

# Towards an integrated framework for evidence-based HEPA promotion – a discussion paper (11.06.2006)

Eva Martin-Diener\*, Urs Mäder\*, Cyrus Rostami°, Sonja Kahlmeier°, Francesca Racioppi°, Brian Martin\*

\*Physical Activity and Health Branch, Swiss Federal Institute of Sports Magglingen, Swiss Federal Office of Sports

° WHO, European Centre for Environment and Health, Rome Office; Italy

## 1. The purpose of this document

Physical inactivity has been clearly recognised as an important public health risk. However, no clear concepts about what can be done to increase health-enhancing physical activity HEPA on the population level have been established outside a very limited circle of experts and ideas in a broader audience seem to vary between isolated motivational and PR campaigns as one extreme and purely infrastructural changes as the other.

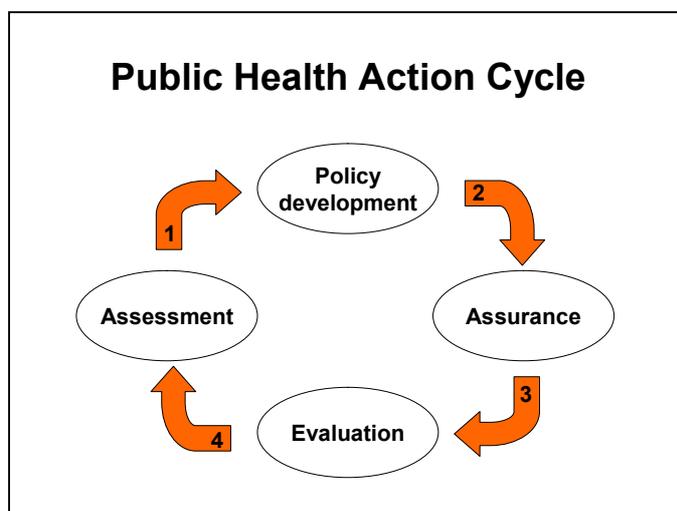
One of the reasons for this situation is the fact that there is still a clear lack of evidence on the effectiveness of many interventions in the historically young field of physical activity promotion; another one seems to be the lack of models and frameworks for physical activity promotion that adequately mirror the complexity of the issue and at the same time are simple and striking enough to be used in the communication towards a broader audience.

The document presented here is part of a development that is carried out in the Steering Committee of HEPA Europe, the European Network for the Promotion of Health-Enhancing Physical Activity ([www.euro.who.int/hepa](http://www.euro.who.int/hepa)). Chapters 1, 2, 3.1, parts of 3.2, 3.3, 3.6, 4 and 5 represent the results of the meeting of the Steering Committee on 24 February and of a meeting of members of the network in Atlanta on 19 April 2006. The detailed framework elements of chapters 3.4 and 3.5 have been discussed among the authors of this discussion paper, but not yet with a wider circle of experts. As similar discussions are currently taking place in other organisations, it is also made available to WHO Headquarters' Virtual Network of Experts for the Global Strategy on Diet, Physical Activity and Health, to WHO Europe's Expert Committee for the Preparation of the 2006 Ministerial Conference on Counteracting Obesity, to the Global Alliance of Physical Activity GAPA and to Agita Mundo.

## 2. Existing models

There are numerous models and frameworks describing factors influencing physical activity behaviour and health outcomes. Not all of them will be discussed here, but four are briefly introduced, because they are used as the basis for the integrated framework presented in this document.

### Public Health Action Cycle



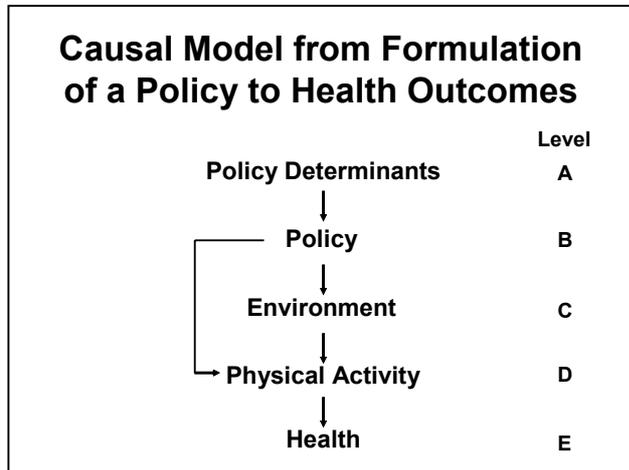
The Public Health Action Cycle was first suggested by the US Institute of Medicine (1) and further developed by Rosenbrock (2). It is widely used to illustrate principles of evidence-based public health. The Public Health Action Cycle describes the assessment of a health problem, the policy development, implementation of action and evaluation as a continuous process and has inspired the overall structure of the integrated framework.

### A Model for Policy Research

Schmid, Pratt and Witmer (3) suggest a framework for physical activity promotion policy research. They define policies as legislative or regulatory action taken by a government, government agency, or nongovernmental organisations that provides an organizing structure and guidance for collective and individual behaviour.

According to the authors, policies can be conceptualized at three levels:

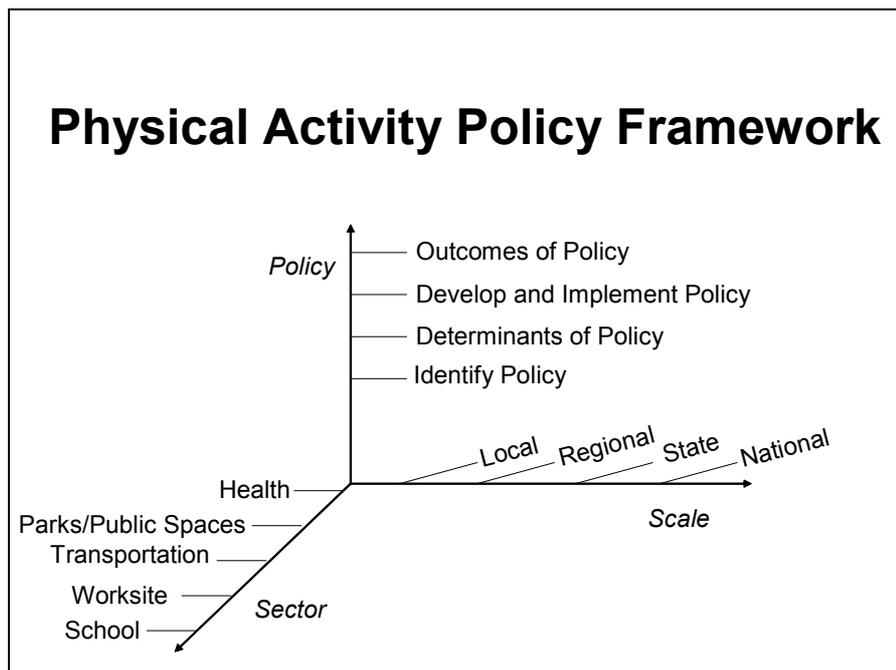
- 1) formal written codes, regulations or decisions bearing legal authority.
- 2) Written standards that guide choices; guidelines
- 3) Unwritten social norms



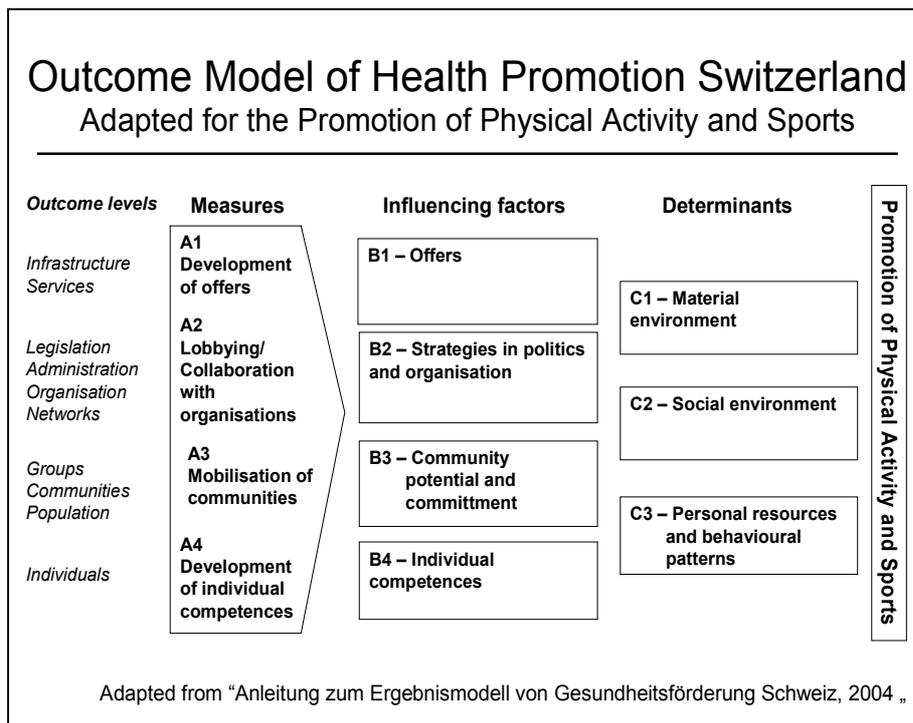
The authors introduce a causal model with different levels, in which they conceptualize 'environment' in a broad sense, including the physical (built and natural), social, cultural and communications environment. As the association between physical activity and health (levels D and E) is well established and there is growing evidence also for the effect of environment on physical activity (C – D), policy research focuses on the top of the chain.

The authors suggest a three-dimensional framework to conceptualize policy research and define priorities.

The definitions and the three-dimensional framework from Schmid, Pratt and Witmer (3) are suggested for use in the "policy process" of the integrated framework.



## Outcome Model of Health Promotion Switzerland

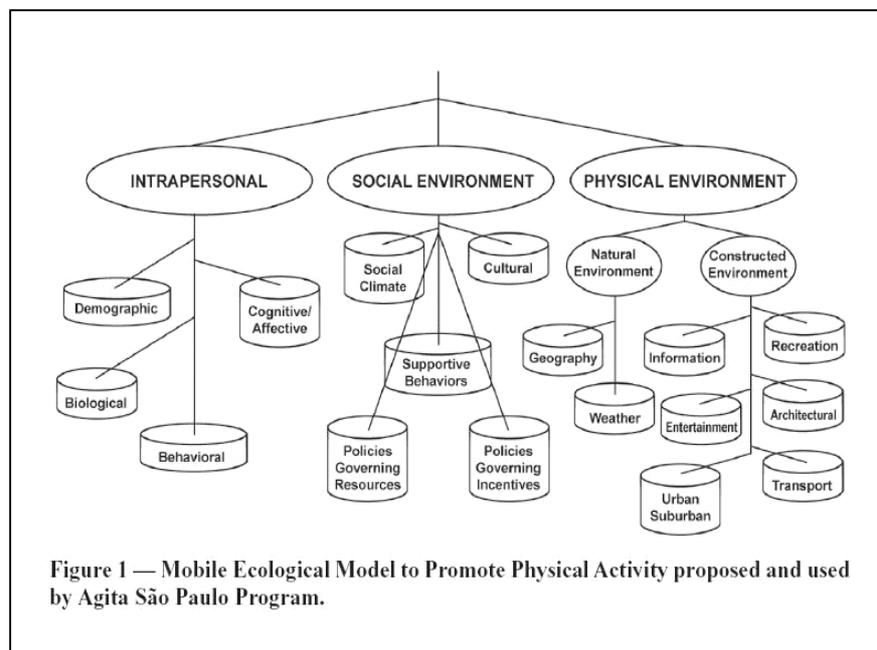


The Outcome Model of Health Promotion Switzerland (4) is inspired by the work of Don Nutbeam and is recommended by the foundation for the evaluation of its health promotion projects.

The model is presented here in an adaptation for physical activity promotion particularly because of its possibilities for categorising programmes and activities based on the levels A and B.

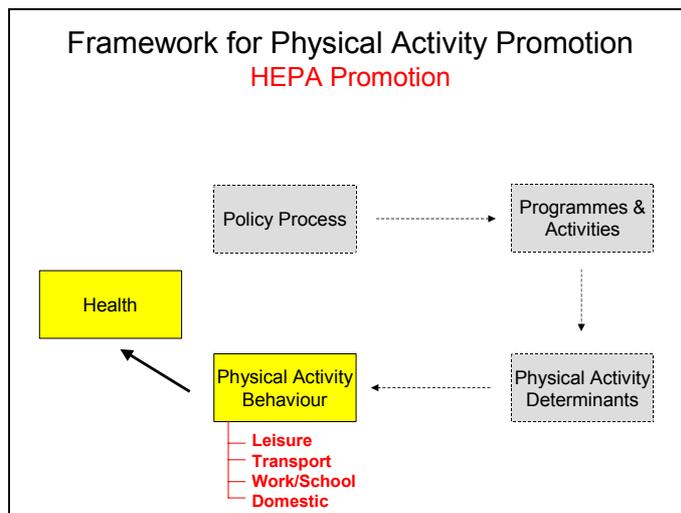
## Mobile Ecological Model (Matsudo et al)

This model has been developed and used for guidance in the design of physical activity promotion interventions for 'Agita Sao Paulo' and emphasises the different modifiable determinants and non-modifiable factors that are related to physical activity behaviour (5). It is suggested to use the modifiable determinants from this model in the integrated framework.



### 3. Development of an integrated framework for HEPA promotion

#### 3.1 Physical activity and health



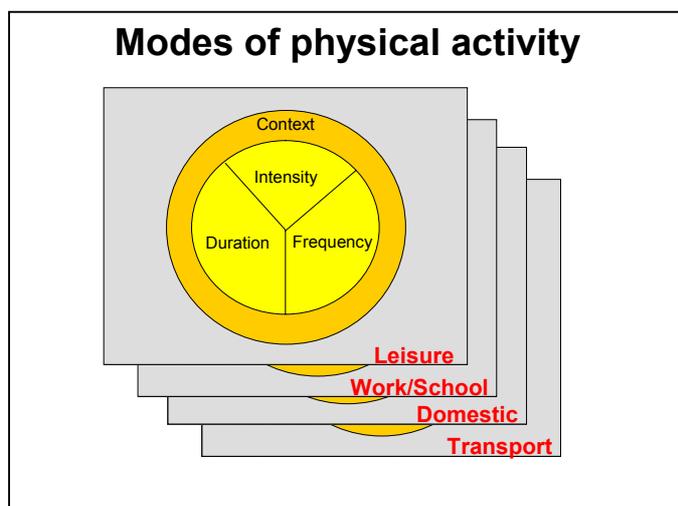
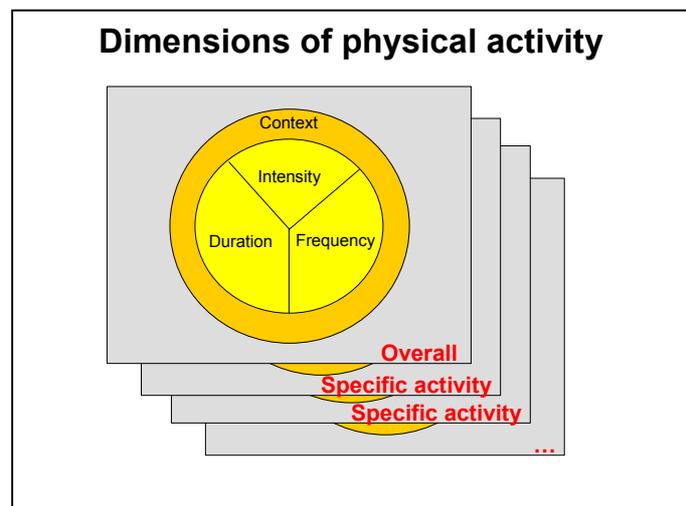
The benefits of physical activity for health with its biological, psychological and social dimension are widely recognized. The respective causal associations have been quantified (6, 7), though evidence is not equally strong for the three dimensions.

#### 3.2 Physical activity behaviour

Physical activity behaviour can be conceptualized in form of specific activities (such as walking or a specific sport), or globally as overall or total physical activity. It is characterised by three dimensions:

- Duration
- Frequency
- Intensity

It can also be of importance to assess in which context an activity takes place (e.g. being active in a group or alone as social context).



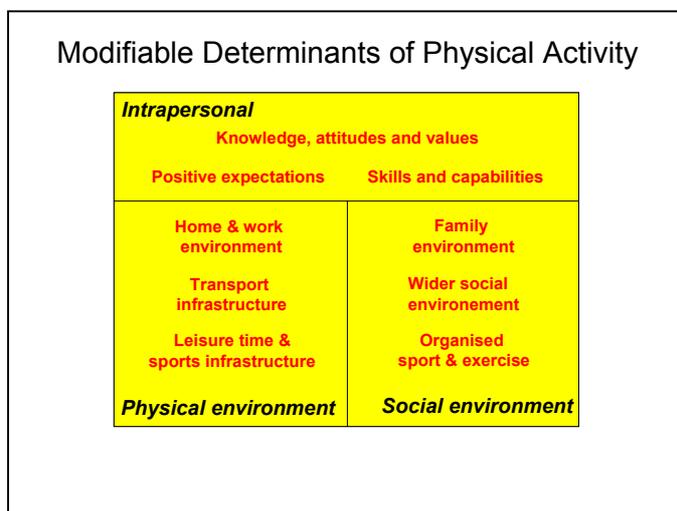
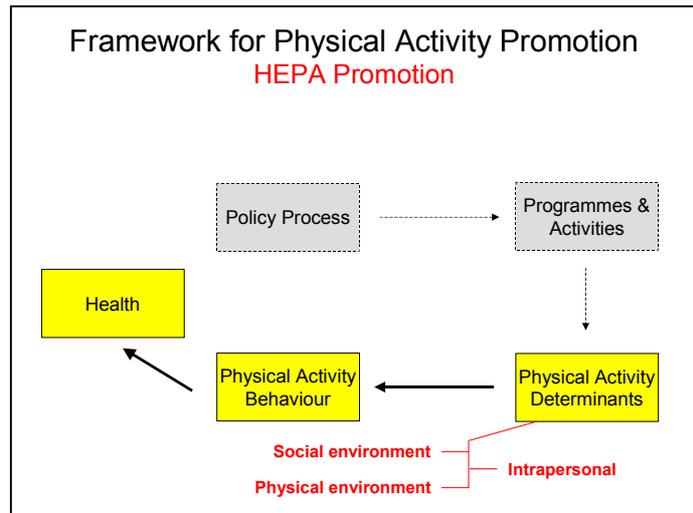
Often activities are grouped in modes relevant for monitoring and intervention. Commonly used modes are (8):

- physical activity as leisure time activity
- physical activity during work (or school-based physical activity in children)
- physical activity in the domestic environment
- physical activity for transport to get from point A to point B

### 3.3 Determinants of physical activity

Different factors of an individual's psychological characteristics and of his or her environment are correlated with physical activity behaviour (9). These factors or determinants can - or cannot - be influenced by interventions.

Determinants can also interact with each other and therefore interventions can aim at reaching determinants indirectly.

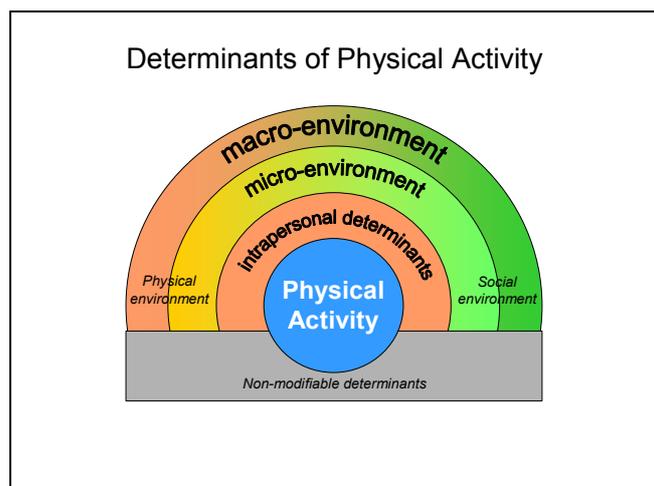


The modifiable determinants are categorised in three groups as suggested by the Mobile Ecological Model described in chapter 2:

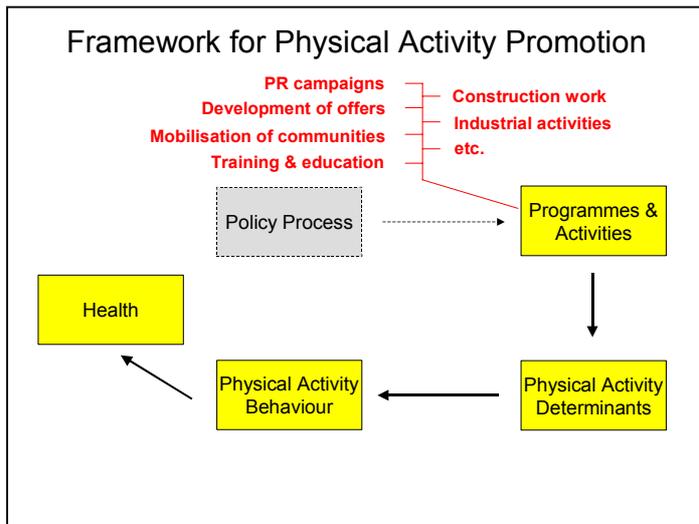
- intrapersonal determinants
- determinants in the social environment
- determinants in the physical environment

Determinants in the social and physical environment are sometimes conceptualised in settings closer (e.g. family) or more remote (e.g. society) from individuals, so-called micro- or macro-environments.

Interventions aim at modifying determinants that are modifiable. There are also non-modifiable factors that can be determinants for physical activity such as age, gender or ethnicity. They must be taken into account in the development of interventions for specific target groups.

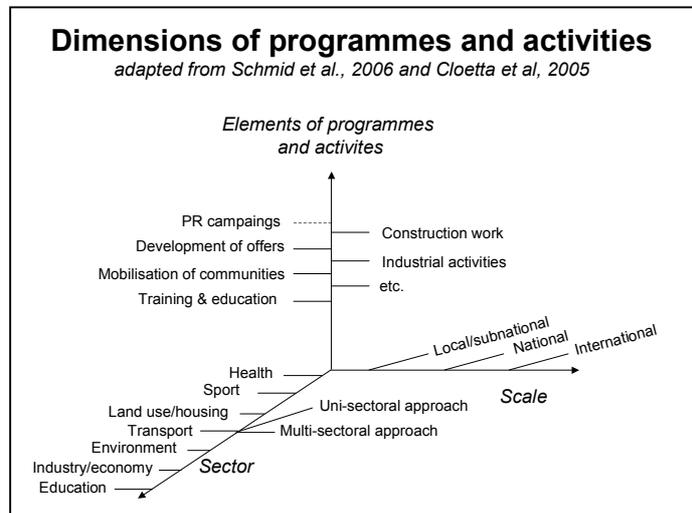


### 3.4 Programmes & activities



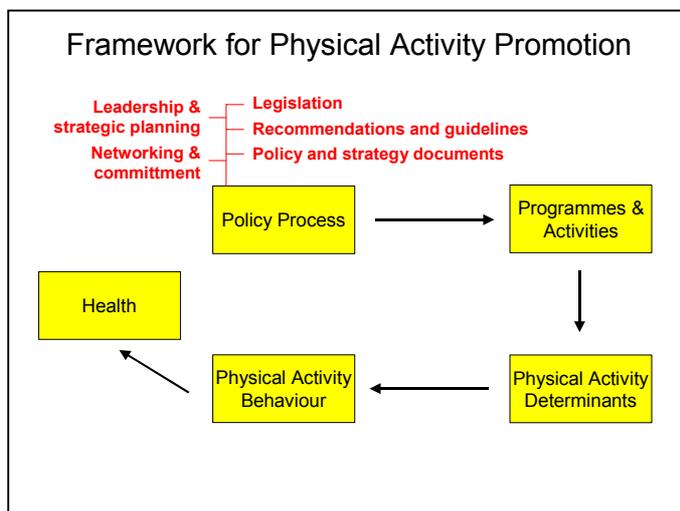
Physical activity determinants can be influenced by many different factors. Among them are specific programmes and activities to promote physical activity. Programmes and activities can take on different forms, exist at different scales and involve different sectors.

The elements of the suggested framework for programmes and activities are based on the categories of the Outcome Model of Health Promotion Switzerland presented in chapter 2 of this document. As far as physical activity promotion by the health sector is concerned, this list covers virtually all elements. When a truly multi-sectoral approach is taken (see chapter 5), there are many other activities outside the health sector to be taken into account (e.g. construction work or law enforcement).

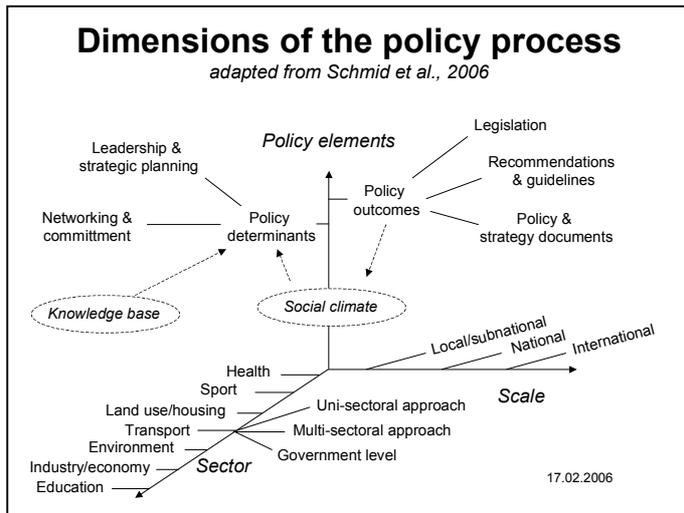


This part of the framework has been discussed among the authors of this discussion paper, but not yet with a wider circle of experts.

### 3.5 Policy process



Though programmes and activities can sometimes be generated independently, they are ideally based on a policy process. This part of the framework is based on the Model for Policy Research presented in chapter 2 of this document. It distinguishes between policy determinants and policy outcomes. Policy determinants are key factors influencing the outcome of a policy process. Policy outcomes are legislation, recommendations & guidelines as well as policy and strategy documents.



Also policy processes can take place on different levels and in different sectors.

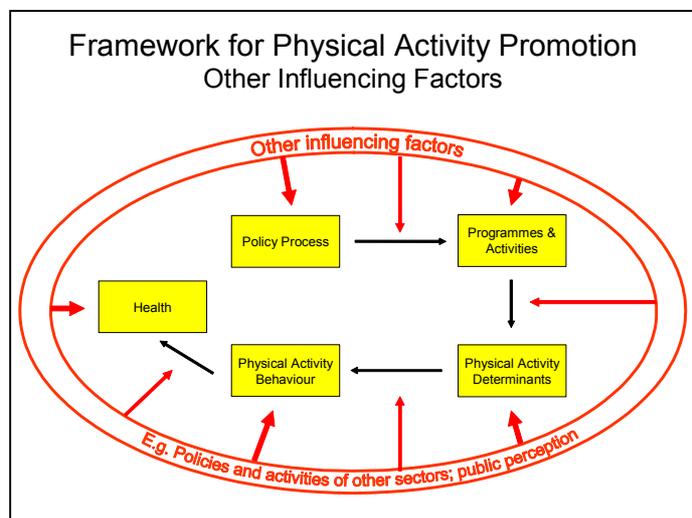
A policy process may result in a policy that potentially encourages more physical activity or has potentially adverse effects on physical activity behaviour.

This part of the framework has been discussed among the authors of this discussion paper, but not yet with a wider circle of experts.

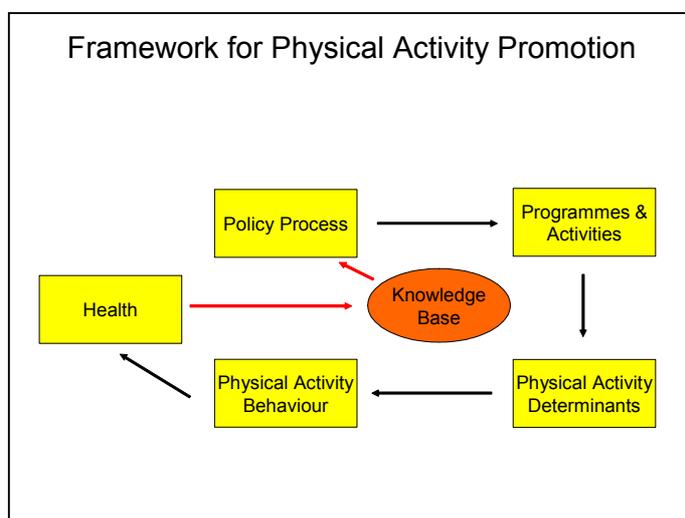
### 3.6 Other influencing factors

Though in real life there are other influencing factors on all levels and there are direct effects of programmes and activities on the policy level, the concept suggested so far seems to provide a framework for the overall process.

However it still does not incorporate the concept of evidence and it lacks the sort of feedback loop suggested by the Public Health Action Cycle. It therefore sadly reflects the activism still found in many areas of physical activity and sports promotion these days.

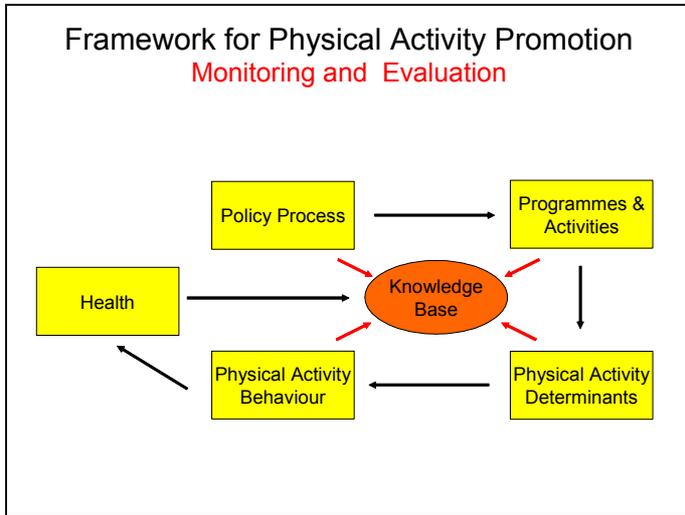


### 4. Development of an integrated framework for evidence-based HEPA promotion



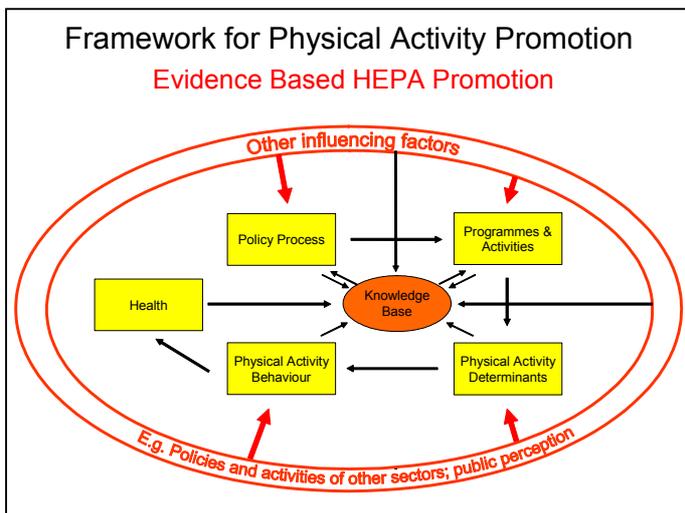
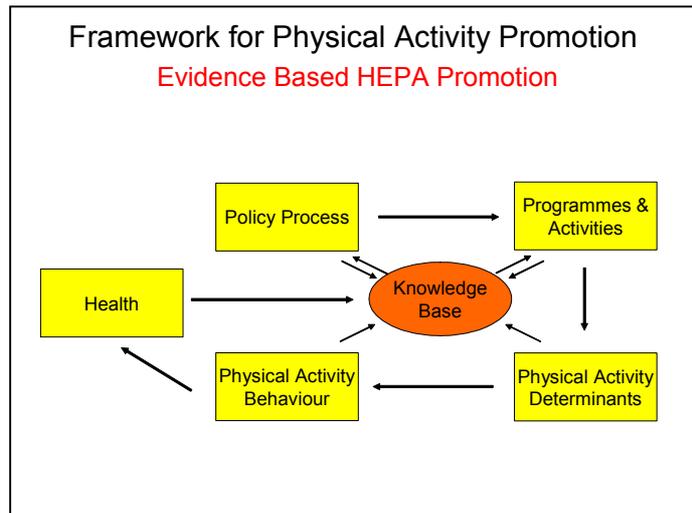
In direct analogy to the Public Health Action Cycle, a framework could be suggested that includes monitoring of health outcomes and feedback to the policy process.

However, this does not include the concept of pre-existing experiences, data and formal study results (best-available evidence) and the fact that evaluation and monitoring should not only take place at the health level, but at all other levels as well.



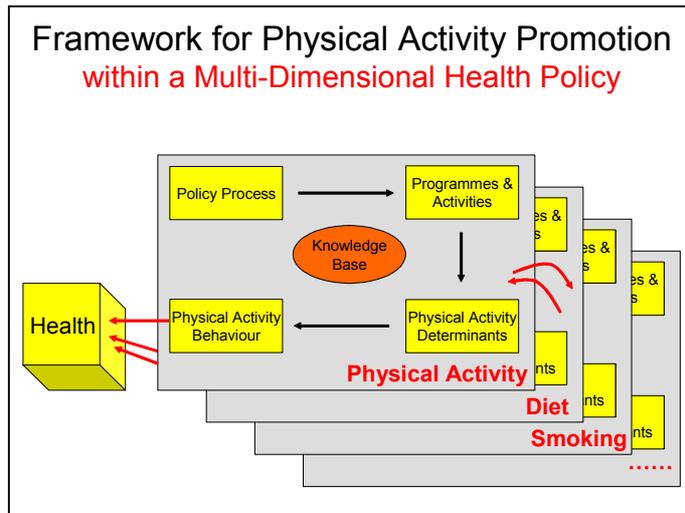
By evaluating and monitoring all levels of the process and by systematic documentation of knowledge and experiences the knowledge base is fed.

The complete framework includes the “feeding mechanisms” for the evidence base through monitoring and evaluation as well as the use of the best available evidence in the “active” stages, namely in the policy process and in the development of programmes and activities.



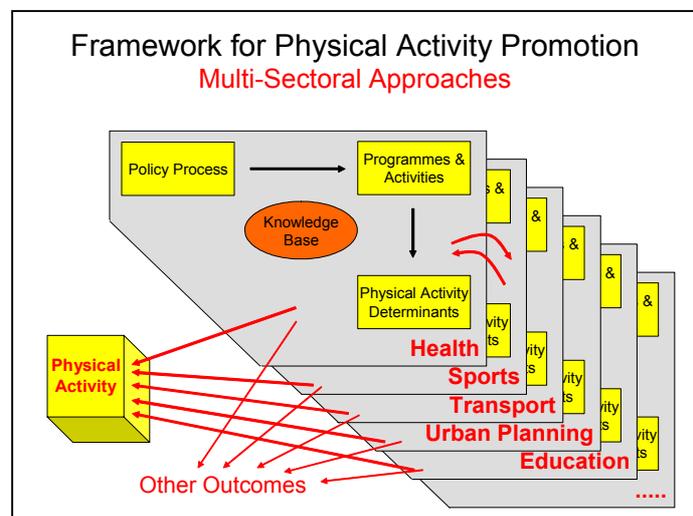
As the success of Public Health interventions often depends on factors outside the system, it is also important to learn about the interaction between the interventions and these other factors and to integrate this knowledge into the planning and implementation.

## 5. Extensions of the framework

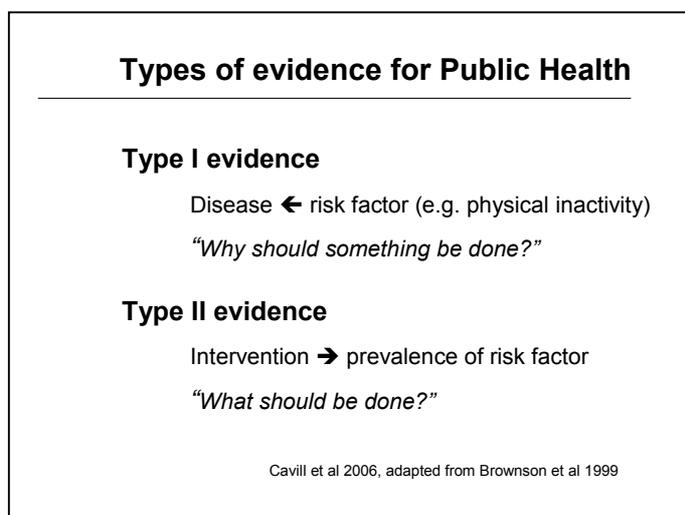


Recognising the fact that physical activity is only one behavioural dimension out of many that have a public health impact, the framework can be extended by other layers of a multi-dimensional health policy. In this way it can also conceptualise the interaction between the different dimension, not only at the level of behavioural patterns, but also at the level of the determinants, the programmes and the policy process.

If not health, but physical activity behaviour is chosen as the outcome of interest, the framework can be used to illustrate the influence of the different sectors and their interaction. It has to be taken into account that for many of the sectors and the players involved health and even physical activity are not the main focus of their activities, but that they focus on other outcomes like traffic congestions for example.

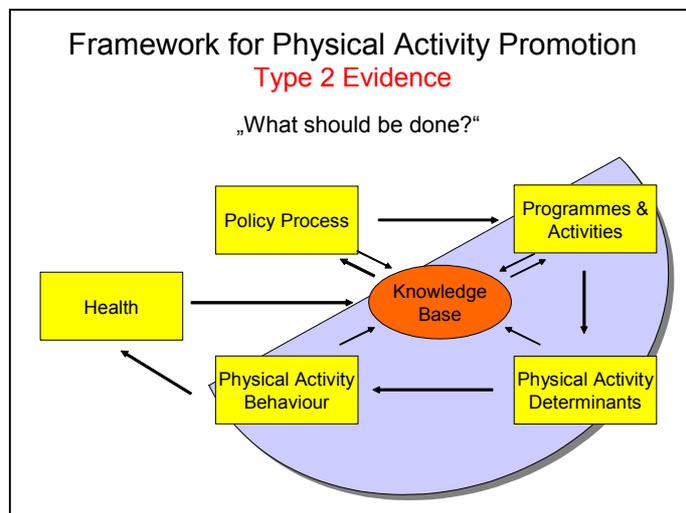
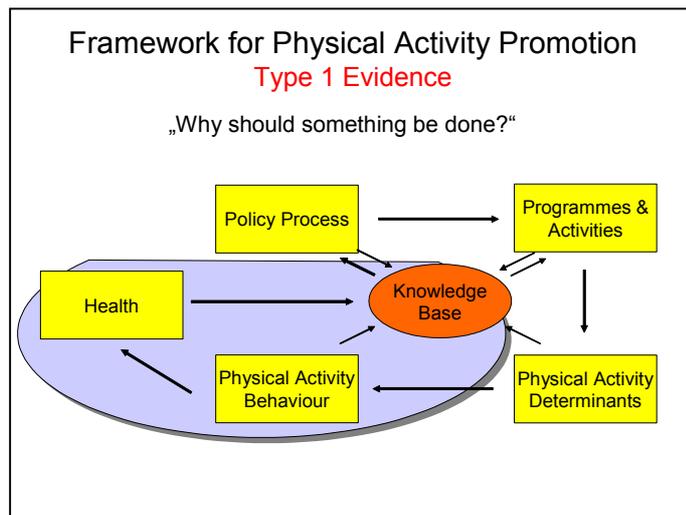


## 6. Visualisation of the different aspects of evidence-based health promotion through physical activity and health



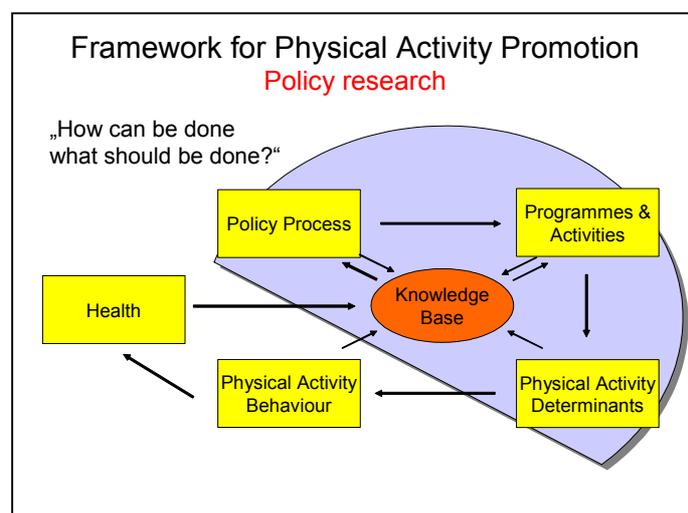
An evidence-based approach to HEPA promotion can focus on different levels of the framework. Cavill et al (10) have suggested to adapt the concept of type I and type II evidence for Public Health developed by Brownson for physical activity, and Schmid et al (3, see chapter 2) have suggested a focus for policy research that focuses on other aspects of the framework.

Type 1 evidence (10) can therefore be conceptualised as the part of the knowledge base that deals with the effects of physical activity on health both on the individual and on the population level and it includes research into causal effects, effect sizes and monitoring of levels of physical activity in the population and in sub-groups.



Type 2 evidence (10) looks at the effectiveness of interventions in influencing physical activity determinants and physical activity behaviour.

Policy research as defined by Schmid et al (3) relies on type 1 and type 2 evidence and focusses particularly on the effectiveness of the policy process.



## 7. Further development of the framework

The different elements of the integrated framework (physical activity behaviour; physical activity determinants; programmes & activities; policy process) will be developed further as pointed out in chapter 2.

## 8. Possible applications of the framework

Several ways of using the integrated framework can be envisioned once it has been developed in its definite form:

- Definition of the role and priorities of the work of HEPA Europe and other similar organisations
- Development of a structure for the “Inventory of existing approaches, policy documents, and targets related to physical activity promotion in countries in the European region” currently being developed by HEPA Europe
- Development of a framework for monitoring HEPA promotion
- Communication of the principles of HEPA Promotion and the role of the different players to a wider audience

## 9. References

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