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## SOCIAL NEEDS IN SPAIN

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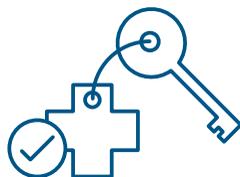
Health

Report

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### METHODOLOGICAL APPENDIX



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# INTRODUCTION



In this document, we present the challenges and indicators used to portray society's health-related needs. We analyse the sources of available information and put forward arguments explaining the choices made.

## Challenges, indicators and sources:

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### First challenge:

To maintain and improve people's state of health



#### Self-perceived ill-health:

Percentage of adults (people aged 16 or over) who declare that they have been in a poor or very poor state of health in the last twelve months. Age-adjusted percentage.

**Source:** ECV-T.

#### Severely limited senior citizens:

Percentage of senior citizens (aged 65 or over) with health problems that have resulted in severe limitations affecting their activities of daily living in the last six months.

**Source:** ECV-T.

#### Limitations in performing activity of daily living:

Percentage of adults (people aged 16 or over) with health problems that have resulted in moderate or severe limitations affecting their activities of daily living in the last six months. Age-adjusted percentage.

**Source:** ENS/EESE.

#### The chronically ill:

Percentage of adults (people aged 15 or over) who have been diagnosed in the last twelve months by their doctor as suffering from one of the main diseases or chronic health problems that place them at risk of cardiovascular problems: hypertension, high cholesterol or diabetes. Age-adjusted percentage.

**Source:** ECV-T.

#### Mental health problem:

Percentage of adults (people aged 15 or over) who have been diagnosed by their doctor as suffering from depression, anxiety or other mental problem in the last twelve months. Age-adjusted percentage.

**Source:** ENS/EESE.

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## Second challenge: To promote healthy lifestyles



### Sedentary lifestyle:

Percentage of adults (people aged 15 and over) who declare that they do no physical exercise in their free time. Age-adjusted percentage.

**Source:** ENS/EESE.

### Insufficient consumption of fruit and vegetables:

Percentage of adults (people aged 15 and over) who do not eat fruit and vegetables on a daily basis. Age-adjusted percentage.

**Source:** ENS/EESE.

### Obesity:

Percentage of adults (people aged 15 and over) with a body mass index above 30 kg/m<sup>2</sup>. Age-adjusted percentage.

**Source:** ENS/EESE.

### Heavy smokers:

Percentage of adults (people aged 15 and over) who smoke 20 cigarettes or more a day. Age-adjusted percentage.

**Source:** ENS/EESE.

### Heavy alcohol consumption or binge drinking:

Percentage of adults between the ages of 15 and 64 who have drunk more than five alcoholic drinks (in the case of a man) or four (in the case of a woman) in a period of two hours in the last 30 days.<sup>1</sup> Age-adjusted percentage.

**Source:** EDADES.

### Heavy cannabis use:

Percentage of adults between the ages of 15 and 64 who smoke cannabis on a daily basis. Age-adjusted percentage.

**Source:** EDADES.

### Third challenge: To guarantee access to healthcare

#### Inability to access medical care:

Percentage of adults (people aged 16 or over) who on some occasion in the last twelve months did not go to the doctor (excluding dentists) for financial reasons or because it was too far or because they had to wait too long.

Source: ECV-T.

#### Inability to access dental care:

Percentage of adults (people aged 16 or over) who on some occasion in the last twelve months did not go to the dentist for financial reasons or because it was too far or because they had to wait too long.

Source: ECV-T.

#### Lack of medical care or excessive delay due to waiting lists:

Percentage of adults (people aged 15 or over) with a need for medical attention that they believe they received late or not at all due to a waiting list in the last twelve months.

Source: ENS/EESE.



#### Waiting lists for surgery:

Per thousand inhabitants, patients awaiting an operating whose wait is attributable to organisational issues and available resources.

Source: SISLE.

#### Decision not to take prescribed medication for financial reasons:

Percentage of adults (people aged 18 or over) who in the previous year decided for financial reasons not to take medication prescribed by a doctor in the public health system.

Source: BS.

#### Catastrophic health spending:

Percentage of people in the first quintile<sup>2</sup> whose health-related spending exceeds 40% of their ability to pay. Ability to pay is measured by subtracting basic standard spending on food, energy and housing from the household's total spending.

Source: EPF.

#### Fourth challenge: To guarantee access to dependency care

##### Senior citizens' self-perceived need for help:

Percentage of senior citizens (aged 65 and over) who face difficulties in some basic or instrumental activity of daily living and who believe they need more help than that which they are currently receiving.

**Source:** SISAAD.

##### Demand for care among senior citizens:

Percentage of senior citizens (aged 65 and over) with an estimated need for care according to health surveys.

**Source:** ENS/EESE and SISAAD.

##### Registered waiting list:

Percentage of people of any age recognised as being dependent who are on the waiting list for services or other benefits from the System for Autonomy and Dependency Care (SAAD).

**Source:** ENS/EESE.



##### Shortfall in the provision of care for dependent senior citizens:

Percentage of senior citizens (aged 65 and over) with an estimated need for care who are not receiving it from the System for Autonomy and Dependency Care (because they have not requested it, because their application has been turned down, because they are on a waiting list, etc.).

**Source:** ENS/EESE.

##### Poor professionalisation among carers:

Percentage of benefits awarded by the System for Autonomy and Dependency Care (SAAD) consisting of aid for care in the family environment, expressed as a percentage of all benefits awarded.

**Source:** SISAAD.

**Notes:**

<sup>1</sup>Binge drinking is deemed to be five standard units of drink (50 g of pure alcohol) for a man and four (40 g of pure alcohol) for a woman consumed on a single occasion of approximately two hours. The equivalence (in grams of pure alcohol) used is: beer with alcohol: 10 g per unit of drink; wine or cava: 10 g per unit of drink; aperitifs containing alcohol (vermouth and dry or sweet sherry): 20 g per unit of drink; liqueurs, anis and pacharán: 20 g per unit of drink; whisky, cognac, high-proof alcoholic drinks with a mixer and cocktails: 20 g per unit of drink; and Spanish drinks (cider, coffee with a shot of alcohol, etc.): 10 g per unit of drink.

<sup>2</sup>The first quintile encompasses the 20% of the population with the lowest level of total consumer spending (monetary and non-monetary), adjusted for the size of the household using the Eurostat equivalence scale.

ECV-T = Transverse files of the Living Conditions Survey, 2004 and 2013 bases. (National Institute of Statistics [INE]).

ENS/EHSS = National Health Survey (2006, 2011-2012 and 2017) and European Health Survey in Spain (2009 and 2014).

In the 2006 and 2009 surveys, adults were deemed to be everyone over the age of 16.

From 2011-2012, anyone over the age of 15 was considered to be an adult (Ministry of Health, Consumer Affairs and Social Welfare).

EDADES = Survey on Alcohol and Drug Use in Spain (Ministry of Health, Consumer Affairs and Social Welfare).

SISLE = National Health System Waiting Lists Information System (Ministry of Health, Consumer Affairs and Social Welfare).

BS = Health Barometer (Ministry of Health, Consumer Affairs and Social Welfare).

EPF = Household Budget Survey, base 2006 (INE).

SISAAD = Information System of the System for Autonomy and Dependency Care. (Institute of Senior Citizens and Social Services).

**Source:** Compiled in-house.

## First challenge:

To maintain and improve people's state of health



The first challenge that presents itself in the field of health is to ensure that the population is as healthy as possible. Good health depends on numerous individual and collective factors (genes, lifestyles, salubrity of the environment, medical advances, etc.). There are also factors associated with the human lifecycle that strongly influence the incidence of certain diseases. Even though old age and illness do not always go hand in hand, people's state of health tends to decline as they age. Consequently, in assessments of advances or setbacks in this challenge, it is advisable to use standardised or age-adjusted indicators in order to eliminate the composition effects caused solely by the change in the age structure of the population (at the same level of health in each age group, the general state of health worsens due to solely a demographic effect if the indicator is not adjusted for ages, whereas it does not change if it is adjusted). To circumvent this problem, the indicators chosen to represent this challenge have been age adjusted, taking as the baseline population the European Standard Population (Waterhouse et al., 1976). The only exception to this is severe limitations among senior citizens, as this indicator by definition concerns only the population group aged 65 and over.

The first indicator, **perceived ill health**, shows the percentage of adults (people aged 16 and over) who declare that their health has been poor or very poor in the last twelve months, age-adjusted in the described manner. It is based on a self-evaluation scale of interviewees' state of health, included in numerous surveys and which has been widely used to analyse the state of the population's health due to its high correlation with objective measures and its good predictive capacity with regard to the use of medical services or the mortality rate (Ministry of Health, Social Services and Equality, 2017). This variable is also used to calculate the indicator known as healthy life expectancy (HLE), which is occasionally employed to draw comparisons regarding life expectancy adjusted according to health status. In this report, we take the information in the Living Conditions Survey on the grounds that it is the source with the greatest continuity over time and because it offers more possibilities for making international comparisons.

The second indicator, **the chronically ill**, shows the age-adjusted percentage of adults (people aged 15 and over) who have been diagnosed by a doctor as suffering in the last twelve months from one of the main diseases or chronic health problems that place them at risk of cardiovascular disease (hypertension, high cholesterol or diabetes). Chronic illnesses are important because they are the cause of lasting health problems that may worsen over time, since they can often be controlled but not cured, and are the leading causes of death (cancer, heart diseases, stroke, etc.). To establish the indicator used in this report, we have employed the extensive information on morbidity contained in health surveys. Even though the list of illnesses on which information is offered is long, the indicator is based on the prevalence of three health problems that are the most closely associated with cardiovascular disease: hypertension, diabetes and high cholesterol. This choice was based on the fact that diseases of the circulatory system continue to constitute the main cause of death in Spain ahead of tumours (INE, 2018). Hypertension, also known as the 'silent killer' because it rarely gives rise to symptoms that interfere with everyday life, is present in the main comorbidities (Farmer et al., 2016). A high cholesterol level is an early sign of declining cardiovascular health that must be monitored.<sup>1</sup> And although diabetes is less prevalent than the other two problems, it is important because it is on the rise and due to its association with risk factors like a sedentary lifestyle and obesity, as well as the possible severe complications that may derive from delayed treatment because the disease is not diagnosed in good time.

The third indicator, **limitations in performing an activity of daily living**, is the age-adjusted percentage of adults (people aged 16 or over) with health problems that have resulted in moderate or severe limitations affecting their activities of daily living in the last six months.

This indicator, known internationally as the Global Activity Limitation Indicator (GALI), features in various sources of data and is widely used internationally. It is also the variable commonly employed to arrive at the disability-free life expectancy indicator, also known as

healthy life years, included in a number of publications (Ministry of Health, Social Services and Equality, 2017). In this report, we use the Living Conditions Survey as a source of data for the same reasons as in the case of self-perceived health.

The fourth indicator, **severely limited senior citizens**, is a variant of the previous indicator and details the percentage of senior citizens (people aged 65 or over) with health problems that have resulted in severe limitations affecting their activities of daily living in the last six months. Self-perceived severe limitations have often been used as a simple estimate of the number of people in need of long-term care (European Commission, 2018). Even though there are limitations inherent in this indicator due to its subjective and general nature, it is useful as a means to monitor this important aspect of senior citizens' state of health, as they are the main group of people in need of this type of care, both now and in the future.

The final indicator, **mental health problem**, complements the indicators on the state of health as it considers the prevalence of mental disorders such as depression, chronic anxiety and other psychological diseases that members of the adult population (people aged 15 and over) have been diagnosed as suffering from in the last twelve months. As in the previous cases, this indicator is presented as an age-adjusted percentage. The data sources are health surveys.<sup>2</sup>

## Second challenge:

To promote  
healthy lifestyles



The best disease is the one you never suffer from. Consequently, a major challenge in the health field is to promote healthy lifestyles and to reduce avoidable risk factors. It is not easy to sum up society's needs in this area in a few indicators given the many controllable factors that influence health. In this report, we focus on obesity, the sedentary lifestyle, diet and the consumption of harmful substances (alcohol, tobacco and other drugs), as there is sufficient information and a consensus concerning these issues, though this does not mean that other aspects do not require action.

The first indicator, **sedentary lifestyle**, shows the age-adjusted percentage of adults (people aged 15 and over) who declare that they do no physical exercise in their free time, in other words, they are sedentary during their leisure time. Even though health surveys, the fundamental source of data for this indicator, contain more detailed variables on physical exercise pursued, the changes between the surveys from year to year make it difficult to establish a more complex indicator that would enable satisfactory comparisons to be made. No data on sedentary habits was gathered from the 2006 and 2009 surveys due to comparability problems (the formulation in these two years was different to the others). This variable is important because a sedentary lifestyle leads to increased weight, accelerates bone and muscle ageing and raises the risk of suffering from numerous diseases.

The second indicator, **obesity**, details the age-adjusted percentage of adults (people aged 15 and over) suffering from obesity. Obesity, like a sedentary lifestyle, has been shown to be associated with many health problems such as hypertension, high cholesterol, type 2 diabetes, coronary diseases and even certain types of cancer. The definition of obesity used in this report is based on the usual parameters that are themselves based on the variable in health surveys that record the body mass index (BMI) of the interviewee, with people with a BMI equal to or above 30 deemed to be obese. Some analyses use a BMI equal to or above 25, a less severe concept of overweight.

The third indicator, **insufficient consumption of fruit and vegetables**, presents the age-adjusted percentage of adults (people aged 15 and over) who do not eat fruit and vegetables on a daily basis. The source of information for this indicator is health surveys. This definition of the indicator has been used in other reports as an approximation to the concept of an inadequate diet, although the complexity implicit in measuring this concept is recognised (Ministry of Health, Social Services and Equality, 2017). It should be noted that the World Health Organization recommends a minimum daily consumption of 400 g of fruit and vegetables in order to improve health and to reduce the risk of certain diseases.

The fourth indicator, **heavy smokers**, reflects the percentage of adults (people aged 15 and over) who smoke 20 cigarettes or more a day. This level of consumption represents a clear health risk due to its proven association with respiratory and cardiovascular diseases, as well as a range of cancers. Smoking is regarded as the leading preventable cause of early death in Spain and other countries, explaining its importance in prevention policies in the realm of health. The data on tobacco consumption used to evaluate this indicator come from health surveys.

The fifth indicator, **heavy alcohol consumption**, shows the percentage of adults between the ages of 15 and 64 who have drunk excessively (binge drinking and heavy episodic drinking) in the last 30 days. As in the case of diet, the definition of excessive or risky consumption of alcohol is complex, given the existence of different patterns of consumption and the lack of unanimous medical opinion, which does exist in relation to smoking. Consequently, this report takes as its reference a form of alcohol consumption (excessive consumption) that clearly has harmful effects on people's health. The data used come from the Survey on Alcohol and Drug Use in Spain (EDADES), conducted by the Ministry of Health, Consumer Affairs and Social Welfare.

The sixth and final indicator, **heavy cannabis use**, measures the percentage of people aged 15 to 64 who declare that they smoke cannabis on a daily basis. This indicator seeks to portray the prevalence of the use of illegal drugs by analysing cannabis, the drug most widely used by the Spanish population. Like the indicator on high alcohol consumption, we have chosen an amount which, according to experts, represents a clear health risk.

## Third challenge:

To guarantee access to healthcare



Spain has a public health service that offers virtually universal coverage. This means that, with very few exceptions, the entire population has the right to receive healthcare from the system when necessary. Guaranteeing adequate access to the health system requires that attempts must be made to identify and overcome, as far as possible, the barriers that generate inequality in the healthcare received and which reduce the treatment opportunities for certain individuals or groups who, even they have the right to use health services, find that fair access is hampered by waiting times, cost, distance or the lack of specialists and services in certain areas.

Measuring unmet healthcare needs is not, however, an easy task. The health system generates a huge volume of data, but they are still insufficient, since by definition they exclude people who have given up using the services or who have used them but not to the full extent of their needs. Consequently, various reports take as their starting point the information collected by direct surveys conducted among the public. The European Union Statistics on Income and Living Conditions (EU-SILC), produced annually since 2004, and the recent Health Barometers (BS) and Spanish and European health surveys (ENS/EHSS) directly research the existence of different types of unmet medical needs through questions put to adult interviewees, though the differences in the questions present difficulties in establishing a standard series of indicators. Furthermore, two special modules of the EU-SILC introduced questions about the potential excessive burden borne by families in meeting health costs, although these modules were not continued over a period of time. Other useful sources of information include the Household Budget Survey, which furnishes objective data on households' pharmaceutical and healthcare spending. These data have been used in a number of reports to formulate 'catastrophic' spending indicators, which may be useful for analysing the difficulties people face in gaining effective access to the health system.

We will now go on to describe and explain the indicators concerning need used to illustrate this challenge:

The first indicator measures **inability to access medical care** through a question included in every Living Conditions Survey (and also available, therefore, for the other European countries that took part in the EU-SILC). This question explores whether adults living in the household needed to see a doctor (excluding dentists) during the previous year but were unable to do so and the reasons for this inability (no time, fear of doctors, lack of money, waiting list, too far to travel, etc.). This question was also included in a very similar format in the health surveys conducted in 2003, 2006 and 2011-2012. The percentage of adults who state that they did not receive the medical care they required on some occasion in the previous year varies from year to year, with a maximum of 8.7% in 2009. To arrive at this indicator, in accordance with the usual methodology, only causes attributable to the health system were taken into account, meaning that an inability to access the health system is deemed to exist if people are unable to use it due to an inability to pay the cost, to the fact that the distance is too far or to long waiting times. When we confine ourselves to these three causes, the indicator for Spain is very low and always less than 1%.

The second indicator measures **inability to access dental care** by posing in the same survey a question identical to the one above but in this instance referring solely to visits to dentists. As in the previous case, an unmet need for access is deemed to exist if the reasons given for not visiting a dentist despite the need to do so are financial, a lack of nearby services or excessive waiting times. With this indicator, we analyse access difficulties in an area of healthcare that is only partly covered by the public health system in Spain and other countries.

In both cases, the indicator measures the percentage of people aged 16 and over who say they did not visit a doctor or dentist for these reasons on at least one occasion during the previous year. Both variables are often used in international comparative analyses of the accessibility of health systems in Europe (OECD/EU, 2018; Baeten et al., 2018; and OECD, 2017), despite certain limitations, which it is essential to be aware of (mainly the exclusion or imperfect inclusion of certain

groups, among them the homeless, people who live in institutions and undocumented immigrants, and the impossibility of ascertaining the real magnitude of access difficulties, as the number of times that people were unable to visit their doctor is not indicated, nor whether this was the first visit or subsequent visits, etc.).<sup>3</sup>

The third indicator, **excessive delays or lack of medical care due to long waiting lists**, complements the previous two in this challenge and uses one of the questions about access difficulties included for the first time in the 2014 European Health Survey in Spain and the 2017 National Health Survey.<sup>4</sup> This indicator details the percentage of people aged 15 or over with a need in the previous year for medical attention that they believe they received late or not at all due to a waiting list. Unlike the first two indicators in this challenge, the question focuses specifically on access problems due to the existence of waiting lists and includes the lack of healthcare as well as an excessive delay (in the eyes of the interviewee) in receiving this care. This percentage is calculated not as a proportion of the total adult population but as a proportion of the adult population who state they had a need for medical care at some point in the twelve months prior to the interview (in other words, interviewees who state they had no need for a medical service, amounting to around 20% of adults, are excluded from the calculation).

The fourth indicator, **waiting lists for surgery**, shows the number of patients on a structural waiting list for surgery per thousand inhabitants on 31 December each year according to the data extracted from the National Health System Waiting Lists Information System (SISLE), which provides information going back to 2003. The patients on structural waiting lists are those who are waiting for an operation (in other words, patients whose treatment is a non-urgent operation for which the use of an operating theatre is planned) and whose wait is attributable to organisational issues and available resources. To calculate the rate per thousand inhabitants, the baseline population group is everyone who holds a health system card according to the National Health System database. This indicator and others in this official information source are extremely

useful for analysing the evolution of one of the elements perceived to be problematic in the running of the Spanish health system. It should be noted, however, that the time series is not perfectly uniform: up to 2011, the totals did not include figures related to the Community of Madrid, as it was deemed that they did not meet the methodological standards required of autonomous communities. In addition, the full data for Catalonia were not included prior to 2016, as the information provided in earlier years was an estimate based on selected processes (Oliva et al., 2018).

The fifth indicator, **the decision not to take prescribed medication for financial reasons**, shows the percentage of adults (people aged 18 or over) who say that for financial reasons they stopped taking medication prescribed by a doctor in the public health system in the previous year. The source used for this indicator is the Health Barometer, which has included this question since 2013 and so provides the longest possible (five years) time series. There is a similar question in health surveys, but only in the years 2014 and 2017. This indicator is of interest because patients must contribute to pharmaceutical spending by means of a copayment and so this is an area in which financial barriers to access may exist if patients' contribution is not satisfactorily designed.

Lastly, we include an indicator on **catastrophic health spending**, which affects the population in the first quintile (the 20% of the population with the lowest financial capacity, measured on the basis of total consumer spending [monetary and non-monetary] and adjusted for the size and composition of the household using the Eurostat equivalence scale). This indicator shows the percentage of people in the first quintile whose healthcare spending exceeds 40% of their ability to pay, which is calculated by subtracting basic standard spending on food, energy and housing from the household's total spending.

The data source used to arrive at these calculations is the Household Budget Survey, which quantifies households' spending on various health-related goods and services (medication, payments to doctors and

dentists, the purchase of therapeutic appliances, etc.). At an aggregate level, the proportion of total health spending directly financed by households depends on key aspects of the organisation of the health system, such as population coverage, the breadth of the range of services and the design of copayment mechanisms, and has been related to the degree of 'financial protection' offered by the various health models (OECD/EU, 2018: 172). Broken down, the microdata on households' health-related spending reveal situations in which payments are high in relation to their ability to pay. The view is that even small copayments can cause financial difficulties in households with limited financial resources and health problems that require long-term treatment, forcing them to choose between continuing with their medication regime or covering other basic needs such as food, energy and housing.

There are various methodologies for determining when a household incurs 'catastrophic' health-related spending. In all of them, spending as a proportion of the household's ability to pay is analysed, but the way these concepts are defined varies. As in the case of measuring 'energy poverty', the main discrepancies between the studies are to do with the choice of the indicator used to quantify the 'ability to pay' and the establishment of the thresholds that may apply. The simplest method, known as the budget share system, uses income or, more frequently, the total spending of the household as the denominator. This is equivalent to presupposing that the household's entire budget is available for health-related spending, and determining that households that exceed a certain percentage, usually 10%, incur catastrophic spending.<sup>5</sup> Critics of this approach argue that as it does not take into account spending needed to cover minimum requirements, it underestimates wealthy families' ability to pay and overestimates that of poor households.<sup>6</sup> Consequently, most catastrophic spending indicators used are based on the quotient between a household's health-related spending and its ability to pay, measured by means of expenditure (or income) less an amount that represents the minimum required to survive by applying a threshold that is generally around 40%. The definition of minimum consumption itself gives rise to various methodologies for calculating it. The most common consists of subtracting a standard amount for food, defined on the basis of the spending on food of households in the particular percentiles representative

of the distribution. If food consumption is lower than this threshold, the household's real spending on food is used.<sup>7</sup> A second possibility is to directly subtract households' real spending on food in every case, rather than the presumed spending. As Cylus et al. (2018) show, in a recent comparison, both methods produced similar results in practice, since food spending in most households is less than the standard amounts.

The Regional Office for Europe of the World Health Organization has recently proposed a variant of the above-mentioned methodologies that it regards as more appropriate for highly developed countries. It is this methodology that we have used, with certain adjustments, to obtain the indicator included in this report.<sup>8</sup> In it, to calculate the household's ability to pay, standard spending on food, housing and energy, calculated as the average spending on these concepts by households situated between the 25th and 35th percentiles of the distribution, is subtracted from its total spending. The included spending includes monetary and non-monetary components (to the extent that this information is collected in the survey): this is important especially for households that own their own homes, in which imputed rent is part of their consumption, making it possible to treat households that own their homes and those that rent them in a more homogeneous manner.<sup>9</sup> In the case of Spain, the minimum annual income calculated in this manner was around €5,420 in 2017 for a single-person household. In larger households, this amount is adjusted using the modified equivalence scale of the OECD, which is regularly used by Eurostat.<sup>10</sup> As well as including other basic costs besides food, the adaptation proposed by the Regional Office for Europe of the WHO uses standard spending in all cases, meaning that the ability to pay may be negative (if real spending does not cover the minimum required spending). In these households, all health-related spending, however small it may be, is catastrophic by definition. In households with a positive ability to pay, spending is deemed to be catastrophic when it exceeds 40% of this ability to pay. One limitation inherent in this indicator is that its calculation excludes households that have not spent anything during the period in question but we do not know whether this is because they did not need to or if it is due to the fact that they managed to meet their need without having to make any payment because of a free prescription policy, or because they could not afford to despite their need.

## Fourth challenge:

To guarantee access  
to dependency care



Population ageing, which is taking place in every country, will result in increasing demand for long-term care, though the evolution of this will be influenced by the state of health of senior citizens (and other social groups). Using the information available today, it is difficult to precisely calculate the demand for this care and the degree to which this need is met. Moreover, the difficulties increase when we wish to analyse time series or make comparisons with neighbouring countries. Spain regulated dependency care as a new social policy in 2006 and since 2008 has had basic statistics on the functioning of the Information System of the System for Autonomy and Dependency Care (SISAAD). Household surveys make it possible to arrive at an approximate estimate of care needs depending on self-perceived limitations, though the more detailed variables are only analysed, in general, for people aged 65 and older.<sup>11</sup> At an international level, the OECD provides broader and more thorough information than the European Union, though the definitions applied by countries are not always strictly comparable.

As in the previous challenge, in this report we reflect needs through five indicators, obtained by combining data from official statistics (provided by IMSERSO [Institute of Social Services and the Elderly]) and the health surveys (ENS/EHSS) and living conditions surveys (ECV). Because of the lack of uniformity and the gaps in the information available in the surveys for calculating the indicators, the series of years used to analyse access to dependency care is limited to 2009, 2014 and 2017.

The first indicator, **senior citizens' self-perceived need for help**, reflects the percentage of senior citizens (people aged 65 and over) with difficulties in at least one basic or instrumental activity of daily living. It is calculated using the questions in the health surveys in which people with difficulties are asked whether they do or do not usually have help in carrying out these activities and whether they are satisfied with this help or need more. These questions were included in the 2009, 2014 and 2017 surveys, though the fact that the questions were put in a different way in 2009 means that the results are not entirely comparable.<sup>12</sup>

The indicator is expressed as a percentage of all senior citizens who have difficulties with at least one basic or instrumental activity of daily living.

The second indicator, **registered waiting list**, shows the percentage of people of any age recognised as being dependent who are waiting to receive services or other benefits from the SAAD according to data supplied by IMSERSO via the SISAAD. These are people whose degree of dependency (moderate, severe or extremely high) has been officially recognised after going through the pertinent assessment process but who are waiting to receive the corresponding services or benefits. The evolution of this indicator, which has been given extensive coverage in the press, has been influenced by a range of diverse factors (implementation dynamics, administration of assessments, possible shortfalls in the supply of certain services, etc.), which may affect how it is interpreted. In any event, there is agreement that the registered waiting list is not sufficient as an indicator of the shortfalls in the coverage of the system, since it excludes people in need of care but who have not applied to be assessed by the SAAD, who are waiting to be assessed or who have been assessed but turned down and who have not requested another assessment. Consequently, the real coverage has to be measured using external sources that make it possible to estimate the number of people in need of care due to the difficulties they have in performing the basic or instrumental activities of daily living (Commission to Analyse the State of the Dependency System, 2017).

The third indicator, **estimated demand for care among the elderly**, shows the percentage of senior citizens (aged 65 and over) with an estimated need for care according to the data in health surveys. To calculate this, we have taken into account interviewees' declarations regarding their limitations in performing basic activities of daily living (getting out of bed, dealing with personal hygiene, feeding themselves, etc.) and instrumental activities of daily living (shopping, cooking, cleaning, etc.) as they appear in the surveys and by applying an extension of the methodology developed by Martínez, Roldán and Sastre (2018). With this information, each person

has been given a score between 0 and 100 points that is indicative of their level of dependence, with a scale that reproduces the official assessment scale to the best of our ability. To do this, we have had to simplify the scale to a certain extent, given that we do not have detailed information for all the specific activities and tasks taken into account in the official scale, and we have also had to use proxy variables in some instances (table 1).<sup>13</sup> To estimate the demand for care, we have assigned points only when people say they are unable to perform an activity without aid or can only do so with considerable difficulty. Given that the information gathered in surveys does not allow the support coefficient to be calculated for each activity in which people have difficulties, we have opted to always assign the coefficient of 0.90.<sup>14</sup> By applying the same threshold as the official scale, the person is deemed dependent if their score is equal to or higher than 25 points.<sup>15</sup> In the case of people with a mental problem, a second assessment is applied that includes an additional activity that determines the person's ability to make decisions, and the system of weightings is altered, with the final choice being the higher score of the two scores for this person, as established in the official scale. In addition to the limitations inherent in the calculation procedure, which is based on self-perceived difficulties in performing a less detailed list of tasks than that of the official scale, it must be remembered that senior citizens living in old people's homes are, by definition, excluded,<sup>16</sup> since they are not part of the sample population used in health surveys. These people must, nevertheless, be taken into account to the fullest possible extent when calculating coverage indicators.

**Table 1. Activities of daily living used to evaluate dependency:  
Official scale for assessing dependency and variables in health surveys**

Official assessment scale	Health survey variables	POINTS	
		B1	B2
<p><b>Eating and drinking:</b> Recognising and reaching food served, cutting food into pieces, using cutlery, lifting a cup to their mouth.</p>	Feeding themselves	16.8	10
<p><b>Personal hygiene related to urinating and defecating:</b> Going to the appropriate place, handling clothing, adopting the proper position, cleaning themselves.</p>	Going to the toilet	14.8	7
<p><b>Washing:</b> Turning taps on and off, washing hands, getting into the bath or shower, washing the upper/lower part of their body.</p>	Showering or bathing	8.8	8
<p><b>Other personal care:</b> Brushing/combing hair, cutting nails, washing hair, brushing teeth.</p>	Using the telephone (proxy)	2.9	2
<p><b>Dressing:</b> Recognising/reaching clothing and footwear, putting on shoes, doing up buttons and zips, dressing the upper/lower part of their body.</p>	Dressing and undressing	11.9	11.6
<p><b>Maintaining good health:</b> Requesting assistance, applying therapeutic measures to themselves, avoiding hazardous situations inside/outside the home, asking for help in an emergency.</p>	Taking their medication	2.9	11
<p><b>Changing and maintaining their position:</b> Changing from lying down to sitting up, remaining seated, changing from being seated to standing, remaining standing, changing to being seated, changing their body's position while lying down.</p>	Sitting down, standing up from a chair or bed, lying down	9.4	2
<p><b>Moving around the home:</b> Moving about in order to dress/eat/wash, moving about unrelated to personal care, moving between non-communal spaces, entering all the communal rooms in the home.</p>	Walking 500 metres unassisted	12.3	12.1
<p><b>Moving about outside the home:</b> Going outdoors, moving around the building, moving about in nearby known/unknown environments, moving about in distant known/unknown environments.</p>	Going up or down twelve steps <sup>1</sup>	12.2	12.9
<p><b>Performing domestic chores:</b> Preparing meals, going shopping, cleaning and looking after the home, washing and caring for clothing.</p>	Preparing meals. Going shopping. Performing light household chores	8	8
<p><b>Making decisions:</b> Deciding about everyday food, personal hygiene habits, planning journeys outside the home, deciding about their relationships with known/unknown people, handling money for everyday spending, organising their time and everyday activities, resolving the use of services available to the public.</p>	Managing their own money	-	15.4

**Notes:** B1: points assigned in a general case. B2: alternative scale if the person suffers from a mental problem.

<sup>1</sup>In 2009: Going up or down a flight of stairs without using a stick, banister or other aid.

**Source:** Compiled in-house based on the regulations governing the scale for assessing dependency (Royal Decree 174/2011 of 11 February 2011) and the 2009 and 2014 European Health Surveys in Spain (EHSS) and the 2017 National Health Survey (ENS).

For international comparisons, we have used as an approximation the Global Activity Limitation Indicator (GALI), described in the first challenge, which is easily available for every country and year through the EU-SILC. The demand for long-term care among the population aged 65 and over in the various countries is estimated using the percentage of interviewees who state that they have experienced severe limitations in performing activities of daily living due to health problems in the last six months at least.

The fourth indicator, **shortfall in the provision of care for dependent senior citizens**, shows the percentage of senior citizens (aged 65 and over) with an estimated need for care who are not receiving care from the SAAD (because they have not requested it, their application has been turned down, they are on a waiting list, etc.). To calculate this indicator, two factors were taken into account: the number of dependent senior citizens in receipt of SAAD benefits on 31 December each year; and the estimated number of dependent senior citizens based on health survey data plus the number of dependent senior citizens receiving residential care<sup>17</sup> (who are not part of the health survey sample populations but who are included in the number of SAAD beneficiaries). The difference between the two figures gives an estimate of the unmet need for care (care shortfall) among senior citizens. This indicator is expressed as a percentage.

Lastly, the **poor professionalisation among carers** indicator shows the percentage of benefits awarded by the SAAD for care in the family environment, a type of non-professional care intended, in principle, to be used only on an exceptional basis<sup>18</sup> but which was relatively frequent, above all in certain autonomous communities, throughout the implementation period of the system. This type of benefit consists of financial aid to the carer, the maximum amount of which is €153 per month for people caring for moderately dependent people, €268.79 per month in the case of the severely dependent, and €387.64 for people with an extremely high degree of dependency. These amounts are only payable if the person's financial resources do not exceed the IPREM (an indicator used to calculate means-tested benefits) and if they do not receive aid of a similar nature, such as the extreme invalidity supplement, a supplement for a dependent child or a supplement related to the need for a third person.

The source for this indicator is the statistics generated by the SISAAD, which details in its monthly reports the number and distribution of the six current types of services and benefits: dependency prevention and promotion of autonomy, telecare, residential care, day centre care, financial benefit to cover care in the family environment, financial benefit linked to a service, and financial benefit for personal care.

## NOTES

1 In 2009, the microdata in the European Health Survey in Spain did not include high cholesterol.

2 The 2014 European Health Survey in Spain also includes the severity of the symptoms of depression in questionnaire PHQ-8. This is a questionnaire consisting of eight items based on the depression criteria in DSM-IV (Diagnostic and Statistical Manual of Mental Disorders), designed to monitor the prevalence of active cases of depression and the severity of symptoms of depression among the population. However, this refers solely to depression and we only have data for 2014.

3 These limitations are discussed in greater detail in EXPH, 2017, pp. 20-23.

4 The 2014 and 2017 health surveys analyse unmet health-related needs by means of two other questions: one to do with the difficulties related to transport or distance; and another concerning the decision not to seek a range of types of medical care for financial reasons. These types of care are: general medical care, dental care, the purchase of prescribed medicines and mental healthcare. Given the diversity of the types of care considered, the responses also include the option that the interviewee did not need the service during the previous year. Unfortunately, these questions are not included in exactly the same format as in previous surveys. The 2006 and 2011-2012 surveys investigated the issue of inaccessibility by asking an almost identical question to the one that constitutes our first indicator. The 2009 health survey replaced the previous question with two very similar questions but now referring separately to hospital care and to visits to see a specialist.

5 This, for example, is the definition chosen within the framework of the 2030 Agenda for Sustainable Development drawn up by the United Nations (United Nations, 2018: 5). According to the report published in 2018, almost 12% of the global population spent at least a tenth of their household's budget on health services in 2010, a figure higher than that recorded in 2000.

6 See, for example, Cylus et al., 2018.

7 This is the methodology most frequently used in the studies reviewed by Wagstaff et al., 2018.

8 Thomson et al. (2016) give a detailed explanation of the methodology. The OECD/EU (2018: 172-173) produce comparative results for a group of countries that does not include Spain, which is excluded from the list of countries in which the study will be done.

9 In reports on European countries using this methodology published to date, imputed rent tends to be excluded due to the different calculation methods used in the various cases, and to the fact that these data do not exist in some countries. To solve the problem of comparability between different home occupation regimes, the basic basket varies in accordance with these regimes, including food, energy and rent in the case of tenant households, and just food and energy in the case of home-owning households. See, for example, Cooke et al., 2018.

10 The WHO suggests using the original OECD scale, which assigns greater weight to the needs of additional household members, but we decided it was preferable to use the Eurostat scale for theoretical and practical reasons and to ensure consistency with other parts of the report.

11 This situation will improve when the results of the Disability and Dependency Survey are published, as it will give detailed information for the entire population.

12 In 2014 and 2017, there was a general question about the availability or otherwise of help. In 2009, the survey asked separately about personal care, technical help and home adaptations. We have taken the first two concepts into account but not the third in calculating the indicator for the year 2009.

13 This is the case of difficulties in performing other personal care, in which we employ the "using the telephone" variable, and of variables related to moving about inside and outside the home, in which we use, respectively, the variables of walking 500 metres and going up and down twelve steps.

14 The 0.90 coefficient is applied if there is a need for supervision or partial physical substitution; a coefficient of 0.95 is applied if maximum or total substitution is required; and a coefficient of 1.00 is applied when there are concomitant aggravating circumstances that mean special support is required (for example, the dependent person is morbidly obese).

15 In the official assessment, each activity consists of a series of simple tasks, each of which is separately evaluated and which contribute in varying proportions to the overall score. The total scores assigned to each activity are in turn multiplied by the support coefficient (between 0.90 and 1.00). The overall result of the assessment is a number of points that can range from 0 to 100, and the threshold for entry into the system is set at 25 points. The person is deemed to be moderately dependent if they have a score of between 25 and 49 points, severely dependent if their score is between 50 and 74, and very highly dependent if they attain a score of 75 points or more.

16 According to the data in the latest Elderly People in Spain Report published by IMSERSO, covering 2016, on 31 December 2015, there was a total of 5,387 centres in Spain that between them offered 372,306 places, 297,220 of which were occupied by people aged 65 and over (Fernández Muñoz [ed.], 2017: 327). In addition, 4,545 senior citizens were cared for in 586 registered old people's homes. Furthermore, the Commission to Analyse the State of the Dependency System (2017) indicates that there were 113,039 dependent people aged 65 and over who were receiving residential care within the framework of the SAAD, though the real figure may be somewhat higher due to the existence of benefits which cover unknown aid (there was a total of 81,244 benefits of this nature associated with home care and day centre and residential care).

17 In reality, the number of residential care benefits granted by the SAAD to people aged 65 and over (broken down, as well, into the subgroups of people aged 65-79 and 80 and over) is only available for the year 2016 thanks to the Commission to Analyse the State of the Dependency System (2017). SISAAD statistics give the number of benefits in each category every year, but this is not broken down according to beneficiaries' age. To estimate the proportion of the benefits awarded to senior citizens in other years, we have presupposed that, as in 2017, approximately 75% of residential care benefits are given to people aged 65 and over.

18 This expectation that care in the family environment would be exceptional is expressed in article 14.4 of Law 39/2006 of 14 December 2006 on the Promotion of Personal Autonomy and Care for dependent people, which states: "The beneficiary may, as an exception, receive a financial benefit to be cared for by non-professional carers so long as adequate cohabitation and habitability conditions exist in the home and this is established in their Individual Care Programme".

## BIBLIOGRAPHY

BAETEN, R., SPASOVA, S., VANHERCKE, B., & COSTER, S. (2018). Inequalities in access to healthcare. A study of national policies. European Social Policy Network (ESPN). Brussels: European Commission.

Comisión para el Análisis de la Situación del Sistema de Dependencia (2017). Informe de la comisión para el análisis de la situación actual del sistema de la dependencia, de su sostenibilidad y de los actuales mecanismos de financiación, para evaluar su adecuación a las necesidades asociadas a la dependencia. Madrid: IMSERSO.

COMISIÓN EUROPEA (2018). The 2018 Ageing Report Economic & Budgetary Projections for the 28 EU Member States (2016-2070). Institutional Paper 079. Luxembourg: Publications Office of the European Union.

COOKE, N., KUMPUNEN, S., & HOLDER, H. (2018). Can people afford to pay for health care? New evidence on financial protection in the United Kingdom. Copenhagen: Regional Office for Europe of the World Health Organization.

CYLUS, J., THOMSON, S., & EVETOVITS, T. (2018). Catastrophic health spending in Europe: equity and policy implications of different calculation methods. *Bulletin of the World Health Organization*, 96(9), 599.

EXPH (2017). Opinion on Benchmarking Access to Healthcare in the EU. Expert Panel on effective ways of investing in Health. Brussels: European Commission.

FARMER, C., FENU, E., O'FLYNN, N., & GUTHRIE, B. (2016). Clinical assessment and management of multimorbidity: summary of NICE guidance. *BMJ*, 354, i4843.

FERNÁNDEZ MUÑOZ [coord.] (2017). Las personas mayores en España: Informe 2016. Madrid: IMSERSO.

INE (2018). Defunciones según la Causa de Muerte Año 2017. Press releases, 19 December 2018. Madrid: INE.

MARTÍNEZ, R., ROLDÁN, S., & SASTRE, M. (2018). La atención a la dependencia en España. Evaluación del sistema actual y propuesta de implantación de un sistema basado en el derecho universal de atención suficiente por parte de los servicios públicos. Estudio de su viabilidad económica y de sus impactos económicos y sociales. Papeles de Trabajo 5/2018. Madrid: Instituto de Estudios Fiscales.

Ministerio de Sanidad, Servicios Sociales e Igualdad (2017). Indicadores de Salud 2017. Evolución de los indicadores del estado de salud en España y su magnitud en el contexto de la Unión Europea. Madrid: Ministerio de Sanidad, Servicios Sociales e Igualdad.

United Nations (2018). The Sustainable Development Goals Report 2018. New York: United Nations.

OECD/EU (2018). Health at a Glance: Europe 2018. State of Health in the EU Cycle. Paris: OECD.

OECD (2017). Health at a Glance. Paris: OECD.

OLIVA, J., GONZÁLEZ, B., BARBER, P., PEÑA, L.M., URBANOS, R., & ZOZAYA, N. (2018). Crisis económica y salud en España. Informes, estudios e investigación 2018. Madrid: Ministerio de Sanidad, Consumo y Bienestar Social.

THOMSON, S., EVETOVITS, T., CYLUS, J., & JAKAB, M. (2016). Monitoring financial protection to assess progress towards universal health coverage in Europe. *Public Health Panorama*, 2(3), 357-366.

WAGSTAFF, A., FLORES, G., HSU, J., SMITZ, M. F., CHEPYNAGA, K., BUISMAN, L. R., VAN WILGENBURG, K., & EOZENO, P. (2018). Progress on catastrophic health spending in 133 countries: a retrospective observational study. *The Lancet Global Health*, 6(2), e169-e179.

WATERHOUSE, J.A.H., MUIR, C.S., CORREA P. AND POWELL, J. [eds.] (1976). Cancer incidence in five continents. IARC, Scientific Publications, vol. III, num. 15, Lyon, IARC.

