

FACTSHEETS  
ON HEALTH-ENHANCING  
PHYSICAL ACTIVITY IN  
THE 28 EUROPEAN UNION  
MEMBER STATES OF  
THE WHO EUROPEAN  
REGION





# FACTSHEETS ON HEALTH- ENHANCING PHYSICAL ACTIVITY IN THE 28 EUROPEAN UNION MEMBER STATES OF THE WHO EUROPEAN REGION



# ABSTRACT

The aim of this document is to give an overview of information on selected surveillance and monitoring physical activity indicators in the 28 European Union Member States of the WHO European Region. It describes selected indicators, data collection procedures and data sources used to summarize some information included in the individual factsheets. The monitoring and surveillance section focuses on physical activity prevalence and national monitoring systems, including types of activity and modes of transport. The policy response section addresses major adopted policy documents, health-enhancing physical activity coordination, target groups and national awareness. This document intends to support the Member States in sharing successes and exchanging experiences and to provide inspiration for further development and implementation, along with closer collaboration among countries in relation to data collection and policy developments. This process will also map the pathway for future work on the part of WHO and the European Commission in providing targeted support and advice to Member States in this increasingly important area of public health.

## Keywords

EUROPEAN UNION  
HEALTH POLICY  
PHYSICAL ACTIVITY  
PUBLIC HEALTH  
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# INTRODUCTION

It is well recognized that physical activity has many known health benefits, including a reduced risk of cardiovascular disease, hypertension, diabetes and certain forms of cancer. Physical activity also helps to maintain good mental health by reducing stress reactions, anxiety and depression and by possibly delaying the effects of Alzheimer disease and other forms of dementia. Despite the known benefits of physical activity, the estimates in Europe indicate that more than one third of adults are insufficiently active (1). While several of the 28 Member States of the WHO European Region have managed to implement some physical activity policies in recent years to promote health-enhancing physical activity (HEPA), challenges remain and it is essential to develop and/or improve the design and implementation of physical activity policies across sectors, in order to reverse this trend towards insufficient physical activity. More specifically, additional data and information about physical activity policy development and the epidemiological situation in Europe is needed, as physical inactivity and sedentary behaviour are reaching emergency proportions.

To meet this need for further analysis, the second version of HEPA policy audit tool (PAT) provides a protocol and method for the detailed compilation and communication of country-level policy responses on physical inactivity. This publication contains an introduction to and user guide for the HEPA PAT (along with the tool itself, for completing the assessment). Completing the assessment using the tool will provide a comprehensive overview of the breadth of current HEPA-related policies and can identify synergies and discrepancies between policy documents, as well as possible gaps to be addressed.

Physical activity can take place in a range of domains and settings, such as at school, in the workplace, during transport from place to place, at home or as part of the activities of daily living. However, maintaining sufficient levels of physical activity is becoming more and more difficult, as most daily environments have changed significantly in recent years. One of the 9 voluntary targets of the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020* calls for a 10% relative reduction in the prevalence of insufficient physical activity (2), and WHO recommends that adults (including older people) undertake at least 150 minutes of moderate-intensity aerobic physical activity each week. Still, alarming figures from Member States of the European Union (EU) indicate that 6 in every 10 people above 15 years of age never or seldom exercise or play a sport, and more than half never or seldom engage in other kinds of physical activity, such as cycling or walking, household chores or gardening (3). At the same time, a high proportion of adults in Europe spend more than 4 hours a day sitting, which could be an independent risk factor for ill health, regardless of other activity levels (1). Research also indicates that adults and older people from low socioeconomic backgrounds, minority ethnic groups, as well as people with disabilities engage in less physical activity and are harder to reach than others in terms of the promotion of physical activity (4).

Furthermore, the obesity statistics show that in the vast majority of European countries, more than 50% of adults are overweight or obese; in several of these countries the obesity rate is close to 70% of the adult population (5). Overweight and obesity are also highly prevalent among children and adolescents, and data from the WHO European Childhood Obesity Surveillance Initiative (COSI) show that in some countries more than 40% of youth are overweight and around 20% are obese (6).

WHO recommends that children and young people carry out at least 60 minutes of moderate- to vigorous-intensity physical activity (MVPA) every day. Despite the guidelines, physical activity levels begin to decline considerably among youth aged 11–15 years, with fewer girls being active than boys. Of all the countries involved in the Health Behaviour

in School-aged Children (HBSC) survey, more than 86% of 15-year-old girls are considered physically inactive (7). The pattern continues among European adolescents aged 13–15 years, with only 34% being active enough to meet the current guidelines and, as a result, further increasing rates of overweight and obesity among children in Europe (in particular those from low socioeconomic backgrounds) (8).

The evidence further highlights that 5% of the burden of disease from coronary heart disease, 7% from type 2 diabetes, 9% from breast cancer and 10% from colon cancer are estimated to be a consequence of physical inactivity, resulting in 1 million deaths (about 10% of all deaths) and 8.3 million disability-adjusted life years lost per year in the WHO European Region (4). In addition, physical inactivity not only has substantial direct consequences for health care costs but also results indirectly in higher costs owing to increased periods of sick leave, work disabilities and premature deaths. For a population of 10 million people, of which half the population are insufficiently active, the overall cost is estimated to be €910 million per year.

Based on the EU Physical Activity Guidelines (9), the Council Recommendation on promoting HEPA across sectors (Council of the European Union) (10), WHO's Global Recommendations on Physical Activity for Health (11), and the forthcoming WHO European physical activity for health strategy, along with various policy guidance documents, the European Commission (EC) Directorate-General for Education and Culture (DG-EAC) and the WHO Regional Office for Europe have initiated a collaborative project, with the aim to develop and expand monitoring and surveillance of HEPA in the 28 EU Member States of the WHO European Region.

This report provides an overview of the situation in 28 EU Member States through country profiles that have been compiled according to a light monitoring framework (a set of 23 indicators chosen from among a wider portfolio of possible indicators) and developed based on the European Council Recommendation on promoting HEPA across sectors. The framework was formulated into a questionnaire and distributed through the EU Physical Activity Focal Points Network (12). The data collected on policy developments represent a minimum baseline that is comparable across countries, allowing the epidemiological state of physical (in)activity in Europe to be assessed. These complete data were also integrated into the information system of the WHO Regional Office for Europe's Integrated surveillance of Noncommunicable Diseases (iNCD) database (formerly the nutrition, obesity and physical activity (NOPA) database), in order to collate more information on physical activity and to identify priority action areas within Member States, as well to produce the factsheets highlighting the situation in each country.

## METHODS

This section provides an overview of the definitions and sources used for a selected list of demographic and monitoring indicators. It also summarizes specific areas of focus in terms of policies and action in the area of physical activity for the EU Member States.

An important part of the project was appointing the EU Physical Activity focal points, with the main objective of providing and validating country-specific data on physical activity. The EU Physical Activity focal points first met in Rome in October 2014, where it was decided to pilot the questionnaire based on the first set of (eight) indicators of the light monitoring framework. A second meeting took place in Zurich in January 2015, where the responses on the eight indicators were provided and challenges and concerns encountered were discussed. Assistance and training were also offered in order to support the network in their data collection based on the remaining 15 indicators.

For each of the 28 EU Member States, an individual country profile on physical activity was prepared using the information from the completed questionnaires relating to the 23 indicators. After the third meeting of the EU Physical Activity Focal Points Network in Lisbon on 24 June 2015, at which the available data and presentation of the factsheets were discussed, the individual draft country profiles were prepared, using selected surveillance indicators and policy items, and were sent to corresponding Member States in mid-July 2015 for comments and validation. The EU Physical Activity focal points provided comments, which were incorporated and the factsheets finalized and approved by the Member States. The factsheets are to be presented during the European Week of Sport in Brussels on 7–13 September 2015.

Only a few countries had covered all of the aspects included in the full questionnaire (23 indicators). For example, some had focused more on HEPA in the education sector, while others had focused on the health sector, and vice versa. In this summary, we report on all indicators for all 28 countries in the interest of comparability and to get a picture of overall progress and gaps. However, for the purposes of the individual country factsheets, the decision was made to focus on areas in which the individual country had taken action and to highlight areas in which particular progress or “success” had been achieved. For this reason, each country profile includes a subsection containing additional information on action in key areas and provides opportunities for countries to highlight certain programmes or schemes implemented in areas such as Sports for All, the health/education/transport sectors, or the work arena. Together, the summary and the individual country profiles provide a more complete picture of the situation across the EU Member States of the WHO European Region.

## Demographic data

The most recent data on demographic indicators for all of the EU Member States factsheets were extracted from Eurostat, the Statistical Office of the EC.

1. Total population figures (13) for all countries were extracted from 2015 Eurostat data.
2. Median age figures were all extracted from 2014 data (14), except in the case of France, for which data are for 2013.
3. Life expectancy figures were derived from 2013 data (15), except in the case of Finland, for which data are for 2012.
4. Nominal GDP per capita figures were extracted from 2013 data (16), where available, or the latest available measured data.
5. Most of the figures for total expenditure on health as a percentage of GDP were extracted from 2012 Eurostat data (17). Figures for Bulgaria, Netherlands, Portugal, Slovakia and Slovenia were derived from 2011 data, and for Latvia from 2010 data. The indicators on Italy (18) and the United Kingdom originate from the Organisation for Economic Co-operation and Development (OECD) Health Database.

## Data collection and disaggregation

Data collection on the implementation of the EU Physical Activity Guidelines (9) was based on the 23 indicators of the aforementioned light monitoring framework, developed by the European Council. This report includes an overview of the indicators compiled in the factsheets, including definitions, methods and data collection. More detailed information on definitions, operationalization and data sources on indicators can be found in the Commission staff working document on the monitoring framework (12), which is based on the EU Physical Activity Guidelines (9) and the Council Recommendation on promoting HEPA across sectors (Council of the European Union) (10).

The questions in the survey were designed to explore national actions by Member States and capacity within certain thematic areas. After the initial pilot questionnaire based on the eight original indicators, it was further



developed, increasing to 23 indicators in order to obtain detailed information about national policies, schemes and recommendations concerning physical activity (12).

The complete questionnaire (with all 23 indicators) was sent to the 28 EU Member States of the WHO European Region at the beginning of April 2015. The questionnaire was available for completion as a Microsoft Word document and, upon completing the survey, Member States submitted their data to the WHO Regional Office for Europe, up to the end of June 2015. A total of 27 (of 28) Member States responded to the survey. To ensure the quality of data, upon receiving the questionnaires, they were checked for completion, and further clarifications sought with the countries as necessary. Data were also double-entered in an Excel database to ensure validity. An international data file was then created and stored in the WHO Regional Office for Europe's iNCD database to allow further analysis and comparisons. The responses also allowed country profiles on physical activity to be updated, and snapshots of the factsheets prepared for each of the 28 Member States, along with an assessment of the overall implementation of HEPA promotion in the EU and the WHO European Region.

## Monitoring and surveillance

The primary source of information on all the indicators was the national focal points (through the respective questionnaire). Where national estimates were provided for certain indicators, this information is included in the corresponding factsheets. All the collected information was derived from a survey (for example WHO's Global Health Observatory (GHO) (19), the EC's Eurobarometer (20) or others), a national verified source (policy documents, or national recommendations and studies) or country-specific information from the country focal points themselves. While this information is valuable and provided an overview of surveillance indicators in the countries, it should be taken into account that these national data do not allow for comparisons across countries owing to sampling and other methodological differences.

## National physical activity recommendations, goals and monitoring

A classification system was used to indicate the existence of any officially adopted national recommendation in each country, and to specify (a) which population group(s) they target (for example young people, adults, older adults) and (b) which international recommendations they are based upon.

## Recommended international guidelines for physical activity

### WHO Global Recommendations on Physical Activity for Health (11)

#### *Children and adolescents aged 5–17 years*

1. Children and young people aged 5–17 years should carry out at least 60 minutes of MVPA daily.
2. Physical activity of amounts greater than 60 minutes daily will provide additional health benefits.
3. Most daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

#### *Adults aged 18–64 years*

1. Adults aged 18–64 years should carry out at least 150 minutes of moderate-intensity aerobic physical activity per week, or at least 75 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination throughout the week (MVPA).

2. Aerobic activity should be performed in bouts of at least 10 minutes' duration.
3. For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination throughout the week (MVPA).
4. Muscle-strengthening activities should be carried out, involving major muscle groups, on  $\geq 2$  days per week.

### *Adults aged 65+ years*

1. For adults aged over 65 years, in principle the same goals should be achieved as for healthy younger adults. In addition, strength training and balance exercises to prevent falls are of particular importance to this age group, and adults aged 65+ years with poor mobility should engage in such physical activity on 3 or more days per week.
2. When older adults cannot achieve the recommended amounts of physical activity owing to health conditions, they should be as physically active as their abilities and conditions allow.

### **EU Physical Activity Guidelines (9)**

The aim of the 41 Physical Activity Guidelines is to serve mainly as inspiration and guidance for policy-makers to formulate and adopt the required physical activity policies. The first 3 guidelines are listed here.

1. In accordance with the WHO guidance documents, the EU and its Member States recommend that children and adolescents participate in a minimum of 60 minutes of daily MVPA, in forms that are developmentally appropriate, enjoyable, and involve a variety of activities. Development of motor skills should be emphasized in the younger age groups. For healthy adults, the goal recommended by WHO is to achieve a minimum of 30 minutes of moderate-intensity physical activity on 5 days per week, or at least 20 minutes of vigorous-intensity physical activity on 3 days per week.
2. All relevant actors should refer to the WHO guidance documents regarding obesity and physical activity and seek ways to implement them.
3. Public authorities responsible for different sectors should support each other through cross-sectoral cooperation to implement policies that can make it easier and more attractive for individuals to increase their level of physical activity.

The other recommendations used by some Member States include those of the United States Centers for Disease Control and Prevention (CDC) (21), the American College of Sports Medicine (ACSM) (22) and the Canadian Society for Exercise Physiology (produced on behalf of the Public Health Agency of Canada) (23).

## Prevalence of insufficient physical activity

- When available, national survey information was the primary source of information for this indicator, both for adults and for children and adolescents.
- Many countries have reported using HBSC data on adolescents as their key national data, and this information is provided in the survey.
- Some countries have no data on the prevalence of insufficient physical activity, and only the estimates from the WHO GHO are available.

## Adults

Reaching the minimum recommended physical activity levels is directly linked to specific health benefits, as identified by extensive scientific research (12). The proportion of adults reaching these recommended levels illustrates the share of the adult population being sufficiently physically active in order to avoid negative health consequences related to insufficient physical activity. For this indicator, the percentage of adults reaching the minimum recommended WHO physical activity levels for health is used.

These percentages (also referred to as prevalence) can be obtained from national representative studies and internationally comparable data, such as those collected by the WHO GHO, or other robust studies that report percentages based on or in accordance with the above-mentioned definition.

Several routine instruments are available to measure physical activity among adults, and there are numerous questionnaires available to measure physical activity, such as the WHO Global Physical Activity Questionnaire (GPAQ) (24). The GPAQ was developed by WHO for physical activity surveillance purposes. It collects information by country on physical activity participation in three settings (or domains), as well as sedentary behaviour.

Another widely used method to assess physical activity is the International Physical Activity Questionnaire (IPAQ). This questionnaire was also developed to facilitate surveillance of physical activity. While IPAQ is the most frequently used questionnaire in the WHO European Region, GPAQ is becoming increasingly common in other areas of the world (25).

## Children and adolescents

As already mentioned, reaching the minimum recommended physical activity levels is related to specific health benefits. Thus, as with adults, the proportion of children and adolescents reaching these recommendations illustrates the share of the child and adolescent populations being sufficiently physically active to avoid negative health consequences related to insufficient physical activity. For this indicator, the percentages of children and adolescents reaching the minimum recommended WHO levels of physical activity for health are used.

These prevalence figures can be obtained from nationally representative studies or internationally comparable data (WHO GHO or the HBSC study; the latter based on self-reported data), as well as other robust studies that report prevalence based on or in accordance with the above-mentioned definition.

## Issues and challenges with collecting and reporting of national data

Depending on the method used, the results can vary slightly. For example, among other things, sampling methods and sizes, statistical modelling, the use of different measures (such as GPAQ or IPAQ, objective measures), differences in target population age ranges and definitions employed to assess physical activity can influence the figures emerging from each of the studies.

National surveys permit national comparisons (that is, it is possible to observe domestic trends). However, owing to the above-mentioned differences in methods, intercountry comparisons remain difficult and require caution in terms of making assumptions. For this reason, internationally comparable estimates can be useful to complement national data. Moreover, as these figures are significantly different (or lower or higher), further statistical inference is needed to allow for conclusion on these differences. In any case, as countries improve their national surveillance systems with more data, the international comparisons will also be improved.

There are many challenges regarding physical activity surveillance in EU countries. The reasons for these challenges are manifold, including: the non-standardized instruments used to carry out national surveys, leading to a lack of

comparability of physical (in)activity measurements between countries; the switching from national instruments to standardized instruments (such as IPAQ or GPAQ), leading to loss of time-series data; the fact that standardized instruments are often not applied or analysed according to the necessary protocols, resulting in a lack of comparability even among surveys using the same instrument; the use of different definitions and recommended levels of physical activity, leading to a lack of comparability of physical (in)activity measurements within and between countries; and difficulties in comparing time-series data from existing European surveys, such as Eurobarometer (20).

## Latest internationally comparable estimates for the physical activity indicators

The most recent internationally (intercountry) comparable estimates for the physical activity indicators are from 2010 and are available from the WHO GHO (also described in the WHO *Global status report on noncommunicable diseases 2014*) (26).

### The WHO GHO method and calculation of the estimates

To calculate the comparable estimates of insufficient physical activity, only surveys that presented sex- and age-specific prevalence with sample sizes (minimum: n=50) were considered and included in the calculations, based on the definition of not meeting any of the following criteria: at least 30 minutes of moderate-intensity activity per day on at least 5 days per week, or at least 20 minutes of vigorous-intensity activity per day on at least 3 days per week, or an equivalent combination. Only surveys that captured activity across all domains of life – including work/household, transport and leisure time – were included in the calculations. Moreover, data were required to originate from a random sample of the general population, with clearly indicated survey methods.

For these calculations, statistical modelling techniques were applied, and both crude adjusted prevalence values and age-standardized comparable estimates were produced. More detailed information on the method used to develop the comparable estimates is available in the *Global status report on noncommunicable diseases 2014* ((26), pp. 138–139).

### WHO GHO 2010 estimates for the physical activity indicators

The estimates are presented in terms of insufficient physical activity. Data are presented as crude and age-standardized estimates, by sex and as a whole (total), and the data used for the illustrations presented in all the factsheets are solely based on the crude estimates. The range of years used to calculate the WHO GHO 2010 estimates for physical activity spanned 2003–2014, depending on the data available for each country.

## Monitoring systems

The questionnaire asked about the existence of a national health monitoring and surveillance system that includes population-based measures of physical activity. The existence of such a system is important for tracking trends and changes in physical activity levels over time and is also a prerequisite of developing or improving the national policy on physical activity. Items typically measured in such systems include frequency, duration and intensity of physical activity, across various domains (such as leisure time, transport, work, household), cycling/walking time and, sedentary behaviour; it is often possible to disaggregate by age group and socioeconomic status. These items were thus included in the questionnaire, and the countries provided information on which items were measured and included, as well as on the systematic collection and analysis of data. When available, the countries provided surveillance data and the corresponding references.

## Types of activity and modes of transport

Cycling and walking require minimal personal financial investment and can be easily integrated into daily life. The Member States provided information on the main modes of transport for daily activities, and confirmed whether or

not a national travel survey exists in their country for assessing time and/or distance walked or cycled per day for all travel purposes, as well as tax incentives for active transport, and use of the assessment tool provided by the WHO Regional Office for Europe (HEAT) (or a similar tool). Although many countries did not have a national travel survey of time or distance walked or cycled per day, percentages of all journeys by different modes of transport (car, motorbike, public transport, walking or cycling) were nonetheless reported in the factsheets (recorded as a national transport survey).

## Eurobarometer surveys and the percentages of adults reaching the recommended physical activity levels

Some information is available from a 2011 Flash Eurobarometer survey by the EC, in the form of the question "What is the main mode of transport that you use for your daily activities?" (27). However, the information gleaned was not specific enough, so in the interest of obtaining more up-to-date information from the Member States, the question was also asked as part of the survey questionnaire sent to the EU Physical Activity focal points. Eurobarometer surveys were carried out in 2011 and 2014, covering all 28 EU Member States and a representative sample per country of about 1000 respondents, aged 15 years and older. Statistical results were weighted to correct for known demographic discrepancies. It should be borne in mind that data from general surveys (such as Eurobarometer) have certain weaknesses compared with data from national travel surveys. In addition, some methodological approaches result in more precise and reliable data than others, while variation in modes of transport can confound the issues at hand. In the Eurobarometer survey, respondents were required to decide on just one mode of transport. In addition, the Eurobarometer surveys might be more prone to underreporting non-motorized modes of transport if they are not yet fully recognized as a standard means of transport, which is still often the case for walking, and to some degree, cycling, in some countries (27).

Member States also provided information on the existence of guidelines for improving infrastructure for leisure time, including specific questions, such as how many communities implement such guidelines, and what support is provided for implementation of guidelines at national level.

## Policy response

### Major policy documents adopted

Sports for All refers to the systematic establishment of opportunities for physical activity that are accessible to everybody. Sports promotion is a vital part of a comprehensive HEPA promotion strategy, but it will only work if it includes a strong focus on Sports for All approaches, rather than mainly favouring elite sports. Elements assessed included the existence of a national Sports for All policy and action plan, the country's focus on various aspects of sports- or HEPA-related policies, the focus on clear objectives and identified actions, targeting specific groups, and often including (or foreseeing) an evaluation.

Countries were also asked about the existence of national or subnational approaches to the promotion of sports clubs for health, based on European guidelines that focus on the implementation of health-oriented sports programmes. Another indicator looked at the existence of policies to expand access to sports and/or opportunities for physical activity for socially disadvantaged groups, such as through a specific national programme, incentive schemes to improve access to existing facilities and/or recreation facilities, or through the development of specifically designed initiatives targeting certain population groups (such as socially disadvantaged individuals).

The questionnaire asked further questions regarding the policy response in specific sectors and settings, notably the education, health, environment and planning sectors, in the workplace and other settings. The indicators included in the questionnaire covered the following topics (among others):

- existence of a policy or programme to encourage counselling by health professionals on physical activity in health care settings;
- training on HEPA in curricula for health and education professionals;
- existence of standards on the provision of physical education (PE) in primary and secondary schools;
- existence of schemes to promote active travel to school and/or the workplace; and
- existence of programmes or schemes to promote physical activity in the workplace.

The survey template collected information on the existence of policies or frameworks, as well as more specific details, such as the types of stakeholders, main topics covered by such policies, budget allocation and countrywide expansion. Countries were asked to provide links or references to the policy documents, to enable validation.

Countries reported a variety of different approaches to addressing HEPA and inclusion in policies originating from a number of different sectors (health, sports and culture, education, environment and planning). Different terminology and approaches were used in different countries, and the level of detail provided about the actions planned or taken varied from country to country and from policy to policy within countries. Where links or references to the policy documents were provided by focal points, they were reviewed to identify whether clear objectives and policy actions were described. Priority was given to documents that had definitively been adopted and endorsed by government, rather than draft policy documents.

## National awareness

An awareness-raising campaign is usually a mass media-based method to enlighten a society's attitudes, behaviours and beliefs. This indicator refers to the existence – and, if it exists in a country, a more detailed description of – any national awareness-raising campaign, including specific topics such as: behavioural change, motivation and cultural acceptability of being physically active.

## HEPA coordination

The questionnaire also asked about the existence of a national coordination mechanism for HEPA in the country that brings together relevant stakeholders, alongside questions about leadership and funding by sector (that is, funds specifically dedicated to HEPA promotion by the health, sports, education or environment sector (among others)), and questions about engagement with international HEPA networks. Many (but not all) countries had a clearly identified HEPA coordination mechanism. In most countries, several different government ministries or authorities were involved in HEPA promotion, notably in the health, education and sports sectors. However, civil society organizations were also found to be playing leading roles in terms of HEPA and Sports for All promotion activities.

## Target groups

Countries generally reported that policies did indeed address specific target groups. On occasion it was hard to verify or validate this, but where possible, a search was conducted to identify any explicitly mentioned target groups and/or whether they were the focus of any concrete action. Where applicable, any innovative approaches to addressing specific target groups were mentioned in the individual country profiles.

# SUMMARY

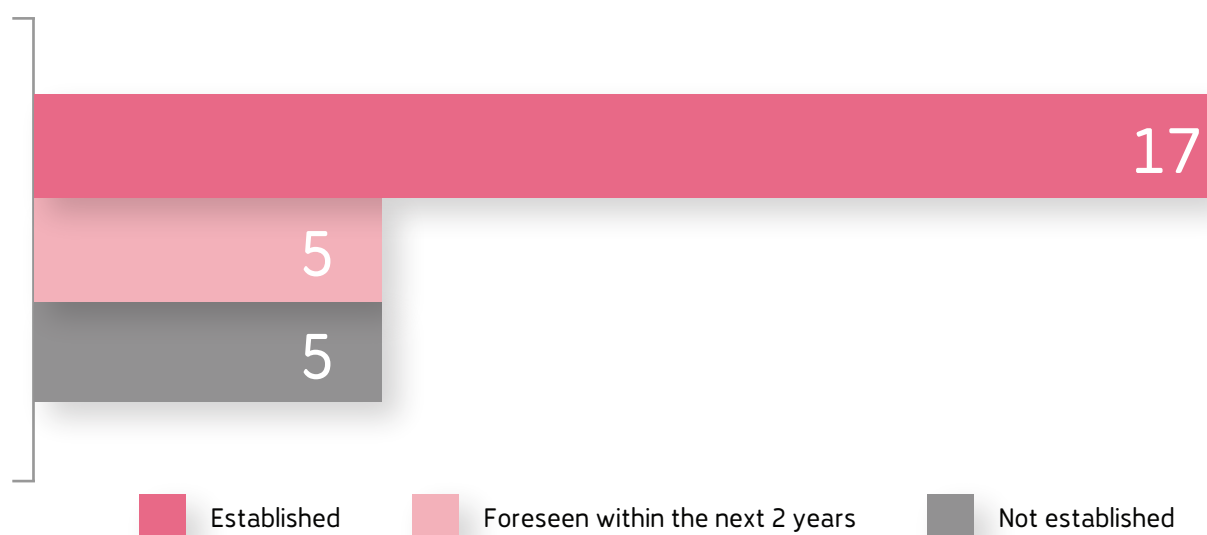
## Monitoring and surveillance

Among the 28 EU Member States of the WHO European Region, the information collected by the questionnaire (in conjunction with existing available information) showed that established national policy recommendations on physical activity currently exist in 19 countries. In 17 of the policies, young people are addressed; in 18 of them, adults are targeted; and 16 of them include older adults in their recommendations.

## Surveillance or health monitoring system that includes population-based measures of physical activity

A total of 17 countries have an established surveillance system, 5 foresee the implementation of a monitoring system in the next 2 years, and 5 countries have no such system established (Fig. 1). Here, both Belgium and the United Kingdom are each counted as one country, not split into regions. Specific data per indicator can be found in the individual factsheets.

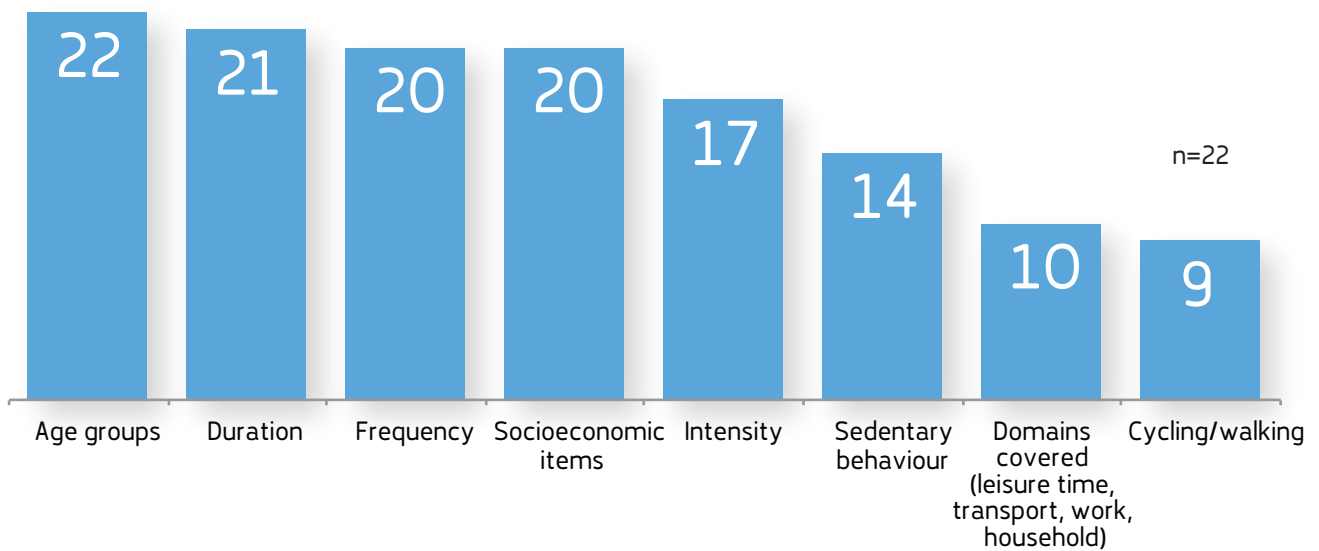
Fig. 1. Surveillance or health monitoring systems that include population-based measures of physical activity



*Notes.* No data provided for Greece. Belgium (treated as 1 country): all parts of the country (Flemish, French- and German-speaking) have a surveillance or health monitoring system that includes population-based measures of physical activity. The United Kingdom (treated as one country, as all 4 home countries have such a system).

In total, 19 different surveys exist across 17 countries (some home countries of the United Kingdom use different surveys and measure different items). The most frequently measured items included age groups, duration, frequency and socioeconomic factors, as shown in Fig. 2.

Fig. 2. Items measured by surveillance or health monitoring systems



Notes. 17 countries: Belgium, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Slovenia, Spain, Sweden and the United Kingdom. No data provided for Greece. Data are presented separately for Belgium (Flemish, French- and German-speaking regions), as well as for the 4 home countries of the United Kingdom (England, Scotland, Wales and Northern Ireland).

## Physical activity in adults

National data is presented in most countries in individual factsheets.

## Physical activity in adolescents

Among youth aged 11–17 years, the WHO GHO intercountry comparable estimates indicated that the prevalence of adolescents meeting minimum WHO recommended activity levels was higher for boys (ranging from 9.0% to 35.4%) than for girls (7.4% to 20.4%) (26).

## Children aged under 5 years

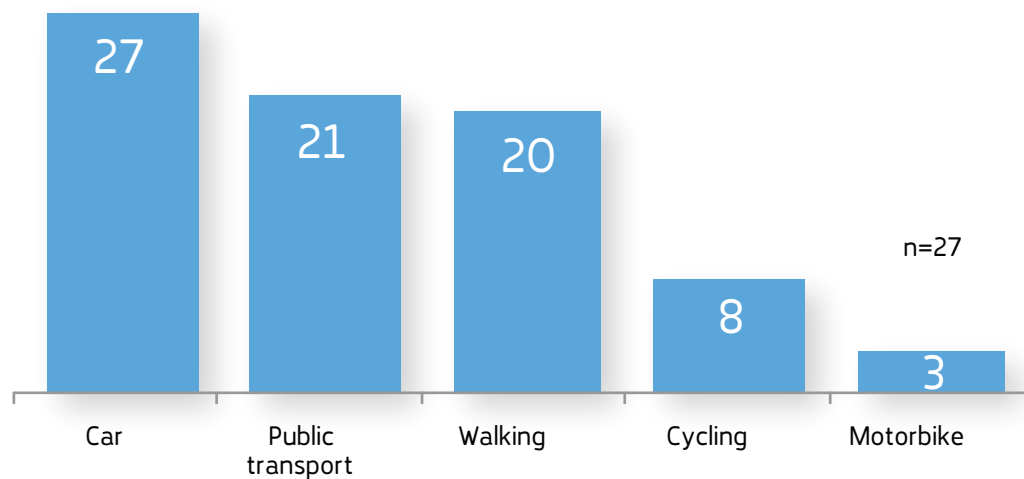
Four countries reported physical activity prevalence data on children aged under 5 years. However, as the country studies used different methods, the figures are unfortunately not intercountry comparable.

## Types of activity and modes of transport

Cycling is one of the three most favoured modes of transport in 8 countries within the EU (Fig. 3). In more than half of the Member States (20 countries), people reported walking as one of the modes of transport used most often. A total of 13 countries reported using their national travel survey to monitor time and/or distance walked or cycled per day for all travel purposes (commuting, shopping, leisure or work).



Fig. 3. Most frequently used modes of transport across the EU



Notes. Countries chose the most common top 3 modes of transport. No data provided for Greece. Belgium is treated as 1 country (data collected through the Belgium Daily Mobility survey (BELDAM) (28)).

Nine countries reported using tax incentives for active transport, including (among others): increased parking fees in city centres or reduced parking fees in suburban settings increased vehicle purchase taxes; remuneration of employees if they cycle or walk; or reduced bicycle costs for employees. Five countries use the WHO Regional Office for Europe Health Economic Assessment Tool (HEAT) to estimate the potential health and economic benefits of a cycling and/or walking infrastructure policy (29). Denmark uses another tool (the Danish Ministry of Transport's spreadsheet model for socioeconomic analysis, TERESA (30)).

## Policy response

### Major policy documents adopted

Most of the Member States (27 countries) have adopted policies in the sports sector, and 22 have dedicated national Sports for All policies. In the health sector, 22 countries have adopted policies, and in the education sector, 19 countries. About a third of the policies focus on socially disadvantaged groups and older adults. The least targeted aspect was leisure-time infrastructure, with only 4 sets of guidelines developed across the 27 countries surveyed (Fig. 4).

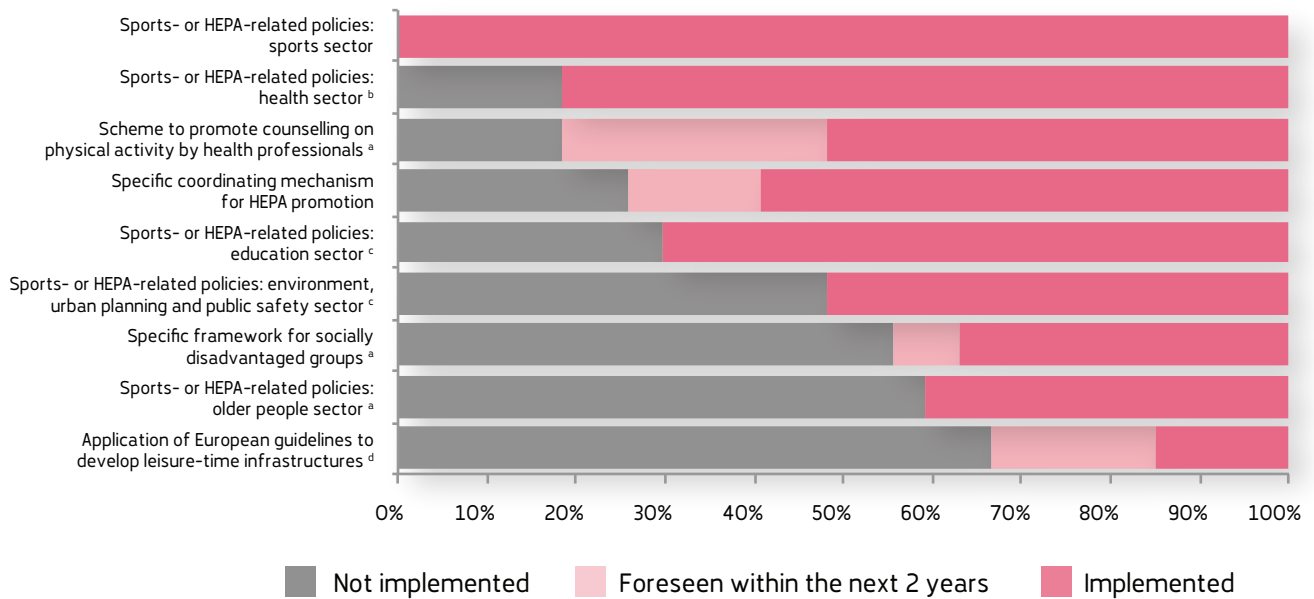
### Key action areas

#### HEPA coordination

More than half of the countries (16) have fully developed and implemented a national coordination mechanism and leadership on HEPA promotion (Fig. 4).

A total of 20 countries reported being members of international networks, most notably the WHO European Healthy Cities Network (15 countries) (31).

Fig. 4. Key areas for implementation of HEPA policy, schemes and coordination mechanisms

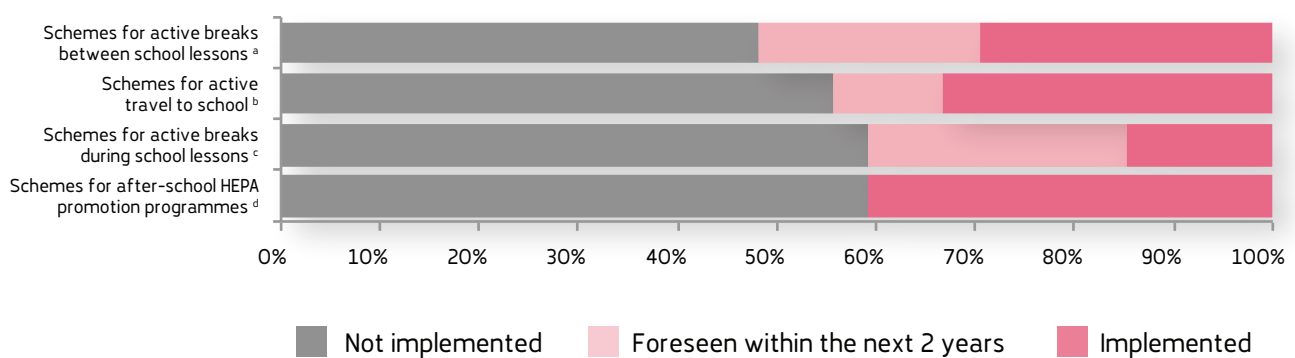


Notes. 22 countries have dedicated Sports for All policies. No data available for Greece. In Belgium: <sup>a</sup> Implemented; however, for the French-speaking region, no policy is reported. <sup>b</sup> implemented; however, for the German-speaking region, no initiative/policy is reported. <sup>c</sup> Implemented; however, for the French- and German-speaking regions, no policies are reported. <sup>d</sup> Not implemented; however, for the German-speaking region, implementation is foreseen it within the next 2 years.

## Schools

Nine countries reported having implemented schemes for active travel to school; 10 countries have developed after-school HEPA promotion schemes; 8 have schemes for active breaks **between** school lessons; and 5 countries reported having implemented schemes for active breaks **during** school lessons (Fig. 5). Data on the different schemes vary, including, for example, for the different regions of Belgium and the United Kingdom.

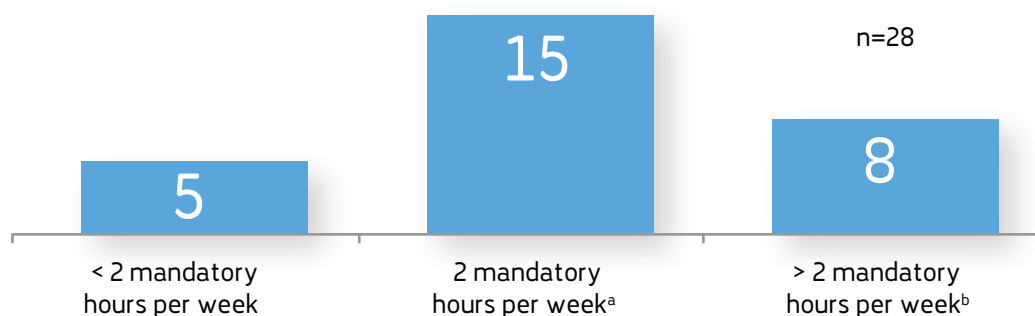
Fig. 5. Implementation of active travel to school and school breaks



Notes. No data provided for Greece. <sup>a</sup> In Belgium: implemented; however, in the French-speaking region, no such scheme exists, and in the German-speaking region, implementation is foreseen within the next 2 years. In the United Kingdom, active travel to school and school breaks are considered to be implemented (a scheme exists in Scotland). <sup>b</sup> In Belgium, such schemes are already implemented in the Flemish region, and foreseen within the next 2 years in the French- and German-speaking regions; in the United Kingdom, all four home countries have schemes in place for active travel to school. <sup>c</sup> In Belgium, the Flemish- and French-speaking regions have implemented schemes for active breaks during school lessons, and such schemes are foreseen within the next 2 years in the German-speaking region. <sup>d</sup> In Belgium as a whole, after-school HEPA promotion schemes are considered to be implemented (implemented in the Flemish region, not implemented in the French-speaking region, and foreseen within the next 2 years in the German-speaking region); in the United Kingdom as a whole, such schemes are considered to be implemented (but information is officially available only for Northern Ireland).

While PE lessons are mandatory in all countries, of the 27 countries that provided information on the number of mandatory hours of PE provided in schools, 1 of the countries (United Kingdom) reported differences between regions and was therefore counted as 4 separate regions, for which the data were presented separately. The total number of countries was therefore 30. Of these 30 countries, 22 have mandated the exact number of hours of PE lessons to be delivered, and in 6 countries, additional hours of PE could also be provided (at the discretion of individual schools). In 2 countries, PE lessons are mandatory, but the number of hours is not specified. In 15 countries 2 hours of PE lessons are mandatory, and in 1 country (Fig. 6), PE is integrated into general education for a certain age group, whereby the teachers are free to allocate time to various subjects and activities.

Fig. 6. Mandatory hours of PE in primary schools

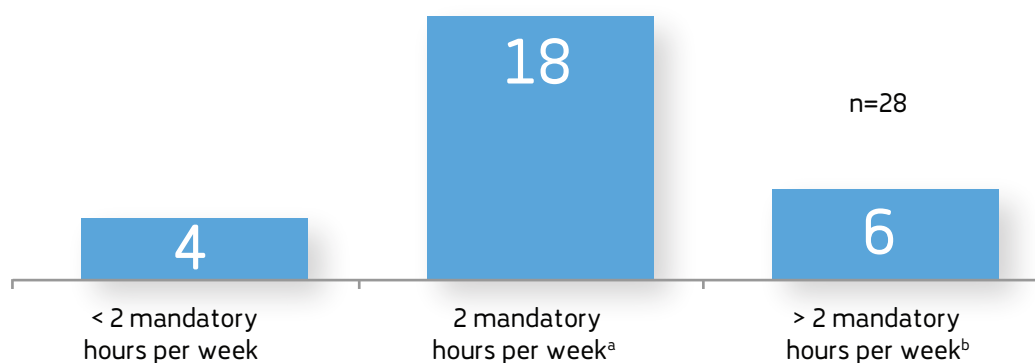


Notes. No data provided for Greece. In 1 country, in the early years of primary school, PE is integrated into the general curriculum; that is, the division between subjects/activities/classes depends on the teacher. Results are presented separately for the 4 home countries of the United Kingdom (England, Scotland, Wales and Northern Ireland), bringing the total number of countries to 30. Certain hours of PE are mandatory in 28 countries, with discretionary hours dedicated to PE in 2 countries. Six countries have a mix of mandated hours and free reign.

<sup>a</sup>Except for Hungary 2 h 15 min, Croatia, Lithuania and Slovenia 1 h 30 min to 2 h 15 min and Belgium (French-speaking region: 1 h 40 min). <sup>b</sup>Except for Luxembourg (1st year, = 0 hours; years 2–5 = 3 hours; years 6–7 = 2 hours).

In terms of mandatory PE in secondary schools, 22 countries reported PE as being “all mandatory”; 2 countries reported PE as “all optional”; and 6 countries stated that PE was “partially mandatory” (either in terms of year groups for which it is mandatory or the number of hours specified). The hours of PE in secondary schools varied greatly among the countries, as shown in Fig. 7.

Fig. 7. Mandatory hours of PE in secondary schools



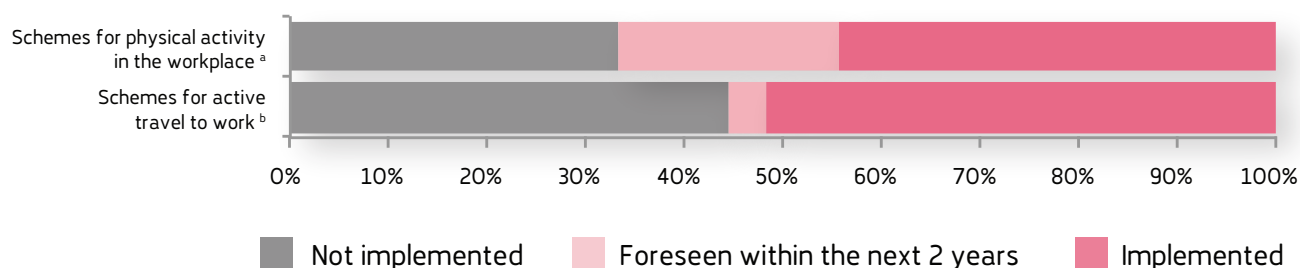
Notes. No data provided for Greece. Data are presented separately for the four home countries of the United Kingdom (England, Scotland, Wales and Northern Ireland). In 1 country, for secondary-level education there are two compulsory courses (each of 38 hours) and three national voluntary courses (the latter were not taken into account in these data). Certain hours of PE are mandatory in 28 countries: entirely mandatory in 22 countries; partially mandatory in 6 countries (in which some mandatory classes can be substituted with other physical activity or sports options); and optional in 2 countries.

<sup>a</sup>Except for Cyprus, Hungary and Portugal (2 h 15 min), Belgium (French-speaking region: from 1 h 40 min to 2 h 30 min, depending on the year group), Lithuania (from 1 h 30 min to 2 h 15 min), Luxembourg (1–2 hours, depending on the year group), Romania (1–3 hours), Scotland (2 sessions per week, with the length of sessions determined by the school), Slovenia (from 45 min to 2 h 15 min), Sweden (about 2 hours). <sup>b</sup>Except for Denmark (lower-secondary education = 3 h 45 min per week; however, upper-secondary education = 60 minutes per week; technical and commercial secondary schools = 15 hours per year).

## Workplace

A total of 14 countries have implemented schemes for active travel to work, and 12 countries have implemented physical activity in the workplace. Some regions of Belgium and the United Kingdom have not implemented such schemes (Fig. 8).

Fig. 8. Schemes for promoting travel to work and physical activity in the workplace

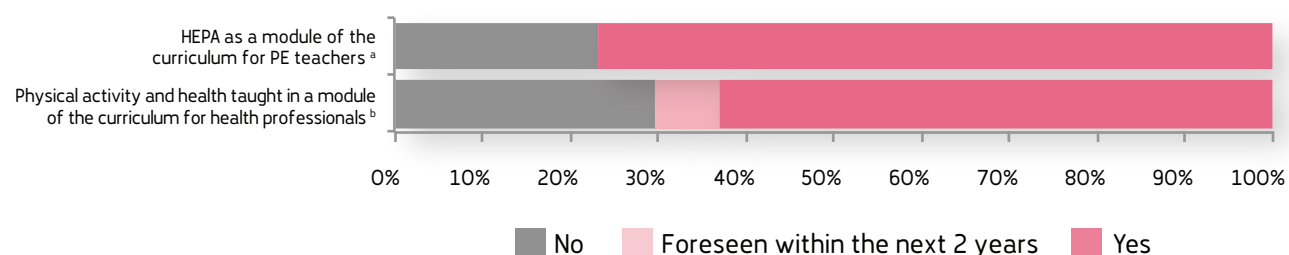


Notes. No data provided for Greece. <sup>a</sup> Implemented in Belgium (except for the German-speaking region); in the United Kingdom, schemes have been implemented in Northern Ireland, Scotland and Wales. <sup>b</sup> Implemented in Belgium (except for the German-speaking region); in all 4 home countries of the United Kingdom, such a scheme is in place (= implemented).

## Training of health professionals and PE teachers

HEPA training on physical activity is provided in 19 EU countries, and in 17 countries physical activity and health are taught within a module of the curriculum for health professionals, as shown in Fig. 9.

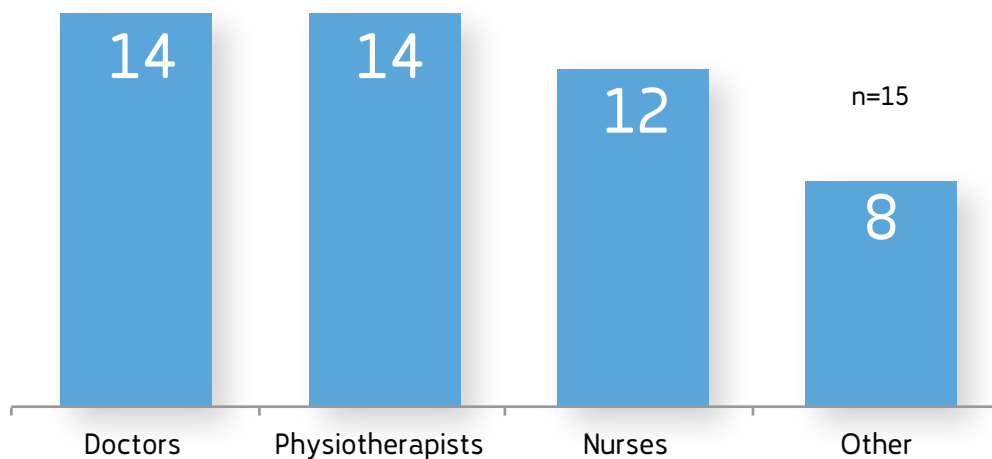
Fig. 9. HEPA training for health professionals and PE teachers



Notes. <sup>a</sup> No data provided for Greece; no applicable data exist for Luxembourg (as no degree in PE is available); Belgium's Flemish region = yes; Belgium's German-speaking region = no; Belgium's French-speaking region = unknown. <sup>b</sup> No data provided for Greece; Belgium's Flemish and German-speaking regions = yes; Belgium's French-speaking region = unknown.

In 15 countries, physical activity and health are taught within a module of the curriculum for health professionals. two of the countries reported that such a module exists, but no further information was available. Fig. 10 shows the 4 most-represented professions in the EU for which such courses were reported to be available.

Fig. 10. Training on physical activity in the curriculum for health professionals

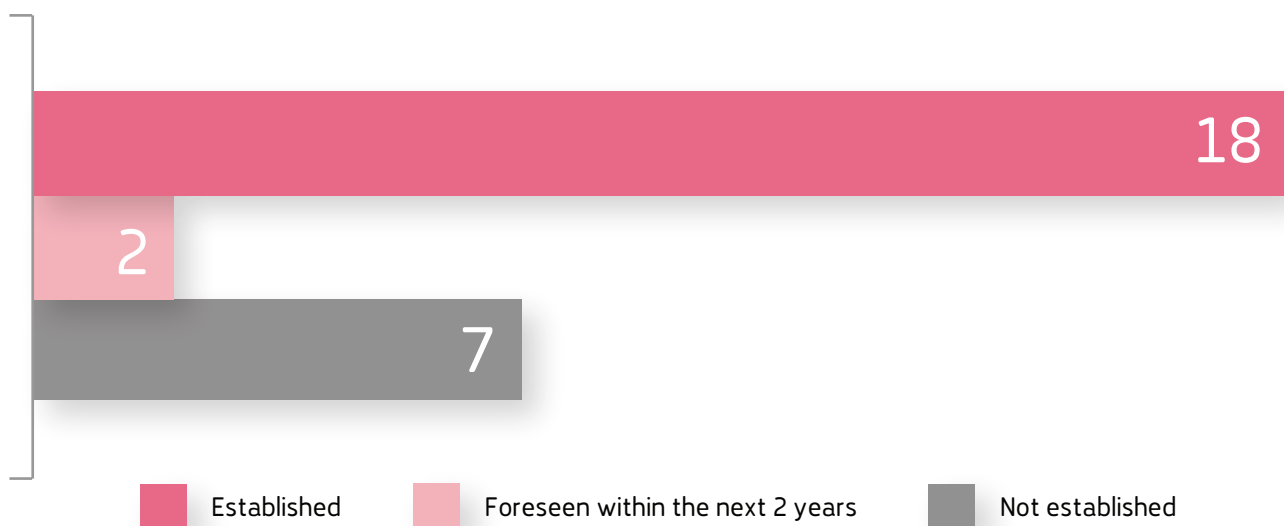


Notes: No data provided for Greece. Missing data for Germany and Netherlands.

### National awareness

More than half of the countries (18) have developed campaigns on national awareness of physical activity (Fig. 11). For this indicator the regions of both Belgium and the United Kingdom were considered, because some of the regions have already implemented such a campaign. Some countries have many different campaigns, targeting specific population groups, such as older adults or children.

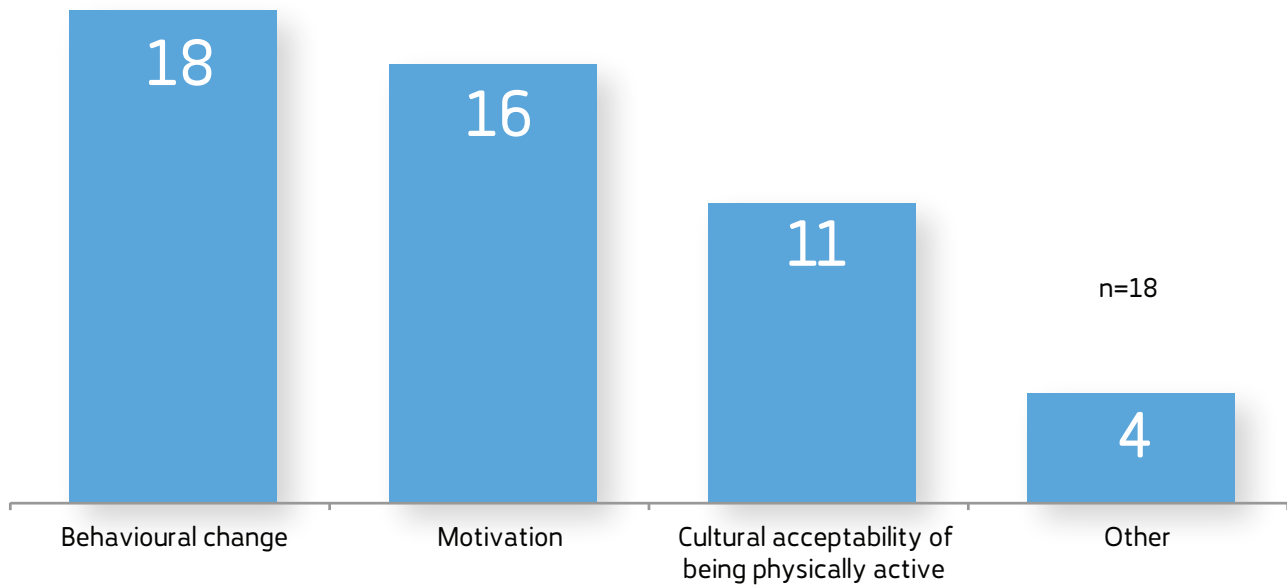
Fig. 11. National physical activity awareness-raising campaigns



Notes: No data provided for Greece. Belgium: established (except for the German-speaking region, where such a campaign is foreseen within the next 2 years). United Kingdom: established (England, Northern Ireland and Wales have such a campaign).

Cross-country comparison of the existing schemes indicated that most of the countries have focused their physical activity awareness campaigns on the theme of behavioural change, followed by the notions of motivation and cultural acceptability (Fig. 12).

Fig. 12. National physical activity awareness-raising campaigns, by topic

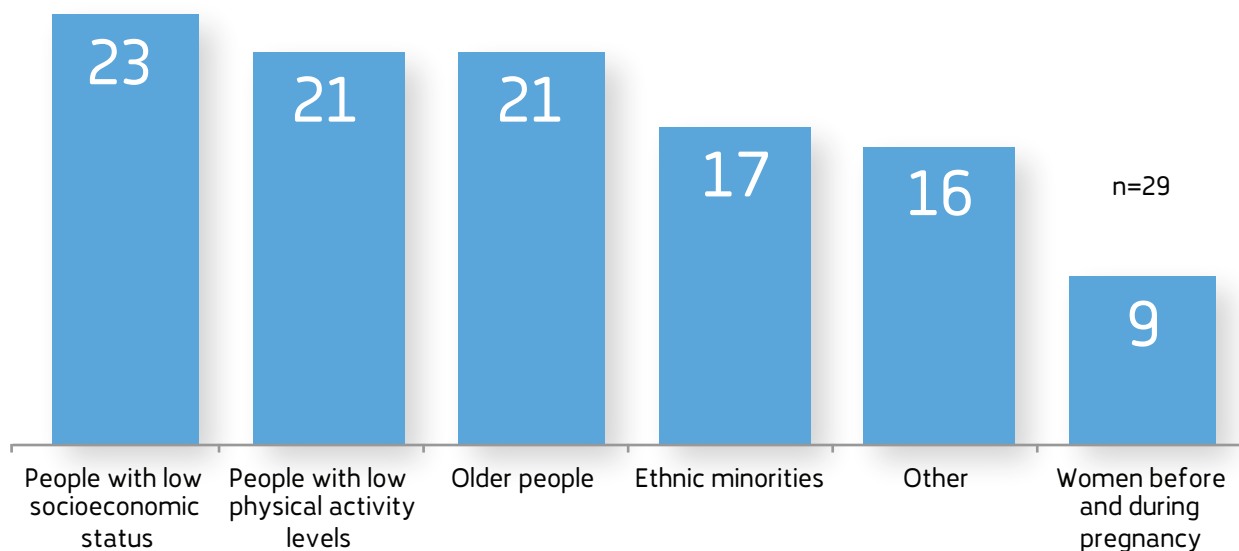


Notes. No data provided for Greece. Belgium has different national awareness campaigns for each of its regions, but they address the same topics and were therefore considered as one. In the United Kingdom, both England and Wales have (different) campaigns but were considered as 1 as they address the same topic; for the other 2 home countries, data were not available.

### Target groups

Information about the focus of various policies on target groups was also provided by the EU (Fig. 13). For these purposes, the United Kingdom is included as 1 country and Belgium is split into its regions, as different policies focus on different groups of the population. Some countries have developed policies that explicitly address the needs of a particular group, while others reported that general strategies addressed the needs of different target groups in a more mainstreamed or integrated way (that is, as a whole, the policies were sensitive to the needs of target and/or vulnerable groups). Generally speaking, although great variety was reported among the EU Member States, the target group least represented is women before and during pregnancy.

Fig. 13. Target groups in particular need of physical activity policies



Notes. No data provided for Greece. The United Kingdom is considered as 1 country (but data were gathered only from England and Northern Ireland; both countries address all target groups). Belgium is split into the Flemish, French- and German-speaking regions as they each have different policies, addressing different target groups.

## Evaluation

Where EU reported having HEPA policies that address different sectors (such as sports, health, education, environment) and target groups (for example, older adults), most also reported the existence of an evaluation plan for those policies. However, the question was not detailed enough to provide information on the type of evaluation plan or details thereof.

# CONCLUSIONS

## Overview, monitoring and limitations

The data collected served several important purposes, including:

- providing updated monitoring and surveillance data on levels of physical activity among different population groups, using national data and internationally comparable estimates;
- identifying, where possible, types of physical activity and modes of transport, which is relevant for the promotion of active transport;
- understanding whether countries have adopted national physical activity recommendations in line with international guidelines;
- obtaining an overview of national surveillance and monitoring systems and the types and range of indicators for which data are currently collected at national level; and
- mapping policy action taken by countries, documenting where possible action in key areas, such as Sports for All, education, health, transport and the environment.

The overview of currently available data on levels of physical activity in all 28 EU Member States of the WHO European Region further allows:

- an understanding of the different methods used by various countries to monitor physical activity levels;
- baselines to be established in order to monitor future trends and to benchmark progress;
- gaps in data to be identified and to locate where countries might need support in monitoring and surveillance;
- a view of whether and/or how countries are using the WHO guidelines and recommendations on physical activity;
- an understanding of the different types of policies that countries have introduced, in order to promote and highlight some innovative approaches; and
- a view of the policy areas in which policy action has been taken and the extent of that action.

Limitations of the factsheets include the following considerations.

- The reports are only as complete as the data provided by the Member States.
- It was necessary to add information to the factsheets with a review process, which was complicated by a language barrier, in terms of being able to verify data.
- No assessment of policy implementation has been made; included information is derived only from the countries' completed surveys. References were checked to ensure, to greatest possible extent, adoption. But full implementation cannot easily be measured.

The result of this process also led to the WHO Regional Office for Europe's iNCD database being reviewed, redesigned

and upgraded to render it more comprehensive, easier to maintain, and more user-friendly and accessible for media, policy-makers and the general public. New indicators on physical activity were added to the WHO Regional Office for Europe's iNCD database, based on (but not limited in the future to) the indicators included in the monitoring framework set up by the Council Recommendation on promoting HEPA across sectors (Council of the European Union) (10). As part of this process, the factsheets on physical activity for health (modelled on the WHO Regional Office for Europe country profiles on nutrition, physical activity and obesity from 2013 (32)) were prepared in August 2015. An annual cycle of data checks is recommended, to confirm the validity of the data, and the iNCD database should also be simultaneously updated (in a timely fashion), to facilitate the improvement and monitoring of the physical activity policies of the Member States concerned.

## Recommendations

The factsheets prepared for each of the 28 EU Member States of the WHO European Region should be viewed as snapshots of the country's current status relating to the selected monitoring indicators and policy developments in the area of physical activity. However, as physical activity trends could not be established for all EU countries and as the national data were often derived by different methods, it is clear that continuous effort is needed to harmonize definitions and measurement methodology across the Region, which would allow for intercountry data comparisons and an improved overall picture of physical activity trends in Europe. Such efforts – along with harmonized data availability and improved or increased monitoring of the impact of physical activity policies – would provide an important measure for evaluating the state of physical activity policy in the EU.

The information that the Member States collected and provided on physical activity indicators provides not only an overview of the specific policies and indicators at national level, but also valuable sources and models of policies for the countries that are in the process of developing or modifying their national policies. The collected data should be used as a basis for Member States to share successes and exchange experiences, as well as providing inspiration for further development and implementation, along with closer collaboration among countries in terms of data collection and policy developments. This process will also map the pathway for future work on the part of WHO and the EC in providing targeted support and advice to Member States in this increasingly important area of public health.

Finally, as only successful and innovative approaches with significant potential for impact could be identified for the purposes of this report, but not the detail of the effectiveness of individual policy measures within countries, a separate review of the accumulated evidence would be needed to identify effective and/or cost-effective approaches to increasing physical activity.



# REFERENCES

1. Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, Ekelund U. Global physical activity levels: surveillance, progress, pitfalls, and prospects. *Lancet* 2012;380(9838):247–257. doi:10.1016/S0140–6736(12)60646–1.
2. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 7 June 2015).
3. Sport and physical activity report. Special Eurobarometer 412. Brussels: European Commission Directorate-General for Education and Culture; 2014. doi:10.2766/73002.
4. Steps to health. A European framework to promote physical activity for health. Copenhagen: WHO Regional Office for Europe; 2007 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0020/101684/E90191.pdf](http://www.euro.who.int/__data/assets/pdf_file/0020/101684/E90191.pdf), accessed 21 June 2015).
5. European Food and Nutrition Action Plan 2015–2020. Copenhagen: WHO Regional Office for Europe; 2014 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/253727/64wd14e\\_FoodNutAP\\_140426.pdf](http://www.euro.who.int/__data/assets/pdf_file/0008/253727/64wd14e_FoodNutAP_140426.pdf), accessed June 7 2015).
6. Wijnhoven TMA, van Raaij JMA, Spinelli A, Starc G, Hassapidou M, Spiroski I et al. WHO European childhood obesity surveillance initiative: body mass index and level of overweight among 6–9-year-old children from school year 2007/2008 to school year 2009/2010. *BMC Public Health* 2014;14:806. doi:10.1186/1471–2458–14–806.
7. Physical activity strategy for the WHO European Region 2016–2025. 65th session of the Regional Committee for Europe, Vilnius, 14–17 September 2015. Working document (EUR/RC65/9). Copenhagen: WHO Regional Office for Europe; 2015 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0010/282961/65wd09e\\_PhysicalActivityStrategy\\_150474.pdf](http://www.euro.who.int/__data/assets/pdf_file/0010/282961/65wd09e_PhysicalActivityStrategy_150474.pdf), accessed 14 August 2015).
8. Loring B, Robertson A. Obesity and inequities. Guidance for addressing inequities in overweight and obesity. Copenhagen: WHO Regional Office for Europe; 2014 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/247638/obesity-090514.pdf](http://www.euro.who.int/__data/assets/pdf_file/0003/247638/obesity-090514.pdf), accessed 21 June 2015).
9. EU Physical Activity Guidelines. Recommended Policy Actions in Support of Health-Enhancing Physical Activity. Brussels: European Commission; 2008 ([http://ec.europa.eu/sport/library/policy\\_documents/eu-physical-activity-guidelines-2008\\_en.pdf](http://ec.europa.eu/sport/library/policy_documents/eu-physical-activity-guidelines-2008_en.pdf), accessed 10 April 2015).
10. Council recommendation on promoting health-enhancing physical activity across sectors. Brussels: Council of the European Union; 2013 ([http://ec.europa.eu/sport/library/news-documents/hepa\\_en.pdf](http://ec.europa.eu/sport/library/news-documents/hepa_en.pdf), accessed 5 August 2015).
11. Global Recommendations on Physical Activity for Health. Geneva: World Health Organization; 2010 ([http://apps.who.int/iris/bitstream/10665/44399/1/9789241599979\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44399/1/9789241599979_eng.pdf), accessed 10 April 2015).
12. Commission staff working document. A monitoring framework for the implementation of policies to promote health-enhancing physical activity (HEPA), based on the EU Physical Activity Guidelines Accompanying the document Proposal for a Council Recommendation on promoting health-enhancing physical activity across sectors. Brussels: European Commission; 2013 (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013SC0310&from=EN>, accessed 5 August 2015).
13. Population change – demographic balance and crude rates at national level. Eurostat [online database]. Luxembourg: Statistical Office of the European Union; 2015 ([http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_gind&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_gind&lang=en), accessed 8 May 2015).
14. Population: structure indicators. Eurostat [online database]. Luxembourg: Statistical Office of the European Union; 2014 ([http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_pjanind&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&lang=en), accessed 8 May 2015).
15. Healthy life years and life expectancy at birth, by sex. Eurostat [online database]. Luxembourg: Statistical Office of the European Union; 2013 (<http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsdph100&language=en>, accessed 8 May 2015).
16. GDP per capita – annual data. Eurostat [online database]. Luxembourg: Statistical Office of the European Union; 2013 (<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do;jsessionid=FdM6ongXMwlr1H5YHUg3xFvwilT6B7H9Th90TAWx1QWqvSNA8N-pl-1100433497>, accessed 8 May 2015).
17. Expenditure of selected health care functions by providers of health care – % [online database]. Luxembourg: Statistical Office of the European Union; 2015 (Luxembourg: Statistical Office of the European Union; 2015, (<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>), accessed 14 August 2015).
18. OECD health statistics 2014. How does Italy compare? Paris: Organisation for Economic Co-operation and Development; 2014 (<http://www.oecd.org/els/health-systems/Briefing-Note-ITALY-2014.pdf>, accessed 15 July 2015).
19. Global Health Observatory (GHO) data [online database]. Geneva: World Health Organization; 2015 (<http://www.who.int/gho/database/en/>, accessed 14 August 2015).
20. Eurobarometer surveys [website]. Brussels: European Union; 2015 ([http://ec.europa.eu/public\\_opinion/index\\_en.htm](http://ec.europa.eu/public_opinion/index_en.htm), accessed 14 August 2015).
21. Physical Activity Guidelines. Atlanta (GA): Centers for Disease Control and Prevention; Division of Nutrition, Physical Activity, and Obesity; 2008 (<http://www.cdc.gov/physicalactivity/basics/index.htm>, accessed 5 June 2015).
22. ACSM, AHA Support Federal Physical Activity Guidelines [website]. Indianapolis: American College of Sports Medicine; 2011 (<https://www.acsm.org/about-acsm/media-room/acsm-in-the-news/2011/08/01/acsm-aha-support-federal-physical-activity-guidelines>, accessed 5 June 2015).
23. Physical Activity Guidelines [website]. Ottawa (ON): Public Health Agency of Canada; 2011 (<http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/O3paap-eng.php>, accessed June 5, 2015).
24. Global Physical Activity Surveillance [website]. Geneva: World Health Organization; 2015 (<http://www.who.int/chp/steps/GPAQ/en/>, accessed 03 July 2015).

25. Report of the Workshop on integration of data on physical activity patterns. WHO/EC Project on monitoring progress on improving nutrition and physical activity and preventing obesity in the European Union. Report no. 4. Copenhagen: WHO Regional Office for Europe; 2009 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0004/87430/E93705.pdf](http://www.euro.who.int/__data/assets/pdf_file/0004/87430/E93705.pdf), accessed 3 July 2015).
26. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 ([http://apps.who.int/iris/bitstream/10665/148114/1/9789241564854\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/148114/1/9789241564854_eng.pdf?ua=1), accessed 21 July 2015).
27. The Gallup Organization. Future of transport. Analytical report. Flash Eurobarometer No. 312. Brussels: European Commission; 2011 ([http://ec.europa.eu/public\\_opinion/flash/fl\\_312\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_312_en.pdf), accessed 3 July 2015).
28. BELDAM [website]. Brussels: Federal Public Service Mobility and Transport; 2015 (<http://www.mobilite.belgium.be/fr/mobilite/chiffres/beldam/>, accessed 14 August 2015).
29. HEAT health economic assessment tool [website]. Copenhagen: World Health Organization Regional Office for Europe (<http://www.heatwalkingcycling.org/>, accessed 5 August 2015).
30. TERESA [website]. Kongens Lyngby: DTU Transport Institute; 2014 (<http://www.modelcenter.transport.dtu.dk/Noegletal/TERESA>, accessed 14 August 2015).
31. WHO European Healthy Cities Network [website]. Copenhagen: WHO Regional Office for Europe; 2015 (<http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/activities/healthy-cities/who-european-healthy-cities-network>, accessed 16 July 2015).
32. Country profiles on nutrition, physical activity and obesity in the 53 WHO European Region Member States. Methodology and summary (2013). Copenhagen: WHO Regional Office for Europe; 2013 (<http://www.euro.who.int/en/publications/abstracts/country-profiles-on-nutrition,-physical-activity-and-obesity-in-the-53-who-european-region-member-states.-methodology-and-summary-2013>, accessed 9 August 2015).

