole region of Flanders and the Bilingual region of Brussels Capital Region.

EUPAP-relevant policy documents

The most relevant policies, according to the extracted data, include specific governmental and ministerial decisions addressed to subsidise the Flemish Institute of Healthy Living (the regional EUPAP Consortium partner)¹⁸ and PAP-coaches¹⁹, to determine modalities and quality requirements of local HEPA programmes²⁰, and specific recommendations for PA and sedentary behaviour, the latter being issued by the Flemish Institute of Healthy Living (EUPAP Consortium partner). Policies of medium-relevance include four other regional policies issued by the Flemish government, including a strategic plan to 2025²¹ and the WHO Global recommendations on PA for Health²².

Physical activity prescribers and allied professionals

Fourteen professional profiles have been identified for EUPAP implementation. The highest score of relevance are for GPs working in primary healthcare as self-employed or staffed by both, public and private health organisations, for exercise scientists working for the community sector as self-employed or staffed by for- and non-profit organisations, and for physiotherapists working in primary healthcare or privately outside the health sector.

Eight other profiles have been identified as of medium relevance for EUPAP implementation, three working in hospitals (medical doctors, physiotherapists and nurses) and medical doctors working in occupational medicine.

Administrative officers, are also of high relevance but are not directly working with end-users, nor health insurance funds members (lower relevance).

¹⁸ Resolution of the Flemish Government to the conferment of a subsidy to the Flemish Institute of Health. <https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Ministerieel%20besluit%20betreffende%20de%20financiering%20van%20BOV.pdf>

¹⁹ Ministerial decision for the financing of 'Physical Activity on Referral'-coaches through the resolution. <https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Ministerieel%20besluit%20betreffende%20de%20financiering%20van%20BOV.pdf>

²⁰ Ministerial decision for the determination of the modalities and quality requirements of local initiatives. <https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Ministerieel%20besluit%20betreffende%20modaliteiten%20en%20kwaliteitsvereisten%20BOV.pdf>

²¹ Strategic Plan 'Healthy Flemish People in 2025'. https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Strategisch_Plan_GezLev_vGCCorr.pdf

²² Strategic Plan 'Healthy Flemish People in 2025'. https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Strategisch_Plan_GezLev_vGCCorr.pdf

Past and current programmes, education and materials on HEPA or Physical activity prescription

The Flemish Institute of Healthy Living (EUPAP Consortium partner) offered programmes, materials and training highly relevant for EUPAP implementation.

The 'Physical Activity on Referral' is similar to the PAP-S²³. GPs prescribe physical activity to patients who can contact a PAR-coach to increase physical activity levels. There is person-centred counselling and follow up, and strong links with community network. Two other programmes, less specific, have been considered relevant – 'Switch Working' in workplace settings²⁴ aimed at reducing sedentary behaviour and a walking programme promoted in primary healthcare, hospital and community centres led by exercise scientists²⁵. Materials include specific information addressed to professionals and citizens (website, booklet, and others), referral tools for GPs. The Flemish Institute of Healthy Living also offers specific offers specific PAR-coach training for exercise scientists and physiotherapists whom have been selected by a local network to work as a PAR-coach (24h) and PAR-training for local conductors of local PAR implementation (8h). High relevant materials for professionals (movies, slide presentations...) and two private companies developed software solutions for PAR-coaches (technical and managerial). *Domus Medica*, a representative organisation for GPs, developed a workshop to introduce and inform about PAR-coaching. (2-3h).

Other resources also of the Flemish Institute of Healthy Living, of lower relevance though, include more materials (toolbox, infographics and graphics, a set of pedometer, booklet and instruction manual among others).

Micro level – Ground prior implementation

Stakeholders

The management of PAP-FL is done by the Flemish Institute of Healthy Living. The Flemish Institute of Healthy Living set up a Regional Steering Group consisting of regional partners from all over Flanders (e.g., mutual insurance companies, representatives of GPs). A collaboration agreement exists within each local PAR network and it consists of these sectors: local government, representative of GPs health and welfare sector, organisations that could contribute to physical activity, organisations that support low socioeconomic status groups and a health promotion organisation. An agreement between the local PAP-network and the Flemish Institute of Healthy Living exists. All of the beforementioned fit within the Strategic Plan 'Healthy Flemish People 2025'.

Healthcare settings

All primary healthcare providers in Flanders and Brussels are targeted for EUPAP implementation, that includes 300 cities in 60 different health zones with a population of over 5 270 000 inhabitants. The number of potential end-users is unknown, but the target number is 6 000. Primary health care is provided by GPs, not primary healthcare centres, with approximately 6 000 potential prescribers and over 120 PAR-coaches (exercise scientists or physiotherapists selected by the local networks and educated by the Flemish Institute of Healthy Living).

Practitioners / Agents (prescribers and allied professionals)

The specific estimation of number of agents to implement EUPAP will be collected during the process, due to the broad scope of the intervention. Two professionals who take part in

²³ Physical Activity on Referral. <https://www.gezondleven.be/projecten/bewegen-op-verwijzing>

²⁴ Switch Working. <https://www.gezondleven.be/projecten/wisselwerken>

²⁵ 10000 steps. <https://10000stappen.gezondleven.be>

coordination as well, include a GP who also represents the Association of GPs, and an exercise scientist, both with experience in HEPA programmes. PAR-coaches already exist in Flanders (exercise scientists or physiotherapists). To become a PAR-coaches they have to be selected by the local network and complete a specific training course.

End-users / Patients

The target end-user is physically inactive adult (not fulfilling the Flemish recommendations for physical activity) and/or with a sedentary behaviour (i.e., sitting too long according to the Flemish recommendations).

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

General Practitioners are the gate to initiate the EUPAP-participation as they already have experience with PAR which is very similar to PAP-S. The GPs have experience in motivating their patients, initiate physical activity prescription and refer their patients towards a PAP-coach (an exercise scientist or physiotherapist selected by the local network and trained specifically for physical activity on prescription by the Flemish Institute of Healthy Living). The patient then would contact a PAP-coach from his/her neighborhood. An appointment would be made and together, the patient and PAP-coach could continue the EUPAP-FL participation which would consist of motivational interviewing through individual counselling. An individually tailored physical activity schedule would be made by the PAP-coach in cooperation with the patient. Follow-up would be done by the PAP-coach as well. The PAP-coach would report progress to the GP and the GP could do follow-up by briefly asking how the EUPAP-FL participation was during consultation. Both professionals may have attended educational courses for EUPAP-FL implementation. The use of the FYSS-in short and the existing PAR-materials for coaching (which are finetuned according to the EUPAP transfer) facilitate GPs to decide their physical activity prescriptions.

Written prescription

GPs may use a referral tool which supports their decision making when making a referral. The tool allows GPs to select certain pathologies. In response to that, specific recommendations are generated and a written prescription with personal data of the patient, general and specific guidelines for PA and references of PAP-coaches in the neighbourhood is created. Notice that the specific recommendations are not as detailed and extensive as those of FYSS, nor are they formulated as 'a treatment for disease'. The physical activity triangle is mentioned as well. This is a tested model, more motivating for inactive people (to become more physically active and less sedentary) than the mere mentioning of general recommendations. Through this tool data is collected.

Evidence based physical activity recommendation

Materials on healthy physical activity levels and reducing sedentary behaviour are broadly available, but not any specific physical activity as a treatment for diseases.

Follow-up

PAP-coaches must use the specific software to facilitate administration of exercise prescriptions and to provide communication between GPs and PAP-coaches. That would serve also for data collection.

Supporting environment, community-based network

The regional and local governments create a supporting environment for the implementation of EUPAP. Even more, the existence of a community-based local network is an important formal condition for the local implementation of EUPAP. This is because EUPAP would entirely be embedded in an intersectoral network. The following different kind of sectors are involved: local government, health sector, welfare sector, organisations that could contribute to physical activity, organisations that support low socioeconomic status groups and a health promotion organisation. All these sectors have different responsibilities in order to have successful local implementations. The organisations agree to share and develop their knowledge, assist in reducing barriers to physical activity of the population in their region, and to help participants in executing their physical activity plans, e.g., by integrating the participant in an existing sport offer.

Other

A major difference between the Flemish experiences and the PAP-S is the target population. Programmes and materials in Flanders are numerous in relation to HEPA and sedentary behaviour, but not for exercise prescription for specific diseases. Another difference is the decision to be two specific agents to be mainly responsible for EUPAP implementation, namely, the GP in the health sector and the PAP-coach in the community. These procedures are reflected in the Resolution of the Flemish Government to the conferment of a subsidy to the Flemish Institute of Health for 'Physical Activity on Referral' programme after pilot testing, and in collaboration with different stakeholders (e.g., GPs).

Relevant findings

There is a solid background for EUPAP transfer and implementation in Flanders and the Bilingual region of Brussels Capital Region. The Flemish government finances 'physical activity on referral coaches' to work in HEPA programmes through the resolution 18th December 2015, such as to the 'Physical Activity on Referral', developed by the Flemish Institute of Healthy Living (EUPAP Consortium partner), similar to the PAP-S. An integration of existing Flemish written prescription form and education courses, and those from the PAP-S is recommended to not overlap existing resources.

The translation of the FYSS handbook seems to be one of the missing features from the broad list of already existing resources.

The main difference is that the overall goal is reducing physical inactivity and sedentary behaviour and not centred to specific diseases. Governments and other policy makers are stakeholders, so that may facilitate feedback to politicians and healthcare managers.

The 'Physical Activity on Referral' project has been launched in Flanders and the Bilingual region of Brussels Capital Region with a focus on people with low socioeconomic status. The programme is funded by the public administration and users have to pay 5€ per 15 minutes of counselling (with exceptions). Agents are not reimbursed for prescribing physical activity. Several challenges for the implementation include: a) aligning health providers with each other (among primary care and between specialised care), in line with EUPAP implementation, b) involving GPs, and keep them involved, c) making GPs use the full potential of PAP-FL, d) keeping the local networks involved, and e) implementing the project on a large scale.

Germany*

The country member in the EUPAP Consortium is the Goethe University Frankfurt (*Goethe - Universität Frankfurt*). The Department of Preventive and Sports Medicine does government and third-party funded scientific research.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Germany focus on the Federal State of Hessaia.

EUPAP-relevant policy documents

Relevant policies include Book IX of the Code of Social Law²⁶, the Federal Law to Strengthen Health Promotion and Prevention²⁷, issued in 2015. Further policy documents of high relevance are the relevant medical guidelines²⁸ and the National Physical Activity Recommendations and Recommendations for Physical Activity Promotion²⁹. Germany's Initiative for Healthy Diet and More Physical Activity is of medium relevance.

Physical activity prescribers and allied professionals

Five general profiles have been identified, although some of them can be split according to the setting where they work or the employment status. Generally speaking, two main professions are highly relevant for EUPAP implementation, that is, medical doctors and exercise professionals. Medical doctors, typically, specialists either work (typically) as self-employed in the outpatient healthcare setting or they are employed by for-profit or not-for profit hospitals and clinics. A special group of medical doctors is those with the sub-speciality "Sports Medicine". They are especially qualified to provide physical activity counselling. Exercise professionals, including university educated sports scientists (BA/BSc and MA/MSc.) and physiotherapists (professional training or BA/BSc.), as well as exercise instructors. Sports Scientists and physiotherapists working in the private or public sector both health settings (primary healthcare, hospital) and community settings (sport and other type of community settings) Exercise instructors, without any university degree, typically hold group-based exercise in community-based sport clubs or for other providers, such as health insurance companies and welfare organisations. A diversity of profiles related with administration are of medium-relevance in the primary healthcare and the sport / fitness sector.

Past and current programmes, education and materials on HEPA or Physical activity prescription

Statutory and private health insurance companies offer rehabilitation exercise and functional training on prescription (referral form³⁰) in the health sector, In the process of rehabilitation exercise and functional training medical doctors in the outpatient healthcare setting, exercise scientists, physiotherapists and administrative staff is involved. The global aims are to improve

**The results provided herein have been collected and discussed by country partner experts only and have not been processed or analysed by the external experts.*

²⁶ Code of Social Law. https://dejure.org/gesetze/SGB_IX/64.html

²⁷ Federal Law to Strengthen Health Promotion and Prevention. https://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBI&jumpTo=bgbl115s1368.pdf#_bgbl__%2F%2F*%5B%40attr_id%3D%27bgbl115s1368.pdf%27%5D__1563358262075

²⁸ <https://www.awmf.org/leitlinien/aktuelle-leitlinien.html>

²⁹ https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Praevention/Broschueren/Bewegungsempfehlungen_BZgA-Fachheft_3.pdf

³⁰ Referral to exercise in rehabilitation. http://www.kbv.de/media/sp/Muster_56.pdf

condition, enhance chances of recovery and attain workability for people with chronic diseases and conditions. Specific information of the programme is available in German³¹. Another programme developed by the German Olympic Sports Federation, the Federal Medical Chamber and the Society of Sports Medicine and Prevention, called 'Exercise on Prescription', implemented by the beforementioned professional profiles as well, targets sedentary patients and risk to increase PA levels referring them to organised groups³². Existing material include a prescription form³³, and database of quality assured exercise offers³⁴. Highly specialised and long education courses exist: MA/MSc in Sport Sciences that include specific contents and skills in HEPA and how to address patient groups offered by over 10 tertiary institutions in Hesse and a Sub-Specialization "Sports Medicine" for Medical Doctors.

Micro level – Ground prior implementation

Stakeholders

Two highly relevant stakeholders are regional organisations addressing medical doctors (Academic Training and Research Physicians' Offices, Centre of Excellence Continuing Education in Hesse), the latter with an agreement for EUPAP implementation because medical doctors in the outpatient care are often in primary healthcare. A third stakeholder, considered of medium relevance, is the regional Medical Chamber. A further stakeholder is the organized sports.

Healthcare settings

Selected settings are in outpatient health care in the Federal State of Hesse with approximately 40 potential prescribers. The number of participating medical doctors with approximate numbers of patients reached, as further contact information will be available upon completion of the EUPAP training with these medical doctors.

Practitioners / Agents (prescribers and allied professionals)

Prescribers are medical doctors in outpatient health care in the Federal State of Hesse. Information on years of experience in healthcare, existing HEPA experience or specific training will be available after the EUPAP training is completed.

End-users / Patients

The target end-users are inactive and sedentary adults of both sexes and all ages.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

Medical doctors in outpatient care will be the gate to initiate EUPAP participation. Specific education for them is available from different organisations to address health problems with

³¹ https://www.vdek.com/vertragspartner/vorsorge-rehabilitation/Reha-Sport/_jcr_content/par/download/file.res/bar_nvrehasport_ft_2011.pdf

³² Exercise on Prescription. <https://www.landessportbund-hessen.de/geschaeftsfelder/sportentwicklung/gesundheitsport/rezept-fuer-bewegung/>

³³ Prescription form. https://www.landessportbund-hessen.de/fileadmin/media/Bereich_Sportentwicklung/Gesundheitsport/Rezept-fuer-Bewegung_2-2017.pdf

³⁴ Sport for Health Course Database. <https://www.gesundheitsport-in-hessen.de/>

physical activity. Information about behaviour counselling skills and expertise in HEPA prescription will be available upon the completion of the EUPAP training.

Written prescription

Medical doctors in outpatient care may use the existing exercise prescription form and referral to community programmes.

Evidence based physical activity recommendation

Because of the highly specialised education for medical doctors it can be expected that decision-making is evidence-based. No specific materials on physical activity prescription is available.

Follow-up

Lack of time has been observed as a challenge by medical doctors in outpatient care.

Supporting environment, community-based network

The two existing programmes include referral of patients from medical doctors in outpatient care to organised groups. However, there is no solid data on use and impact. Specific stakeholders (e.g., organisations outside the health sector, government bodies) that facilitate community network during EUPAP implementation exist in selected cities and regions.

Other

A major common feature between the Hessen implementation plan and the PAP-S is the target population: inactive or sedentary patients. Education courses are numerous in relation to HEPA prescription but less information is available for motivational counselling. Another difference is the plan to be medical doctors in the outpatient care and exercise professionals the main responsible for EUPAP implementation. The 'Rehabilitation Exercise and Functional Training' programme reimburses medical doctors per each prescription, whereas the other programme does not.

Medical associations are stakeholders, but the communication with politicians and healthcare managers is not clear.

Relevant findings

In Germany there are existing programmes in which medical doctors prescribe physical activity and refer patients to exercise scientists, also at the national level with the participation of the German Olympic Sports Federation, Federal Medical Chamber, Society of Sports Medicine and Prevention, there is a highly specialised education (MA/MSc programmes for exercise scientists) and continuing education for medical doctors, materials such a prescription and referral forms are available. Also, there is a very wide net of community-based sports clubs, which offer quality assured courses at reasonable prices. In that sense, an integration of existing German prescription form and education courses and those from the PAP-S is recommended to not overlap existing resources. The translation of the FYSS handbook seems to be supplementary to existing materials. Specific education courses including behavioural counselling may be also supplementary.

Challenges to implementation include barriers such as lack of time, lack of funding and variety of HEPA prescription experience and less than optimal exchange between the health and the sport



sector. Assets include highly qualified medical doctors with an increasing awareness for physical activity counselling, and sports professionals, as well as the extensive network of community-based sports clubs.

Italy

The country member in the EUPAP Consortium is the Local Health Authority in Treviso (*Azienda Unita Locale Socio Sanitaria n2 Marca Trevigiana*), the Sports and Exercise Medicine Division. It provides health protection of sports activity and promotes physical exercise as a preventive and therapeutic intervention.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Italy focuses in the Veneto region, primarily in Treviso city and surrounding municipalities. Part of the implementation is in Padova in the context of the University Hospital and within a regional cardiovascular screening program. The project is centred in people with diabetes, metabolic syndrome and inactive population.

EUPAP-relevant policy documents

The highest score for relevant policies is for two at national level, a National Prevention Plan³⁵ that includes exercise promotion and prescription for people with NCDs, and a Definition and update of the essential levels of care³⁶ which includes individual counselling for physical activity promotion in the general population and encourages structured exercise programmes for people at risk. Other relevant policies are at regional level, the Regional adaptation of the National Prevention Plan³⁷, and a Law that determine the prescribers of structured exercise programmes, their allied professionals and the status of fitness centres suitable to offer services for people with NCDs, so called “Gyms of Health”³⁸. A deliberation of the regional committee states that the eligible fitness centres collaborate with the clinical network of sports and exercise medicine for exercise on prescription programmes³⁹.

Physical activity prescribers and allied professionals

Ten different profiles have been considered relevant for EUPAP implementation. Of those, seven score highest in relevancy and are three professionals in hospitals (Sport physicians, specialised physicians -not sports- and nurses), two in primary healthcare (GP and community nurse), exercise scientists working in the private sport / fitness sector (holding a MSc degree) and healthcare assistants working in local health districts. Lower relevant professionals include hospital's health educators and sports medicine residents, and exercise scientists (holding a BSc degree) working in the private sport / fitness sector.

The regional law 18/2016 indicates that exercise programmes for people with NCDs, under medical prescription or advice, have to be supervised by exercise scientists with a MSc in Preventive and Adapted Physical Activity in an accredited Gyms of Health. There is a collaboration between exercise prescribers in the healthcare and the exercise scientists of the Gyms of Health for the development of the prescribed exercise protocols.

³⁵ National Prevention Plan. http://www.salute.gov.it/imgs/C_17_pubblicazioni_2285_allegato.pdf

³⁶ Definition and update of the essential levels of care.

<https://www.gazzettaufficiale.it/eli/igu/2017/03/18/65/so/15/sg/pdf>

³⁷ Regional Prevention Plan. <https://bur.regione.veneto.it/BurVServices/pubblica/DetttaglioDgr.aspx?id=298741>

³⁸ Regional Law No. 8/2015.

<https://bur.regione.veneto.it/BurVServices/pubblica/DetttaglioLegge.aspx?id=298263>

³⁹ Deliberation of the regional committee (DGR) 362 of 24 March 2020.

<https://bur.regione.veneto.it/BurVServices/pubblica/DetttaglioDgr.aspx?id=417592>

Past and current programmes, education and materials on HEPA or Physical activity prescription

Three high-relevant programmes have been collected, two of them with links between hospitals and the sport sector^{40,41} and the third one in primary healthcare (district hospitals) that includes physical activity counselling for adults aged 50 and above at risk with insufficient physical activity⁴². Lower-relevance include a past intervention on exercise on prescription and supervised exercising in four regions (finished in 2011) also with links between hospitals and the fitness sector; and two regional programmes in primary healthcare (with budget available for lifestyle counselling in combination with other preventive interventions and in the sports sector (walking groups and special fee discounts in fitness centres for patients being referred by the public healthcare). Four materials have been collected, being an official list of accredited Gyms of Health⁴³ outstanding, and less relevant materials include a website of walking groups, agreements between health and sport stakeholders and a quick guide on exercise prescription.

The 'Physical Exercise on Prescription' programme, within the Regional Prevention Plan, included a budget of 150 000€ (by 2019) for staffed professionals (i.e., MD, exercise scientist), training courses (free of charge for healthcare professionals and exercise scientists) and dissemination. End-users had to pay for the participation in the fitness centre.

Micro level – Ground prior implementation

Stakeholders

Collaboration agreement exists with local, regional and national health stakeholders (including the Ministry of Health, the Directorate for Prevention, Food Safety and Animal Health and several local health authorities) and with an educational stakeholder, the University of Padova, which offers MSc programmes for MD (Sports and Exercise Medicine) and exercise scientists (the MSc Degree required to work in Gyms for Health). The National Institute of Health, at national level, is found relevant because it is the technical and scientific responsible within the national health service and may ease implementation at national level, there is no agreement yet.

Healthcare settings

Six different settings have been targeted for EUPAP implementation. The Sport and Exercise Medicine Department of two cities (Treviso and Padova) with previous with the 'Physical Exercise on Prescription' programme and with links to Gyms of Health for referral. The one in Treviso will address patients being referred by the local Diabetology Service. Another Diabetology Service, in Castelfranco Veneto, offers care and education for diabetic patients including physical activity. The integrated primary healthcare team of Ponzano Veneto and the Service of hygiene, preventive medicine and public health (SISP) both provide counselling on physical activity, the latter with experience with the 'Cardiovascular screening program (Cardio 50). All these settings sum up 11 500 patients being registered and 7 200 being potentially EUPAP participants, plus an indeterminate number from the Diabetes centres and the Sport and Exercise Medicine Department in Treviso. Thirty-six agents can potentially prescribe in EUPAP implementation including 17 MD, 9 medical residents, six nurses and four health educators

⁴⁰ Physical Exercise on Prescription. <https://www.regione.veneto.it/web/sanita/prescrizione-esercizio-fisico>

⁴¹ Exercise is Medicine Italy. https://www.exerciseismedicine.org/assets/documents/pdf_files/Italy%20-%202019%20Fact%20Sheet.pdf

⁴² Cardiovascular screening programme (Cardio 50).

<https://www.epicentro.iss.it/passi/incontri/corso2014/Lo%20screening%20cardiovascolare.pdf>

https://bur.regione.veneto.it/BurServices/Pubblica/Download.aspx?name=749_AllegatoA_298741.pdf&type=9&storico=False

⁴³ The Gyms of Health (official list). <https://www.regione.veneto.it/web/sanita/palestre-della-salute>

Practitioners / Agents (prescribers and allied professionals)

Fourteen agents have confirmed their participation in EUPAP implementation (six GPs working within one integrated primary healthcare team, four Sport Physicians with experience in physical activity prescription, one Sports Medicine resident being involved in a national programme on exercise prescription, two nurses with experience in exercise counselling and monitoring and one health educator for patients with diabetes).

End-users / Patients

Five of the settings have a common target group: Diabetes, and three of them also Metabolic Syndrome. The Service of hygiene, preventive medicine and public health from Padova will address adults over 50 not physically active and/or with a sedentary behaviour.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

The existing training programme 'Physical exercise on prescription (FAD)' offers basics on patient-centred individual counselling. Knowledge and skills of the agents involved in person-centred care, behaviour change and motivational interviewing varies. Physicians are responsible for exercise prescription. The EUPAP implementation will involve the following healthcare agents: a) professionals already involved in the 'Physical Exercise on Prescription' programme, who are not currently prescribers (i.e. nurses, resident physicians), and b) agents who provide counselling, but not a written prescription, within initiatives for the promotion of physical activity (i.e. community nurses, healthcare assistants, professional educators). Since the prescription can only be provided by a licensed physician, the support of a medical doctor (GP or specialised) could be needed.

Written prescription

There is no any standard physical activity prescription form. However, the existing training programme 'Physical exercise on prescription (FAD)' focuses on the written prescription of structured exercise. The physical activity counselling within primary healthcare, the education of diabetic patients and the cardiovascular screening programme all include oral advice or written general information.

Evidence based physical activity recommendation

Highly specialised education for medical doctors may expect decision-making to be evidence-based. There is a compendium of exercise recommendations for NCDs. Annual education which includes the evidence on the benefits of exercise prescription is available via online training (FAD) and residential courses.

Follow-up

The link between health centres in Treviso and Padova with the so-called "Gyms of Health", private fitness centres, may provide specific follow-up and monitoring by the exercise scientist (PAP-coach) in communication with the licensed health professionals (PAP-prescribers), as shown in other programmes done in the region.

Supporting environment, community-based network

Two of the existing materials are related to private fitness centres. The network 'Gyms of Health' is the option for exercise prescribed by medical doctors for people with NCDs, and it is regulated by regional laws. Other fitness centres, who are not accredited as 'Gyms of Health' have a partnership with the Department of Prevention of Treviso, with financial benefits (reduction fees) for leisure-time physical activities (e.g., yoga, dance, self-defence). The fitness centres of 'Gyms of Health' have a legal status of '*amateur sports association*' and thus the users require a medical clearance for non-competitive sports participation. This may be, indeed, a barrier for people with NCDs ready to start the prescribed physical activity. Walking groups are organised all over the region, the participants are encouraged to gather in groups without the supervision of professionals.

Other

A major difference between the Italian experiences and the PAP-S is the participation of specialised medical doctors, in Sports Medicine, as PAP-prescribers. Other licensed health professionals have been participating in HEPA promotion programmes (behavioural counselling), but not proper exercise prescription.

Governmental stakeholders are within agreements with the EUPAP partner which may provide feedback to local authorities and healthcare managers about the EUPAP implementation.

Relevant findings

There is a clear environment for EUPAP transfer and implementation in Treviso and surrounding area. The National Prevention Plan includes exercise prescription that should be developed, regional policies address the issue specifically and, Treviso city has links with community settings to participate in the process. There is a budget for Sports Medicine Units as well as for specific actions in primary care involving healthy behaviour (including PA). There is a high specialised education for professionals with MSc programmes for exercise scientists whom may do internships in healthcare settings (120h). Annual training for the continuing education of healthcare professionals is available (6 – 8h). In that sense, an integration of existing Italian education courses and those from the PAP-S is recommended to not overlap existing resources. The translation of the Prescription Form and FYSS handbook seems to be supplementary to existing materials.

Stakeholders include public bodies from the health and governmental sector and one from education. There is no agreement with stakeholders from the private sector nor from the community sector (e.g., fitness and sports organisations). However, there are existing agreements between local Diabetes Associations and Diabetology services.

The implementation of EUPAP may take place within the existing regional network for the prescription of structured exercise and in the context of physical activity promotion initiatives. Adaptations could be needed to support the autonomy and responsibility of non-physician healthcare professionals in the prescription process. A participation fee for end-users and the law requiring a preparticipation health screening may be barriers for those patients with lower risk.

Lithuania

The country member in the EUPAP Consortium is the Poliklinika Clinic (*Viešoji įstaiga Centro Poliklinika*). It is one of the largest outpatient healthcare providers in Lithuania.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Lithuania will be in Vilnius city.

EUPAP-relevant policy documents

The highest score for relevant policies is for the Lithuanian health program strategy (2014-2025)⁴⁴, three related to physical activity promotion^{45,46,47} and the EU Recommendation on promoting HEPA across sectors⁴⁸. Six other sport and exercise policies scored medium of relevance, some of them also covering the scope of health and/or children and young people. It was collected also the National Educational Strategy as being relevant, but of low importance.

Physical activity prescribers and allied professionals

Four profiles have been considered relevant, all of them licensed health professionals and being employed by public health providers: GPs, Physiotherapists and Community Nurses in primary healthcare settings and physiotherapists in community centres (not sport-specific). All of them are considered of high relevance for EUPAP implementation.

Past and current programmes, education and materials on HEPA or Physical activity prescription

The most relevant programme is the National Sports Development Strategy (2011-2020)⁴⁹, aimed at promoting Sports-for-all including promotion of HEPA and targeting ethnic minorities and people with disabilities. Two other programmes include behaviour counselling for risk of CVD aged 40 or more. One material has been identified: a report that addresses the Lithuanian situation in light of the EU Recommendations (50). Any education course has been identified to offer HEPA or Physical activity prescription contents, although it is possible that the Lithuanian Sports University includes tertiary level programmes related to it⁵⁰.

Micro level – Ground prior implementation

Stakeholders

Five stakeholders have been identified, four governmental at national, regional or local level, and the University of Vilnius. All of them aimed at promoting policy decisions and, the University

⁴⁴ Lithuanian health program strategy of 2014-2025. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/35834810004f11e4b0ef967b19d90c08?jfwid=-fxdp770g>

⁴⁵ 2011-2020 years national sports development strategy. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.395701>

⁴⁶ On the Description of the Procedure for Recognition of Schools as Health Promoting and Active Schools. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/12c15990837e11e98a8298567570d639?jfwid=cx4koy6gj>

⁴⁷ The programme of promoting physical activity between residents of Lithuania. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.394174/asr>

⁴⁸ European Council recommendation on promoting HEPA across sectors. https://ec.europa.eu/health/sites/health/files/nutrition_physical_activity/docs/2013_hepa_en.pdf

⁴⁹ National Sports Development Strategy for 2011-2020. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.395701>

⁵⁰ <https://www.lsu.lt/en/studies/practical-information/kaunas/>

also potentially involved in HEPA educational activities. Three other stakeholders are within the health sector and one is cross-sectional.

Healthcare settings

One public healthcare setting covering primary and secondary healthcare will be the place for EUPAP implementation (it is the EUPAP Consortium partner). It covers a population of 150 000 patients of which 5 000 are potential end-users, 200 agents of which 50 may implement EUPAP. There is room inside for EUPAP implementation but no links with the community exist. The setting has experience with the 'Cardiovascular Disease Prevention Programme'⁵¹, and no specific budget for HEPA programmes.

Practitioners / Agents (prescribers and allied professionals)

Three GPs have confirmed their participation in EUPAP implementation. Their labour situation is stable, have experience in the 'Cardiovascular Disease Prevention Programme' and no specific education in HEPA.

End-users / Patients

A broad spectrum of diseases will be addressed for EUPAP implementation, in line with the "The programme of promoting physical activity between residents of Lithuania": Anxiety, chronic back and neck pain, coronary artery disease, depression, DM 1 and 2, chronic heart failure, hypertension, lipid disorders, metabolic syndrome, migraine, osteoarthritis, osteoporosis, overweight and obesity, PCOS. There are no links with any disease or patients' association.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

GPs are expected to implement EUPAP, but they have not received education in HEPA prescription or behavioural counselling. There is no specific target of other professionals to take over EUPAP counselling.

Written prescription

No materials regarding PA written prescription and monitoring have been found.

Evidence based physical activity recommendation

No materials on evidence-based PA recommendations have been found.

Follow-up

There are not stakeholders from the community sector nor other allied-health professionals (licensed health or exercise scientists) as a target agent for EUPAP implementation.

⁵¹ Cardiovascular Disease Prevention Programme. <http://www.vlk.lt/veikla/veiklos-sritys/prevencines-programos/sirdie-ir-kraujagysliu-ligu-prevencijos-programa>

Supporting environment, community-based network

There are no formal agreements with community organisations nor stakeholders involved in EUPAP implementation.

Other

Stakeholders include governmental bodies which may ease communication of EUPAP implementation and results to politicians and healthcare managers.

Relevant findings

There is little resources and experience on HEPA and Physical activity programmes. Most relevant policies are related to sports promotion not specifically addressing health benefits of physical activity. Links with the community may be an action to work on, trying to involve physiotherapists working in community centres as first option (according to the existing professionals) or, on the other hand, by addressing policy issuers, most of which address to sport and exercise, education or children and health sectors.

The translation and adoption of PAP-S materials (FYSS manual, prescription form) and taking part of EUPAP Education and Training courses seems to be highly relevant in the Lithuanian context. Local training addressing a broader profile of professionals may be positive to support GPs (PAP-prescribers) and not rely the whole implementation on them, and work on the community sector to create links with activity organisers (PAP-coaches), that is, physiotherapists working in community centres or new professional profiles from the sport sector.

The potential impact of the EUPAP implementation in Vilnius is the chance to reach a high number of potential end-users.

Malta

The country member in the EUPAP Consortium is the Ministry for Health, the Health Promotion and Disease Prevention Directorate. It aims to protect and promote health and well-being of the population by developing and implementing strategies for the reduction of NCDs, among others.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Malta targets the all nation.

EUPAP-relevant policy documents

The highest score for relevant policies is for an ongoing draft of the HEPA strategy and Action Plan for Malta (2016-2026) 'Active living for All', which addresses the health, sport/exercise and the environment/urban planning sectors. Two other policies are national strategies for obesity and weight management and prevention for NCDs.

Physical activity prescribers and allied professionals

Seven different profiles have been considered relevant for EUPAP implementation, with the highest score for GPs and physiotherapists working in private clinics as well as physiotherapists working in the public sector. Low relevance for current practice transfer but potential implementers in the future are GPs and community nurses working in public primary healthcare (i.e., within the public sector) and exercise instructors working for non-profit organisations in the sport / fitness sector.

Past and current programmes, education and materials on HEPA or Physical activity prescription

There is a programme of behaviour change (including 1 hour a week of PA) for overweight and obese patients⁵². It is developed by the EUPAP Consortium partner in community settings with physiotherapists and exercise instructors carrying out the physical activity component. A new strategy is currently being drafted in consultation with stakeholders which includes HEPA promotion and monitoring of the population with a special focus on children. Existing materials include PA recommendations for adults aged 18-65 and older adults. No HEPA or PA prescription courses have been found.

Micro level – Ground prior implementation

Stakeholders

Collaboration agreement exists with two highly relevant stakeholders: The Ministry for Health and the Physiotherapy Department within the public sector. The latter offering a public service of physiotherapy on a national scale. Another relevant stakeholder, without collaboration agreement, is Sport Malta, a national entity aimed at promoting and developing sport. Three more stakeholders from the Health sector have been identified: the Malta College of Family Doctors, the Association of Private Family Doctors and a not-profit organisation for physiotherapists.

⁵² Healthy weight for life. <https://deputyprimeminister.gov.mt/en/health-promotion/Documents/library/publications/Aplikazzjon%20-%20Piz%20Tajjeb%20Gha%20Hajtek%202018%20FINAL.pdf>

Healthcare settings

The implementation process is still under negotiation. To date (April 2020) there is no confirmation yet about what healthcare settings are target.

Practitioners / Agents (prescribers an allied professionals)

The implementation process is still under negotiation. To date (April 2020) there is no confirmation yet about what agents are target.

End-users / Patients

The implementation process is still under negotiation. To date (April 2020) there is no confirmation yet about the number of end-users who are targeted.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

The entrance to EUPAP implement is still to be decided, so it is not possible to discuss the current situation in Malta in regards to patient-centred individual counselling. The PA prescribers and allied professionals' profile to be considered most relevant for implementation include medical doctors and physiotherapists, whose knowledge and experience in behavioural counselling have not been identified.

Written prescription

No materials regarding PA written prescription and monitoring have been found.

Evidence based physical activity recommendation

No materials on evidence-based PA prescription have been found.

Follow-up

There is one stakeholder from the community sector but no selected professionals to collaborate in EUPAP implementation. There are no other allied-health professionals (licensed health or exercise scientists) as a target agent for EUPAP implementation besides those working in the health sector with knowledge and experience in behavioural counselling have been identified.

Supporting environment, community-based network

There are no formal agreements with community organisations nor stakeholders from the community. The programmes identified are / would be developed in the health sector.

Other

Stakeholders include governmental bodies which may ease communication of EUPAP implementation and results to politicians and healthcare managers.

Relevant findings

There is little resources and experience on HEPA and Physical activity programmes. The most relevant policy is being drafted and existing policies addresses HEPA promotion rather than prescription. Since there is still work in progress to select settings for EUPAP implementation, and therefore agents and target end-users, there is insufficient information to discuss the feasibility of PAP-S transfer.

Besides the final decision, links with the community for follow-up purposes may be an area to work on, such as trying to involve physiotherapists working in community centres as first option (according to the existing professionals) or addressing issuers of the relevant policies, most of them related to the sport and exercise, education or children and health sectors.

The translation and adoption of PAP-S materials (FYSS manual, prescription form) and taking part in EUPAP Education and Training courses seems to be highly relevant in the Maltese context. Local training to address more than two professional profiles to support GPs and physiotherapists (PAP-prescribers), and work on the community sector to create links with activity organisers (PAP-coaches) may be helpful. These may include exercise instructors in community centres (after providing comprehensive education programmes, because they do not need to have received formal education prior to working) or new professional profiles from the sport sector.

The potential impact of the EUPAP implementation in Malta is the coverage that the Health Promotion and Disease Prevention Directorate may offer nation-wide.

Portugal

The country member in the EUPAP Consortium is the Ministry of Health, the General-Directorate of Health (*Direção-Geral da Saúde*). It guides and develops Public Health programmes, improves healthcare and clinical organisational quality management, assures national epidemiological surveillance, prepares and publishes health statistics and coordinates international relations of the Ministry of Health.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Portugal focus on the continental part of the country, that is, excluding the regions of Azores and Madeira.

EUPAP-relevant policy documents

The highest score for relevant policies is for National Strategy for the Promotion of Physical Activity, Health and Well-being (2016-2025)⁵³ and the National Programme for the Promotion of Physical Activity⁵⁴, which is included in the National Health Plan (2016-2020). Other two national policies are of lower relevance: An Action Plan for Physical Activity Promotion⁵⁵, which addresses the EU HEPA promotion recommendations and the Programme of Sports for All⁵⁶, which supports projects implemented by NGOs and public bodies.

Physical activity prescribers and allied professionals

Twenty-six different profiles have been considered relevant for EUPAP implementation, with the highest score for professionals working in primary healthcare (GPs, community nurses and exercise scientists holding a MSc degree), private hospitals (GPs and exercise scientists holding a MSc degree), public hospitals (exercise scientists holding a MSc degree) and the sport / fitness sector (exercise scientists holding a MSc degree) managed by the public administration, health- and not-health specific. Other professions, with lower relevance, include sport physicians working in public or private hospitals or private clinics, nutritionists or physiotherapists working in public or private health settings (primary or secondary care) or private clinics. Also, GPs in hospitals or physiotherapists in the fitness sector as self-employed or for-profit companies. Exercise scientists holding a BSc degree also may participate and exercise instructors (i.e., with technical education and not university degree) working in the public administration or private companies.

Past and current programmes, education and materials on HEPA or Physical activity prescription

The 'Physical Activity on Prescription' programmes⁵⁷ implemented in primary healthcare by GPs, exercise scientists and community nurses aimed at using PA as treatment and behaviour counselling for people with Diabetes II or depression. Two other experiences were similar by means of professionals involved and target end-users, the 'Diabetes on the move'⁵⁸ and 'Sweet-football'⁵⁹. Other experiences include five ERASMUS+ projects in different cities, 'Lisbon +55'⁶⁰ a

⁵³ National Strategy for the Promotion of Physical Activity, Health and Well-being 2016-2025. <https://www.dgs.pt/documentos-e-publicacoes/estrategia-nacional-para-a-promocao-da-atividade-fisica-da-saude-e-do-bem-estar-pdf.aspx>

⁵⁴ National Programme for the Promotion of Physical Activity (a priority programme of the National Health Plan). <http://www.pnpaf.pt/>

⁵⁵ National Action Plan for Physical Activity Promotion. <http://www.panaf.gov.pt/>

⁵⁶ National Programme of Sports for All. <http://www.idesporto.pt/conteudo.aspx?id=173&idMenu=4>

⁵⁷ Physical Activity on Prescription. <https://dre.pt/pesquisa/-/search/108275649/details/normal?l=1>

⁵⁸ Diabetes on the move. <http://www.diabetesemmovimento.com/>

⁵⁹ Sweet-football. <https://www.facebook.com/sweetfootballportugal/>

⁶⁰ Lisbon +55. <https://www.youtube.com/watch?v=aaNVC4xSqaA>

local programme with links between the sport / fitness sector and the primary healthcare, the 'Brief counselling'⁶¹ in which GPs and community nurses participate, and the 'Walk well'⁶² for HEPA promotion. In any of the programmes end-users had to pay, the ERASMUS+ programmes were funded by the EC and the 'Lisbon +55' by the public health administration and local municipality (unknown budget).

Several materials exist, standing out the 'Physical Activity on Prescription support manual', addressed to GPs, community nurses and exercise scientists with emphasis in Diabetes and Depression, being available only for agents involved in the programme. Other existing materials include resources for brief counselling and behaviour change, and a handbook to promote walking groups. Highly specialised and long education courses exist: MSc in Sport Sciences that include specific contents and skills in HEPA promotion and prescription offered by 11 tertiary institutions in Portugal (3 MSc programmes are addressed to HEPA in older adults). There is a 30-hour course on nutrition and exercise for GPs, to provide insight in PA and HEPA promotion, including PA assessment, counselling and disease factsheets.

Micro level – Ground prior implementation

Stakeholders

Collaboration agreement exists with six national stakeholders (one from the health sector and five from sport and exercise) and five health regional administration. The national health stakeholder, The GPs Portuguese Association represents GPs and has an internal working group on exercise and nutrition, whereas the national sport stakeholders include the Portuguese Association of Exercise Physiologists, Association of Health Clubs, Institute of Sport and Youth and the Sport-Friendly Municipality Programme (Social City).

Healthcare settings

Fifteen primary healthcare settings have confirmed EUPAP implementation, located in 12 cities throughout all continental regions in Portugal. These settings provide health services to a total population of over 223 000 people and staffing 390 agents. The number of potential participants or agents is unknown, but the target is to reach 90 patients from each setting and 2 to 4 agents as PAP-prescribers, 1 350 patients and 34 agents in total. All these settings have experience in HEPA or PA prescription programmes and have links with the local municipality. Also, five of them belong to the Portuguese Network of Healthy Municipalities⁶³, two out of these five also belong to the Sport-Friendly Municipality Programme (Social City)⁶⁴ and even one out of the two participates in Diabetes on the move. None of the settings have specific budget for this sort of programmes.

Practitioners / Agents (prescribers and allied professionals)

Thirty-one agents have confirmed their participation in EUPAP implementation (18 GPs, 11 exercise scientists with BSc degree and two exercise scientists with MSc degree). All 15 primary healthcare settings include one or more GP and exercise scientist. All GPs have some relation with sports medicine: they work at clubs and/or are members of the sports medicine association. This is the way to guarantee the link between the health and the sport sectors. Their labour

⁶¹ Brief counseling. https://www.dgs.pt/programa-nacional-para-a-promocao-da-atividade-fisica/ficheiros-externos-pnpaf/recur_ferramentas-ab-pdf.aspx

⁶² Walk well. <http://coletivozebra.org/andar-bem/>

⁶³ Portuguese Network of Healthy Municipalities. <http://redemunicipiosaudaveis.com/index.php/pt>

⁶⁴ Social City (Sport-Friendly Municipalities Programme). <http://formar.pt/programas.html>

situation, years of clinical experience and HEPA training is unknown, except for MSc degree holders. All of them will receive specific EUPAP training.

End-users / Patients

Target end-users in all settings are adults with diabetes or depression, in line with the National Program for the Promotion of Physical Activity (a priority programme of the National Health Plan). No patients / disease association has been identified.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

Primary healthcare settings and professionals, together with other allied professionals (exercise scientists) have specific experience and will receive training for EUPAP implementation -support behaviour change and counselling build on individual's situation. Also, some of them may have taken the course for GPs, and exercise scientists hold a MSc degree in HEPA prescription.

Written prescription

The 'Physical Activity on Prescription support manual' includes resources on physical activity prescription, monitoring and referral and also a SOP (Standard Operations Procedures, for private use only).

Evidence based physical activity recommendation

The 'Physical Activity on Prescription support manual' includes evidence in Diabetes and Depression only. No other materials have been identified.

Follow-up

The EUPAP implementation would not rely only in GPs, since the prescription referral may be done by a licensed health professional⁶⁵ and the specific counselling be done by an exercise scientist. The latter are regulated by some norms^{66,67}, which affect exercise scientists or instructors working in fitness and sport clubs. The way follow-ups will be done is not provided.

Supporting environment, community-based network

All healthcare settings have formal links with the local municipality. Some municipalities (five out of 15) are member of networks to foster HEPA promotion. The specific way on how end-users would go from the health sector to the community sector not clear. No information about patients / disease associations have been found.

Other

A major difference that future PAP-S transfer would be in Portugal is the prescribers' profile. Seldom Portuguese public primary healthcare settings staff physiotherapists, occupational therapists or dietitians. Healthcare counsellor does not exist itself. Also, none of the

⁶⁵ Ordinance 35/2012, 3rd February. <https://dre.pt/web/guest/pesquisa/-/search/543684/details/normal?q=Portaria+n%C2%BA%2035%2F2012.%20de+3+de+fevereiro>

⁶⁶ Ministerial order 8932/2017, 10th October. <https://dre.pt/pesquisa/-/search/108275649/details/normal?l=1>

⁶⁷ Law 39/2012, 28th August. <https://dre.pt/home/-/dre/174777/details/maximized>

beforementioned, nor GPs or community nurse, have formal education in exercise prescription. On the other hand, exercise scientists, that is, graduated in sport sciences, are educated in HEPA promotion and postgraduates also in specific HEPA prescription. However, not any of them is staffed in the public health sector.

The governmental bodies responsible for health at national and regional level are stakeholders of EUPAP implementation, that may facilitate feedback to politicians and healthcare managers.

Relevant findings

There is a solid background for EUPAP transfer and implementation in Portugal. Past and existing HEPA programmes, with the involvement of licensed health professionals (namely, GPs and community nurses) and exercise scientists have been done in several cities in the country. There is a high specialised education (MSc programmes for exercise scientists) and continuing education for medical doctors. Materials on behaviour counselling are available. In that sense, an integration of existing Portuguese education courses and those from the PAP-S is recommended to not overlap existing resources.

The translation of the FYSS handbook and the exercise prescription form seems to be supplementary to existing materials. Stakeholders include public and private bodies, from the health and the community sector. Settings from all the continental regions in Portugal commit to participate in the EUPAP implementation and the link with exercise prescribers exist. Potential funding sources are yet to be identified to foster commitment by the stakeholders, settings, agents and end-users.

Romania

The country member in the EUPAP Consortium is the National Institute of Public Health (*Institutul Național de Sănătate Publică*). It provides methodological coordination and technical assistance, including the provision of data, expertise and training, on public health and related matters to the Ministry of Health and its local structures, the county Public Health Directorates.

Macro level – Scope of the Feasibility Study

The EUPAP implementation in Romania focus on two cities, Sibiu and Arad.

EUPAP-relevant policy documents

Six policy documents have found to be relevant, all at national level. Four addressed to the health sector: designation of the National Institute as main institution for health promotion⁶⁸, the 'National Health Strategy' (2014-2020)⁶⁹ which includes an increase in health promotion, the 'National Programme of Health Promotion and Evaluation, and Education for Health'⁷⁰ which includes actions on PA promotion and preventive guidelines for GPs⁷¹ that include PA for adults. Other two policies are for Sport-for-All⁷² and PA and performance sport⁷³.

Physical activity prescribers and allied professionals

Eighteen different profiles have been considered relevant for EUPAP implementation, with the highest score for licensed health professionals working in public or private hospitals (MD with specialisation, physiotherapists [BSc in Physio-kineto-therapy] and clinical psychologists), GPs in primary healthcare being self-employed or working for-profit clinics, community nurses in public administration, MD in schools. Less relevant professionals include nutritionists in public hospitals, exercise scientists, exercise instructors or kineto-therapists (studied in the Faculty of Physical Education and Sports) working in the private sport/fitness sector who are involved in implementing PA programmes.

Past and current programmes, education and materials on HEPA or Physical activity prescription

One programme has been identified aimed at patients aged 60 and above who are recommended by their GPs to do moderate-intensity PA⁷⁴, developed by the Sibiu Regional Public Health Centre, within the NIPH. This programme addresses about 1 500 participants per year (55 new participants per year) who take part in lessons of healthy lifestyle once a year. Existing materials for GPs include a 'Prevention Guide'⁷⁵ that includes PA and a software for

⁶⁸ Governmental decision no 1414/2009 on National Institute of Public Health.

https://www.insp.gov.ro/organizare_insp/hg1414.pdf

⁶⁹ National Health Strategy 2014-2020 "Health for Prosperity". <http://www.ms.ro/wp-content/uploads/2016/10/Anexa-1-Strategia-Nationala-de-Sanatate-2014-2020.pdf>

⁷⁰ National Program of Health Promotion and Evaluation and Education for Health (Order of Ministry of Health no. 377/2017 for approval of technical norms of development of national public health programs for 2017 and 2018) as subsequently amended and supplemented. https://www.hosptm.ro/files/pn-screening-cancer-col/ordin_377_2017_full.pdf

⁷¹ Project "Multilevel interventions for the prevention of noncommunicable diseases (NCDs) associated with lifestyle in Romania". <http://insp.gov.ro/sites/1/>

⁷² National Programme "Sports for All-3rd Millennium Romania- a different lifestyle".

<http://sportulpentrutoti.ro/informatii-generale/>

⁷³ National Strategy for Sport 2016-2032. <http://mts.ro/wp-content/uploads/2016/02/Strategia-nationala-pentru-SPORT-v2016-v2.pdf>

⁷⁴ A project for physical activity and healthy nutrition. <https://www.insp.gov.ro/>

⁷⁵ Prevention guide, preventive interventions addressed to the lifestyle, nutrition - physical activity vol I. <http://insp.gov.ro/sites/1/wp-content/uploads/2014/11/Ghid-Volumul-1-web.pdf>

health-risk assessment and recommendations based on the preventive guidelines⁷⁶. No specific education course has been identified.

Micro level – Ground prior implementation

Stakeholders

Collaboration agreement exists with two governmental bodies responsible for public health: The Ministry of Health and the Sibiu County Directorate of Public Health. Other relevant stakeholders without formal agreement include the National Health Insurance House, the National Society of Family Medicine and the Specialised Commission on Physical Medicine and Rehabilitation.

Healthcare settings

EUPAP implementation will be done in three types of settings: GP surgeries in Sibiu and Arad (two in each county), community settings in Sibiu County and a fitness centre in Sibiu.

Each surgery covers a population of ca. 1 500 patients, of which are still to be determined the number of potential participants. There is no data on the number of agents in the cities, therefore nor the number of potential prescribers. However, two agents in each city have been targeted to implement EUPAP. Intervention priorities include addressing metabolic disorders, cardiovascular diseases, muscle-skeletal disorders, obesity and diabetes. These surgeries have been part of the 'Project for Physical Activity and Healthy Nutrition', do not have agreements with community organisations and do not have specific budget for HEPA prescription.

Community interventions in Sibiu City will be addressed together between community nurses and other organisations. The fitness centre staffs one exercise scientist.

Practitioners / Agents (prescribers and allied professionals)

Four GPs have confirmed their participation in EUPAP. All have stable positions with more than 10 years of clinical experience. Twenty community nurses have confirmed their participation within community health interventions and one exercise scientist in a fitness centre. Their HEPA experience is unknown nor their specific training on HEPA prescription.

End-users / Patients

Target end-users include people suffering from high blood pressure, overweight / obesity, diabetes, osteoporosis, depression, anxiety or cancer, in line with the National Health Strategy (2014-2020). No patients / disease association has been identified.

Regional situation in relation to five core components of PAP-S

Patient-centred individual counselling

GPs are expected to implement EUPAP, but they have not received education in HEPA prescription or behavioural counselling. Community nurses and exercise scientists from the Regional Sibiu Public Health Centre will be PAP-coaches.

⁷⁶ IT solution - the module 'prevent'. <https://insp.gov.ro/sites/1/rezultate/>

Written prescription

No specific materials regarding PA written prescription and monitoring have been found. The software used by GPs for risk assessment and recommendations has been the framework for physical activity advise.

Evidence based physical activity recommendation

No materials on evidence-based PA recommendations have been found.

Follow-up

The EUPAP implementation would not rely only in GPs, they will refer end-users to community nurses or the exercise scientist for the counselling and follow-up.

Supporting environment, community-based network

Local health directorates offer promotion and training materials to the community. There are formal agreements within stakeholders involved in EUPAP implementation but not for specific local community organisations specifically for EUPAP implementation.

Other

Stakeholders include governmental bodies which may ease communication of EUPAP implementation and results to politicians and healthcare managers.

Relevant findings

There is little resources and experience on HEPA and Physical activity programmes. Most relevant policies are related to organisation of health responsibilities and health promotion with little detail on PA. Links with the community at a national level may be an action to work on, trying to involve community nurses, kinetherapists, exercise scientists or instructors working in the sport / fitness sector as first option (according to the existing professionals) or, on the other hand, by addressing policy issuers such as the Romanian Federation of Sport for All or the Ministry of Youth and Sports.

The translation and adoption of PAP-S materials (FYSS manual, prescription form) and taking part of EUPAP Education and Training courses seems to be highly relevant in the Romanian context. Local training addressing a broader profile of professionals may be positive to support GPs (PAP-prescribers) and not rely the whole implementation on them, and work on the community sector to create links with activity organisers (PAP-coaches), that is, kinetherapists, exercise scientists or instructors working in the sport / fitness sector or new professional profiles from the sport sector.

The commitment of four GPs to start EUPAP implementation may serve of an opportunity to evaluate the pilot intervention before deciding what steps should be done to approach more the Swedish method.

Sweden

The country member in the EUPAP Consortium is the Public Health Agency of Sweden (Folkhälsomyndigheten). It has the national responsibility for public health issues and works to ensure good public health.

Macro level – Scope of the Feasibility Study

The Swedish method on Physical Activity on Prescription is to be transferred to the nine partner countries. However, challenges still exist to improve the method as suggested previously, such as increasing follow-up of the prescriptions and ascertain quality in documentation and follow up.

Data collection for the Swedish Feasibility Study did not serve as possibilities for practice transfer, but instead for updating relevant data to ease communication and standardisation between different European regions. The Public Health Agency has collected data from the majority of the 21 regions, but in the Feasibility Study data from only a limited number of regions are presented. The aim of the collection for Sweden has rather been to show the variations rather than collecting all the data. Even though a lot of the work with PAP-S is regionally coordinated, there is still variations also at the local level within regions, and the agency had not the resources to collect data from this level.

EUPAP-relevant policy documents

Six regional relevant policies have been identified, in four different regions, and three of national scope. Issuers of relevant policies at national level include the Swedish Government, the National Board of Health and Welfare and The Swedish Sports Confederation. Their policies address physical activity levels from different sectors (reducing inequalities⁷⁷, resources for effective interventions in healthcare⁷⁸, motivate people to be active by making sports more welcoming⁷⁹). Regional policies include specific guidelines for PAP-S^{80,81}, public health strategies^{82,83}, and of pharmaceutical committees^{84,85}. Policies of medium-relevance for EUPAP are of sectors not

⁷⁷ Good and equal health - a developed public health policy. Governmental proposition 2017/18:249. https://www.regeringen.se/498282/contentassets/8d6fca158ec0498491f21f7c1cb2fe6d/prop.-2017_18_249-god-och-jamlik-halsa--en-utvecklad-folkhalsopolitik.pdf

⁷⁸ National guidelines for prevention of NCDs focusing on methods to change lifestyle habits. <https://www.socialstyrelsen.se/regler-och-riktlinjer/nationella-riktlinjer/slutliga-riktlinjer/levnadsvanor/>

⁷⁹ The Sports movement's change development work. Strategy 2025. <https://www.strategi2025.se/>

⁸⁰ Guidelines for PAP in Stockholm. <https://vardgivarguiden.se/kunskapsstod/halsoframjande-arbete/regionalt-varprogram-ohalsosamma-levnadsvanor/>

⁸¹ Regional guidelines for prescribing physical activity, Norrbotten. <https://www.norbotten.se/sv/Om-Region-Norbotten/Organisation/Regiondirektorens-stab/Utvecklingsavdelningen/Folkhalsocentrum/Folkhalsocentrum/>

⁸² Norrbotten Public Health Strategy 2018-2026.

<https://www.norbotten.se/publika/lg/utv/Folkh%c3%a4socentrum/Folkh%c3%a4sopolitiska%20strategin/Reviderad%20strategi/FHS%20171220%20beslutad%20NFR%20m.%20bilder.pdf>

⁸³ Regional health care programme - unhealthy living habits. <https://vardgivarguiden.se/kunskapsstod/halsoframjande-arbete/regionalt-varprogram-ohalsosamma-levnadsvanor/>

⁸⁴ Essential treatments/drugs in 2019.

<https://regionvastmanland.se/vardgivare/behandlingsstod/lakemedel/Baslakemedel/>

⁸⁵ Regional medical guideline – physical activity. <https://www.vgregion.se/halsa-och-vard/vardgivarwebben/vardriktlinjer/lakemedel/lakemedelskommiten/>

exclusively addressing to health, that is, addressing the environment/urban planning^{86,87,88}, Sport and exercise^{89,90} or Children and Young people⁹¹.

Physical activity prescribers and allied professionals

Out of the large variety of profiles that are currently implementing PAP-S, seven have been considered of higher relevance: four primary healthcare professionals (GP, Physiotherapist, Community Nurse and Midwife) and three professionals in the sport / fitness sector (Physiotherapist and exercise instructor with college or technical education). Three other primary healthcare professionals, with medium-relevance, include dietitian, healthcare counsellor, occupational therapist and psychologist.

Past and current programmes, education and materials on HEPA or Physical activity prescription

No other national programme such as PAP-S exists in Sweden. Ten materials have been highlighted for their relevancy and are developed by ten different organisations, including professional associations (Medicine, Physiotherapy, Nursing, Midwifery, Clinical Dietetics, Occupational Therapy, for Physical Activity), the National Board of Health and Welfare, the Swedish Health promotion hospitals and a Swedish Sports Education. Nine training courses have been presented, also with variety to the professionals which are addressed as well as the organisation in charge of them. The latter includes regional health centres and sports organisations, and one university.

Micro level – Ground prior implementation

Stakeholders

Twenty-three relevant stakeholders are identified, of which three have a specific agreement for EUPAP implementation. Stakeholders are all at national level except regional sport associations, sixteen out of them are within the health sector whereas four are from the sport and exercise sector. Lower-relevant stakeholders, but still considered important for PAP-S/EUPAP implementation include the Ministry of Culture, and of Health and Social Affairs, disease-related organisations (cancer, heart-lung) and the Swedish National Pensioners' Organisation.

⁸⁶ Outdoor recreation policy.

<https://www.regeringen.se/49bb18/contentassets/5d29304417da4cd8ae098aeb0aef057/forslag-till-statens-budget-for-2013-finansplan-och-skattefragor-kapitel-1-12>

⁸⁷ Plan Norrbotten Region 2019-2021.

<https://www.norbotten.se/publika/lg/verk/Kansli/Lst/2018/%C3%84renden%20och%20bilagor%20181031/Regi-onstyrelsens%20plan%202019-2021.pdf>

⁸⁸ Regional Development Plan for the Stockholm Region 2050.

http://rufs.episerverhosting.com/globalassets/h_-publikationer/2017/rufs2050_utstallning_kortversion_engelska.pdf

⁸⁹ Policy of sports.

<https://www.regeringen.se/4adae5/contentassets/c689564aa19c4d29bcebb1c037a2e37b/utgiftsomrade-17-kultur-medier-trossamfund-och-fritid.pdf>

⁹⁰ The Sports Will. The sports movement's idea programme.

<https://www.rf.se/globalassets/rksidrattsforbundet/nya-dokument/nya-dokumentbanken/rfs-verksamhet/idrotten-vill-idrottsrorelsens-ideprogram.pdf>

⁹¹ Regional "Strategy for increased physical activity among children and youth".

<https://www.vgregion.se/regional-utveckling/verksamhetsomraden/folkhalsa/kraftsamling-fullfoljda-studier/livsvalkor-och-levnadsvanor/strategi-for-att-oka-fysisk-aktivitet-hos-barn-och-unga/>

Healthcare settings

No specific healthcare settings have been identified for specific actions in PAP-S / EUPAP implementation.

Practitioners / Agents (prescribers and allied professionals)

No specific agents have been identified for specific actions in PAP-S / EUPAP implementation.

End-users / Patients

No specific end-users have been identified for specific actions in PAP-S / EUPAP implementation.

Regional situation in relation to five core components of PAP-S

This section does not apply for Sweden.

Relevant findings

Swedish relevant policies for PAP-S and EUPAP implementation addresses not only the Health sector from national and regional perspectives, but also cross-sectional sectors with health: sport and exercise, environment/urban planning, children and young people. The professional background and profile of physical activity prescribers and allied professionals is broad; hence the training courses and materials address the whole possibilities of PAP-prescribers and PAP-coaches, and relevant stakeholders include organisations linked with potential agents of implementation.

A challenge to address is the decline of physical activity behaviour when there is no structural and regular follow-up or feedback to the end-users after the initial counselling and prescription (24).

Conclusions

The Study Report shows data from 10 European countries on indicators from macro- and micro-level dimensions to be considered prior transferring the Swedish method on Physical Activity on Prescription.

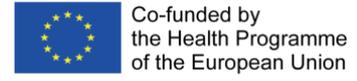
The global aim of the study was to know and standardise the information to make it accessible, communicable and ease the transfer from the Swedish context. The specific aims were: 1) to determine relevant indicators and variables related to PAP-S; 2) to create common guidelines to proceed with the data collection, 3) to provide an overview of the situation in 10 European regions, 4) to compare the situation of each region with the PAP-S method.

We believe that the aims were achieved in the sense that this EUPAP Feasibility Study Report includes data from the Swedish method which the regions could compare to. The study highlights these differences and presents what is already existing in regions (macro-level) and what specific decisions have initially been taken (micro-level). This comparison, together with a more detailed pre-implementation analysis, may assist in setting specific, and realistic goals for EUPAP implementation in each of the 10 regions. In relation to the specific aims: 1) selected indicators and variables were agreed upon; 2) the EUPAP Feasibility Study Guide was edited, and it may now serve as a guide for future feasibility studies to aid scaling up public health programmes, also the on-line database created ad hoc may be useful for data collection in future studies; 3) despite of the variety of social and health organisation among the 10 different European regions, including north-south and east-west regions, we provided a quantitative overview of relevant data extracted by the experts; and 4) we systematically discussed data from each region and searched for common aspects contextual and cultural differences.

Data showed that the following regions have a solid background and strong network to launch the EUPAP implementation, that is, Catalonia-Spain, Denmark, Flanders-Belgium, Italy and Portugal. Other regions, such as Romania and Lithuania, with less experience and specific material, but with established networks, permits to start from training, using the adapted PAP-S materials and piloting the implementation to end-users. Malta was found as having little experience and specific materials and a weak or undeveloped network. Data from Germany was processed beyond the e-Delphi panel and interpretations should be conformed with it. For the situation in Sweden they face challenges which include optimising the method and, for instance, improving follow-ups to maintain physical activity and health outcomes, but also improving documentation and develop national monitoring.

The method included the participation of thirty-five experts participated in four stages, using a modified Hybrid e-Delphi process. This method has its weaknesses, as is also commonly known in Delphi methods. It was difficult to verify the precision of the method, possible interrelations between predicted outcomes were not taken into consideration, and that consensus, or agreement, is used as a means of approaching the truth and that, a priori, it is difficult to know what constitutes a real expert (26).

However, we believe that the large number of experts in the process and the variety of their professional backgrounds and expertise added value to the process of data selection, collection and discussion. Transferring good practices to other contexts different than those from where they were originated is very complex, and this study provides specific suggestion for future steps. The broad evidence on the PAP-S may permit for other contexts to prepare for "Transferability", that is, compare the results of the new practice transfer in comparison with the evidence shown in Sweden, and to collect practice-based evidence of what (if any) works in Physical Activity and Exercise Prescription in real contexts (2). Reis and cols. in their paper published in the Lancet (42) consider the RE-AIM framework (5) as one that best frame core elements for scaling up public



health programmes. RE-AIM measures reach, efficacy or effectiveness, adoption, implementation and maintenance.

Appendixes

Table 9. Relationship between the EUPAP Feasibility Study dimensions, attributes and examples from the Swedish method.

DIMENSIONS IN EUPAP FEASIBILITY STUDY	ATTRIBUTES OF FEASIBILITY STUDIES	EXAMPLES FROM THE SWEDISH PAP-S METHOD (2001-2018)
A. EARLY DIAGNOSIS - MACRO LEVEL		
A1. Context A11. Policies A12. Professionals	Political environment. Knowledge of public health interventions. Skills of local people. Epidemiological situation	<u>A11. EUPAP-relevant policy documents</u> Methods of promoting Physical Activity, A systematic Review. SBU. (2007) Government Bill 2007/08:110. Renewed Swedish Public Health Bill. <u>A12. Physical activity prescribers and allied professionals</u> Prescribers: All licensed healthcare professionals working in the system with adequate expertise and knowledge of: patients health status, use of FYSS, the PAP-S method and local routines, behavioural change and motivational interviewing approach. Specifically, in Primary health care: General Practitioner, community nurse, physiotherapist, occupational therapist, midwife, healthcare counsellor, dietitian. Others: Specialist doctors, psychologist. Physical activity organisers: In community sector: PAP-coach with a background on BSc in Physical Therapy, or 1-y college education in personal training, or technical education in personal training, mostly.
A2. Current and past experiences A21. Programmes A22. Materials A23. Training	Knowledge of public health interventions. Skills of local people.	<u>A21. HEPA programmes or Physical activity prescription</u> The PAP-S is outstanding at a national level. No other national-broad programme exists. PAP-S includes clear routines and patient flow, also a regional coordination for supporting healthcare settings. There are regional and local networks for sharing experiences and development work within healthcare and between healthcare and activity organisers. There is regular education and training. No compulsory courses but each agent decides from a variety of options. Healthcare agents may allocate time for clinical work in PAP. PAP-S provides feedback to politicians and healthcare managers. Some strategies: involvement of the pharmaceutical committee, providing a activity catalogue at municipality-level and supporting clinicians to find suitable activities for their patients. <u>A22. Materials on HEPA programmes or Physical activity prescription</u>

DIMENSIONS IN EUPAP FEASIBILITY STUDY	ATTRIBUTES OF FEASIBILITY STUDIES	EXAMPLES FROM THE SWEDISH PAP-S METHOD (2001-2018)
		<p>FYSS handbook. Electronic prescription form in the medical records system (including the inclusion of PA treatment recommendations in Drug Therapy Recommendations). Supporting materials (behavioural counselling addressed by selected agents -Physiotherapists, medical doctors, Nurses, Midwives, Occupational therapists, Clinical dietitians), Guide for PAP-coaches, slide presentations.</p> <p><u>A23. Training on HEPA programmes or Physical activity prescription</u> 5-week PAP-S training for healthcare professionals. 10-week Course for in-depth knowledge of PA for prevention and treatment for nurses, physiotherapists and occupational therapists. 2-day course for regional implementation of PAP-S. 4-hour training for specific professions (nurses, midwives). 4- to 8-hour training for activity organisers.</p>
<p>A3. Legal and financial issues</p> <p>A31. Norms A32. Budget</p>	<p>Political environment. Resources availability</p>	<p><u>A31. Norms and regulations</u> The healthcare act (about responsibilities of agents and bodies).</p> <p><u>A32. Budget on physical activity and health</u> Healthcare is largely tax-funded. It ensures equal access to healthcare services. Financial support is not linked to a program. It is part of a regular undertaking. Some examples include: funding for specific projects or certain diagnoses; support for PAP-S structures (e.g., Centre for PA, Academic Primary Healthcare Centre, Public Health Centre); agreements between regions and sports federations for financial compensation; subsidies to patients.</p>
B. PREPAREDNESS FOR IMPLEMENTATION - MICRO LEVEL		
B1. Stakeholders	Organisational factors	<p>Governmental bodies: Ministries of Culture and of Health and Social Affairs, Swedish Association of Local Authorities and Regions.</p> <p>Health administration and organisations: Swedish National Institute of Public Health. Swedish Council on Technology Assessment. National Board of Health and Welfare. Swedish Network of Health Promoting Hospitals & Health Services.</p> <p>Swedish professional associations: Occupational Therapists, Clinical Dietitians, Healthcare counsellors, Midwives, Physiotherapists, Medicine, Nursing, for Physical Activity.</p> <p>Sport-related organisations: Swedish Sports Confederation, Regional associations.</p> <p>Disease-related organisations: Diabetes, Cancer, Overweight/obesity, CVD and respiratory.</p> <p>Others: Swedish National Pensioners' Organisation. National Programme for lifestyle behaviours. Swedish Outdoor Association.</p>
B2. Healthcare settings	Organisational factors	<p>Primary healthcare settings. Psychiatric clinics. Hospitals.</p> <p>Note that the 20 county councils are self-governed. Many of them develop guidance or support within or outside the settings (PAP-coaches, PAP-coordinators).</p>
B3. Practitioners / Agents (prescribers)	Skills of local people.	<p>Mostly: PAP-prescribers: General Practitioners. Nurses and Physiotherapists in primary care (as PAP-coordinators).</p>

DIMENSIONS IN EUPAP FEASIBILITY STUDY	ATTRIBUTES OF FEASIBILITY STUDIES	EXAMPLES FROM THE SWEDISH PAP-S METHOD (2001-2018)
an allied professionals)		PAP-coaches: Physiotherapists or other professionals (1y college education or technical education) outside healthcare settings.
B4. End-users / Patients	Epidemiological situation. Characteristics of the target population	Disease-related organisations (e.g. Diabetes, Cancer, Overweight/obesity, CVD and respiratory) are already part of the Stakeholders in PAP-S.
<p>Note: PAP-S, Swedish method on Physical Activity on Prescription. HEPA, health-enhancing physical activity. PA, physical activity. FYSS, Physical Activity in the Prevention and Treatment Disease Handbook. BSc, Bachelor of Science Degree. CVD, cardiovascular disease. Data from Lena V Kallings (Steering Committee Seminar, 14th May 2019 and 10th Jan 2020) and other provided by Pia Lindeskog and Lena Hansson.</p>		

Glossary and abbreviations

Table 10. Definitions of terms used in the EUPAP Feasibility Study Final Report. More physical-activity related terms used in the framework within the EUPAP Project can be found in the List of Terminology (2019).

Term	Definition
Agent	Any professional who may implement EUPAP.
End-user	Any person who may receive physical activity prescription within EUPAP.
EUPAP	A European Physical Activity on Prescription Model
Exercise scientist	Any sports professional holding tertiary education degree.
Exercise instructor	Any sports professional with technical education.
Feasibility	Whether an intervention process could be implemented in the local setting, no matter what the outcome is; applicability. (2)
GP	General practitioner.
HEPA - Health-enhancing physical activity	Any form of physical activity that benefits health and functional capacity without undue harm or risk. (4)
PAP-S	Swedish physical activity on prescription method.
Partner	Any of the member institutions of the EUPAP consortium.
WP	Work Package.

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