

# National Health Plan 2012 – 2016

## Portuguese Health Profile

(January 2012)



National Health Plan  
2012–2016

## 2. PORTUGUESE HEALTH PROFILE

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As set out below, with a view to obtain a current picture of the Portuguese Health System and the health status of the Portuguese people, highlight is given to the significant health gains that Portugal has achieved in recent years, measured and evaluated by a set of indicators that have come to be near the best figures registered in EU countries.

In fact, the health status of the population has improved consistently and sustainably, which may have been the result of a positive development of the several health determinants and the ability to invest in this domain.

This chapter characterises the health status of the Portuguese population<sup>1</sup>, beginning by describing its determining factors. The following is a brief summary of the Health System. We present the current figures of the indicators that are most relevant to this analysis and their respective development in the last decade, to recognise trends. As the purpose of this chapter is to contribute to the identification of further potential health gains, the figures of the indicators for mainland Portugal are compared with those observed in the different health regions, as well as with the average of the top five figures registered in EU countries, whenever such information is available.

### 2.1. HEALTH STATUS OF THE POPULATION

#### 2.1.1. HEALTH DETERMINANTS

1. There are health determinants of several different natures and they can be categorised in many different ways. For example, Kirch suggests four categories: demographic and social context (culture, politics, gender, socioeconomic factors and community capacity), physical environment (living and working conditions), individual dimensions (genetic heritage and behaviours) and access to health services (Kirch, 2008).

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<sup>1</sup> The figures shown throughout the chapter concern Mainland Portugal, except where such figures are unavailable. In such cases, identified in a footnote, figures provided pertain to Portugal, including the Autonomous Regions.

## Demographic and social context

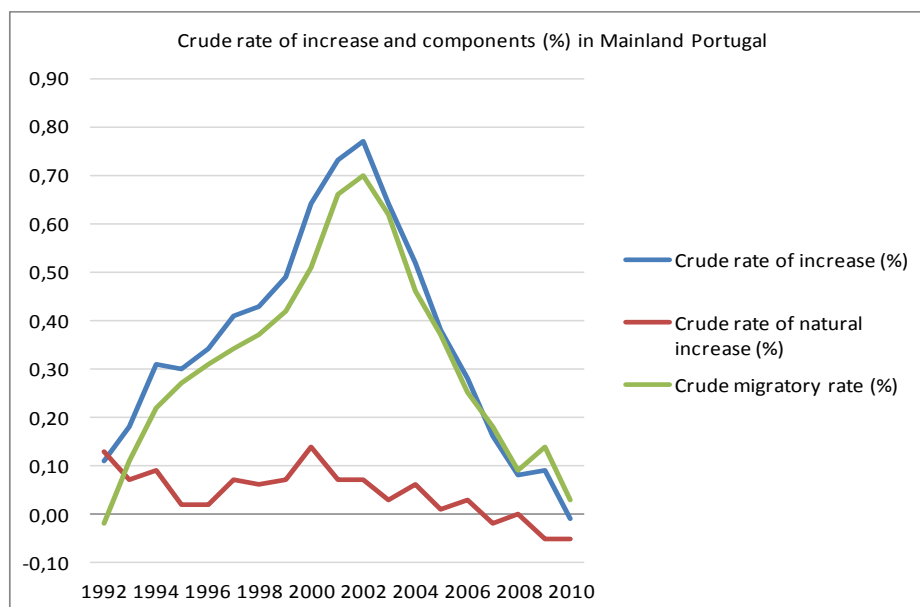
2. At the time of the 2011 Census, 10,047,083 inhabitants resided in Mainland Portugal, of whom 15% were under the age of 15 and 19% were 65 or older (provisional data available on the INE website). For 2020, although most forecast scenarios point to a non-decrease in population, it is expected that the proportion of young people (0-14) drops to 14% and the population over the age of 65 grows to 21%, this figure including 6% of individuals aged 80 years or older<sup>2</sup> (INE portal, 2012).

### BOX 2.1 - EVOLUTION IN THE LAST DECADE

- Increasing proportion of elderly people and decreasing proportion of young people;
- Increased old-age dependency ratio and ageing ratio;
- Negative crude rate of natural increase;
- Decreased total fertility rate;
- Decreased crude migratory rate;
- Overall improvement of educational level;
- Rising unemployment rate;
- Decreased risk-of-poverty rate.

3. In 2010 there was a decrease in resident population, which had not happened since the early 1990s. Between 2001 and 2010 the crude rate of natural increase decreased from 0.07% to -0.05% and the total fertility rate<sup>3</sup> decreased from 1.5 to 1.4 (not allowing the renewal of generations). Following the great waves of immigration recorded in the early 2000s, the crude migratory rate showed a strong deceleration, having decreased from 0.66% to 0.03% between 2001 and 2010 (FIGURE 2.1) (INE portal, 2012).

**FIGURE 2.1 - CRUDE RATE OF INCREASE AND COMPONENTS (%) IN MAINLAND PORTUGAL**



Source: Compiled from data available on the INE portal, 2012.

<sup>2</sup> Figures pertaining to Portugal, including the Autonomous Regions, according to the results of the central scenario of "Projections for the resident population in Portugal, 2008-2060" (publication provided on the INE portal, 19th March, 2009).

<sup>3</sup> Average number of live births per woman of child-bearing age (ages 15 to 49), assuming that women would be subject to fertility rates observed at that moment.

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4. The weight of the elderly population maintains a growing trend, as a result of decreased fertility and increased longevity. Temporary results of the 2011 Census show that the population ageing ratio is 131, which means that, for every 100 youths, there are 131 elderly people (65 years or older). In 2001, this index was 104. There was also an increase in the old-age dependency ratio in the last decade, going from 25 to 30 seniors per 100 working-age people (INE, 2011b).
  5. The level of education attained by the Portuguese population has progressed very significantly in the last decade. The proportion of population with a university degree increased from 9% to 12%. Regarding other levels of education, the 2011 Census indicates that 13% of the population has completed upper secondary education, 16% completed the 3rd cycle and 13% the 2nd cycle of education. However, the percentage of the population who only completed the 1st cycle of basic education is still 25%; the population who did not obtain any educational level reaches 19%. It should be noted that women have higher qualifications than men and that about 61% of university graduates are women (INE, 2011b).
  6. In 2010, the Gross Domestic Product<sup>4</sup> (GDP), at constant prices of 2006, was €15,248 per inhabitant, which represents an increase of €316 (2.1%) in relation to 2004 (INE, 2011a).
  7. Similarly to other European countries, in Portugal the unemployment rate also shows an increasing trend, which has worsened in recent years. In 2011, between the 1st and 4th quarters, the unemployment rate increased from 12.4% to 14.0% of the active population (INE portal, 2012).
  8. Considering only labour income, capital revenue and private transfers, 42.5% of the population residing in Portugal, including the Autonomous Regions, would be at risk of poverty in 2010. That year, income from retirement and survivor's pensions contributed to a decrease by 17.1 percentage points, resulting in a risk-of-poverty rate, after pensions and before social transfers, of 25.4%. Globally, social transfers, related to illness and incapacity, family, unemployment and social inclusion have contributed to reduce the risk-of-poverty rate by 7.4 percentage points. Therefore, after social transfers, the risk-of-poverty rate stood at 18.0% in 2010, close to the estimated rate for the two previous years. The risk-of-poverty rate of families with dependent children reached 20.1%, 2 percentage points more than the figure recorded for the total resident population. The results for indicators of inequality in income distribution in 2010 were higher than those of 2009, but lower than those observed in remaining years. In 2010, the equivalent net cash income of the 20% of population with the most resources corresponded to 5.7 times the income of the 20% of population with the least resources (INE, 2012a).
  9. Between 2007 and 2010, the number of beneficiaries of social integration income increased from 39.4 to 56.7 per 1000 working-age inhabitants (INE portal, 2012).

## Physical Environment

10. Physical territory and social fabric are also important determinants of health. Space organisation, air and water quality and waste management, as well as housing conditions, are some of the aspects that affect the health status of the population.

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<sup>4</sup> Figures pertaining to Portugal, including the Autonomous Regions.

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11. Between the two censuses (2001 and 2011), the country has accentuated the patterns of higher population concentration along the coast line and around the large metropolitan areas of Lisbon and Oporto. The imbalance in the population's distribution throughout the territory has worsened and desertification has spread to a significant part of the territory. In general, coastal municipalities maintained or strengthened the capacity to settle and attract population. The vast majority of inland municipalities have lost population in the last decade. In 2001, 171 municipalities had lost population, but in 2011, this figure rose to 198 (INE, 2011b). Overall, on the mainland territory, population density rose from 110.9 to 113.9 inhab./km<sup>2</sup> in the 2001-2010 period (INE portal, 2012).
12. In Portugal<sup>5</sup>, in the period from 2006 to 2009, there was a decrease in the greenhouse effect potential<sup>6</sup> of approximately 9%. Following a significant increase in emissions up to 2006, the greenhouse gas (GHG) emission trend was reversed, and in 2009, the percentage of emissions was 24%, which is 3 percentage points below the Kyoto target<sup>7</sup>. Of emissions verified in 2009, the "energy industry" and "transport" stand out as the main anthropogenic activities responsible for GHG emissions, with about 27% and 26%, respectively. 2006 registered an emission of 7.58 t CO<sub>2</sub>eq *per capita*, whereas in 2009, this figure was 6.90 t CO<sub>2</sub>eq per capita. With regard to the air quality index, it appears that, between 2006 and 2010, there was a predominance of the classification "good", and since 2008, there has been a marked decrease of the "medium", "poor" and "bad" classifications (INE, 2011c).
13. Between 2006 and 2009, the percentage of Portuguese resident population served by water supply systems increased from 90% to 96%. In the same period, the percentage of population served by waste-water drainage systems increased from 77% to 84%, and those served by waste-water treatment plants increased from 71% to 74% (INE portal, 2012). Overall<sup>8</sup>, in 2010, waste-water service operators attained almost full compliance regarding the conducting of mandatory tests, with about 99% of analyses completed. In the 2006-2010 period, the proportion of water controlled and deemed of good quality was always above 95%, reaching 97% in 2010 (INE, 2011c).
14. The annual production of municipal waste has been increasing. Between 2002 and 2010, it rose from 441 to 511 kg/inhabitant. The quantity of municipal waste selectively collected still represents a small fraction of the total waste produced, although it also shows an increasing trend: from 20 to 78 kg/inhabitant, in the same period (INE portal, 2012).
15. Improvements were made in housing conditions, in recent decades. Basic infrastructures, such as running water, sewage and sanitary facilities with bath and shower, are now present in virtually every home.

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<sup>5</sup> Figures pertaining to Portugal, including the Autonomous Regions.

<sup>6</sup> The potential for greenhouse effect is calculated by combining the three main gases contributing the most towards the greenhouse effect: carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>).

<sup>7</sup> Under the Kyoto Protocol and pursuant to the sharing of responsibilities, Portugal should limit the increase in GHG emissions to 27%, during the period 2008-2012, compared to the adjusted reference figure from 1990 records.

<sup>8</sup> Figures pertaining to Portugal, including the Autonomous Regions.

**TABLE 2.1- HABITUAL RESIDENCE FAMILY DWELLINGS WITHOUT BASIC INFRASTRUCTURES, AT THE TIME OF THE 2001 AND 2011 CENSUSES, IN MAINLAND PORTUGAL**

|                                   | 2001   |      | 2011  |      |
|-----------------------------------|--------|------|-------|------|
|                                   | N      | %    | N     | %    |
| No running water in the dwellings | 20529  | 0.6% | 23176 | 0.6% |
| No waste-water drainage system    | 58559  | 1.7% | 17679 | 0.5% |
| No bath or shower facilities      | 215135 | 6.3% | 74088 | 1.9% |

Source: Compiled from data available on the INE portal, 2012.

16. On the Portuguese mainland, at the time of the 2011 Census, the percentage of habitual residence family dwellings with no running water was 0.6% (23,176 dwellings), a percentage similar to that observed in 2001. Currently, sewage system availability is also practically universal: only 0.5% (17,679) of dwellings have no sewage system, whereas, in 2001, this percentage had reached 1.7%. In 2011, there are still about 1.9% (74,088) of dwellings without a bathroom with bath and shower, but this figure is 4.4 percentage points below that observed in 2001 (6.3%) (INE portal, 2012).

### Individual dimensions

17. Among the health determinants associated to lifestyle, tobacco use and alcohol consumption stand out. The data collected during the 4th National Health Interview Survey (INS) (between February 2005 and February 2006) allows the characterisation of these consumptions, in population aged 15 years and older (INE/INSA, 2009).

18. In 2006, 20.8% of the Portuguese resident population were smokers. Among smokers, approximately 10.6% smoked only occasionally and 89.4% smoked daily. The proportion of current smokers was higher in the male population: 30.5%, versus 11.8% of women. In both genders, the highest value was in the group of 35 to 44 years of age: 44.6% and 21.2%, respectively, for men and women.

19. Considering the average of the best 5 European figures in the same year, it appears that the prevalence of smokers in Portugal is slightly higher (20.8% *versus* 19.5%). However, this difference is higher when considering only the male population (30.5% *versus* 21.2%). On the other hand, Portugal is the EU country with the lowest proportion of women smokers.

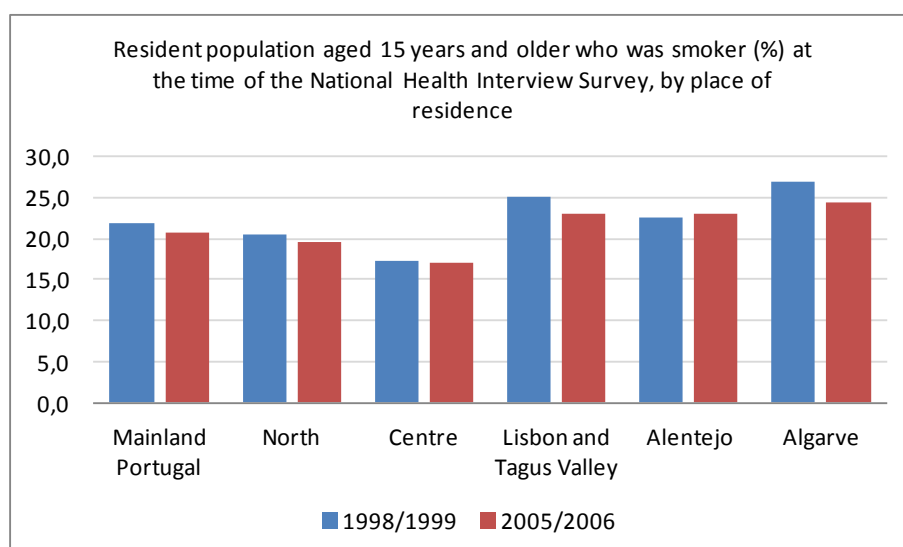
**TABLE 2.2 - RESIDENT POPULATION AGED 15 YEARS AND OLDER WHO WAS SMOKER (%), BY GENDER AND PLACE OF RESIDENCE (2006)**

|                                | MF   | M    | F    |
|--------------------------------|------|------|------|
| North                          | 19.7 | 31.4 | 8.9  |
| Centre                         | 17.0 | 26.6 | 8.2  |
| Lisbon and Tagus Valley        | 23.1 | 30.5 | 16.2 |
| Alentejo                       | 23.0 | 35.5 | 11.2 |
| Algarve                        | 24.4 | 34.1 | 14.8 |
| Mainland Portugal              | 20.8 | 30.5 | 11.8 |
| Average of EU's 5 best figures | 19.5 | 21.2 | 15.0 |

Source: Compiled from data taken from the 4th National Health Interview Survey 2005-2006, INE/INSA, 2009 and WHO, Health for All Database, 2012.

20. Between 1999 and 2006, the INS showed that the number of smokers decreased (from 22.0% to 20.8%). For the male population, the prevalence of smokers increased in the group from 15 to 24 years (from 29.7% to 31.4%) and decreased in all other age groups, with particular highlight to a decrease from 50.4% to 39.0% among young adults (25 to 34 years). Among the female population, there was also a decrease in prevalence in this age group. However, there was an increase in all other age groups, up to the age of 74, with highlight to an increase of 4.7 percentage points in women from 45 to 54 years.

**FIGURE 2.2 - RESIDENT POPULATION AGED 15 YEARS AND OLDER WHO WAS SMOKER (%) AT THE TIME OF THE NATIONAL HEALTH INTERVIEW SURVEY, BY PLACE OF RESIDENCE**



Source: Compiled from data taken from the 3rd and 4th National Health Interview Surveys 2005-2006, INE/INSA, 2009.

21. According to the *Health Behaviour in School-aged Children* study (Matos *et al*, 2012), the percentage of school-aged children, aged 11, 13 and 15 years, who admitted to smoking every day has declined: 5.4% in 1998, 8.5% in 2002, 5.0% in 2006 and 4.5% in 2010. No significant differences were found in terms of gender in the analysis of the 2010 data concerning the experimentation and consumption of tobacco.

22. The so-called Tobacco Act (Law No. 37/2007, of 14th August) has changed smoking habits among smokers, both in terms of reducing active smoking, and regarding behaviours aimed at reducing exposure to second-hand smoke. The report on the first evaluation of the impact of the Tobacco Act, concerning the 2008-2010 period (DGS/INSA, 2011), gathered evidence that the prevalence of tobacco consumption decreased by about 5% during the two years in which the law was in force; for women, no evidence was found that the prevalence of tobacco consumption continued to increase.

23. According to data collected in the 4th INS, 40.5% of residents in mainland Portugal reported having consumed at least one alcoholic beverage in the week preceding the interview. This proportion increased to 54.8% in the total male population, twice what was observed for women: 27.0%. Still according to the 4th INS, 24.5% of residents reported having consumed alcoholic drinks every day in the week preceding the interview. This indicator was higher in men, with 37.6%, when

compared to women (12.3%), and it contrasted with what was observed for occasional consumption in 1 or 2 days during the week, in which the estimated proportion was around 11% in both genders.

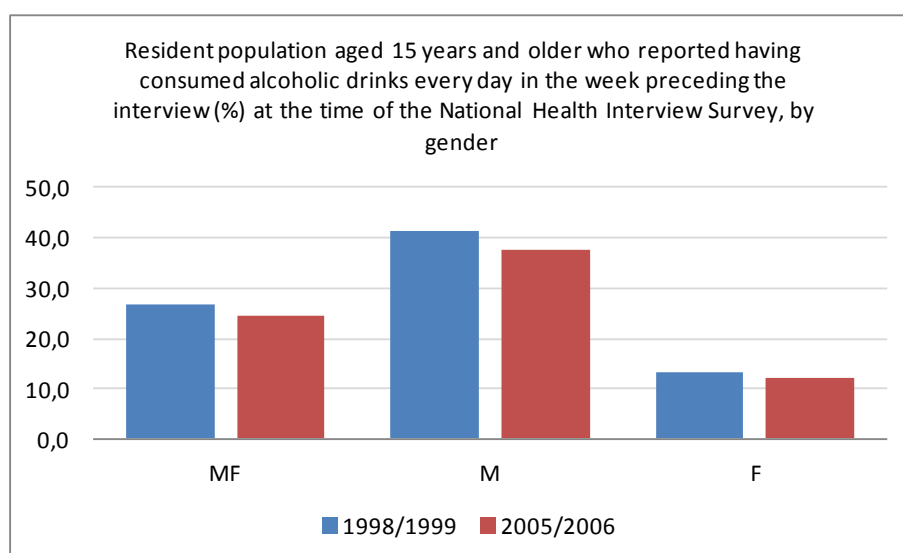
**TABLE 2.3 - RESIDENT POPULATION AGED 15 YEARS AND OLDER WHO REPORTED HAVING CONSUMED ALCOHOLIC BEVERAGES EVERY DAY IN THE WEEK PRECEDING THE INTERVIEW (%), BY GENDER AND AGE GROUP (2006)**

|                   | MF   | M    | F    |
|-------------------|------|------|------|
| 15 to 24 years    | 5.7  | 9.8  | 1.4  |
| 25 to 34 years    | 18.2 | 30.3 | 5.9  |
| 35 to 44 years    | 31.3 | 48.2 | 14.8 |
| 45 to 54 years    | 41.8 | 63.3 | 21.3 |
| 55 to 64 years    | 41.8 | 64.1 | 21.9 |
| 65 to 74 years    | 37.7 | 58.6 | 20.8 |
| 75 to 84 years    | 32.3 | 55.5 | 17.0 |
| 85 years or older | 26.4 | 47.7 | 16.3 |
| Total             | 24.5 | 37.6 | 12.3 |

Source: Compiled from data taken from the 4th National Health Interview Survey 2005-2006, INE/INSA, 2009.

24. In the period from 1999 to 2006, the proportion of resident population who reported having consumed alcoholic beverages every day in the week preceding the interview decreased from 26.8% to 24.5%, a trend that occurred for both genders, with a decrease of 41.3% to 37.6% in men and from 13.4% to 12.3% in women.

**FIGURE 2.3 - RESIDENT POPULATION AGED 15 AND OLDER WHO REPORTED HAVING CONSUMED ALCOHOLIC DRINKS EVERY DAY IN THE WEEK PRECEDING THE INTERVIEW (%) AT THE TIME OF THE NATIONAL HEALTH INTERVIEW SURVEY, BY GENDER**



Source: Compiled from data taken from the 3rd and 4th National Health Interview Surveys 2005-2006, INE/INSA, 2009.

25. Considering consumption registered through the data from national production, imports, exports and sales, it is estimated that, in 2007, 11.4 litres of pure alcohol were consumed *per capita* in



Portugal, which is higher than the average of the five EU countries with the lowest consumption figures, in the same year (8.1 litres *per capita*) (WHO, Health for All Database, 2012).

**TABLE 2.4 - CONSUMPTION OF PURE ALCOHOL (LITRES PER CAPITA) BY THE RESIDENT POPULATION AGED 15 AND OLDER (2007)**

|                                |      |
|--------------------------------|------|
|                                | MF   |
| Portugal <sup>9</sup>          | 11.4 |
| Average of EU's 5 best figures | 8.1  |

Source: Compiled with data from the WHO, Health for All Database, 2012.

26. Data collected in the survey conducted in 2010 with Portuguese school-aged children (Matos *et al*, 2012) show that, in terms of drug experimentation, the substance most often mentioned is hashish/weed (8.8% reported having already experimented) and boys are those who more often report having tried hashish (10.7% of boys and 7.0% of girls). Regular consumption of illicit drugs in the month preceding the interview was reported by 1.4% of adolescents (2.2% in boys and 0.7% in girls).

27. Both the experimentation with hashish and regular consumption in the month preceding the interview are most often reported by teenagers who reside in the regions of Algarve and Lisbon and Tagus Valley (Matos *et al*, 2012).

**TABLE 2.5 - EXPERIMENTATION AND CONSUMPTION OF ILLICIT DRUGS AMONG SCHOOL-AGED CHILDREN (%), BY PLACE OF RESIDENCE (2010)**

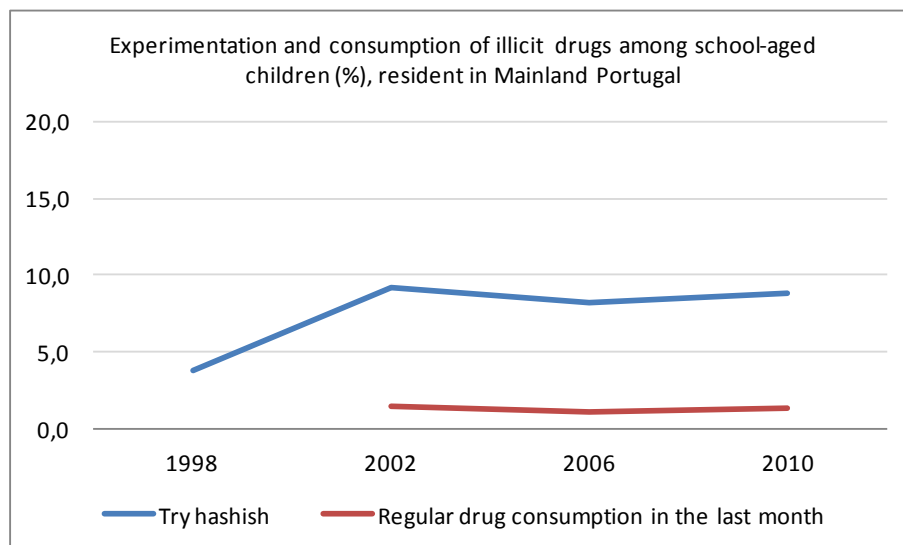
|                         | Experimenting with hashish | Regular consumption of drugs in the previous month |
|-------------------------|----------------------------|--|
| North                   | 7.7                        | 1.3  |
| Centre                  | 7.8                        | 1.5  |
| Lisbon and Tagus Valley | 10.3                       | 1.7  |
| Alentejo                | 8.9                        | 0.4  |
| Algarve                 | 10.9                       | 1.8  |
| Mainland Portugal       | 8.8                        | 1.4  |

Source: Compiled with data from Matos *et al*, 2012.

28. The analysis of the data collected since 1998 shows that the number of young people who admitted to having tried hashish increased between 1998 and 2002 (from 3.8% to 9.2%), but has remained below 9% since. The proportion of adolescents who had regularly consumed illicit drugs in the month preceding the interview is below 1.5% throughout the entire analysed period.

<sup>9</sup> Figure pertaining to Portugal, including the Autonomous Regions.

**FIGURE 2.4 – EXPERIMENTATION AND CONSUMPTION OF ILLICIT DRUGS AMONG SCHOOL-AGED CHILDREN (%), RESIDENT IN MAINLAND PORTUGAL**



Source: Compiled with data from Matos *et al*, 2012.

29. In the European context, it appears that the proportion of Portuguese adolescents aged 15 years who reported having used cannabis is higher than the average calculated for the 5 EU countries where reported consumption is lowest. This trend is observed both in consumption at some point in life (having used at least once) and in recent consumption (having used the month preceding the interview) (Currie *et al*, 2012).

**TABLE 2.6 - CANNABIS USE AMONG SCHOOL-AGED CHILDREN AGED 15 (%), BY GENDER (2010)**

|                                | At some point in life |   | In the last month |   |
|--------------------------------|-----------------------|---|-------------------|---|
|                                | M                     | F | M                 | F |
| Portugal                       | 15                    | 9 | 7                 | 4 |
| Average of EU's 5 best figures | 12                    | 7 | 5                 | 2 |

Source: Compiled with data from Currie *et al*, 2012.

30. In 2006, 15.2% of the Portuguese adult population (18 and older) was obese<sup>10</sup>. The prevalence of obesity in women (15.9%) was slightly higher than in men (14.4%). Regardless of gender, the proportion of individuals with obesity was highest in age groups between 45 and 74 years, with values above 20%.

<sup>10</sup> The condition of obesity was calculated based on the Body Mass Index (BMI). According to this indicator, people are considered to be obese when their result is 30 kg/m<sup>2</sup> or higher.

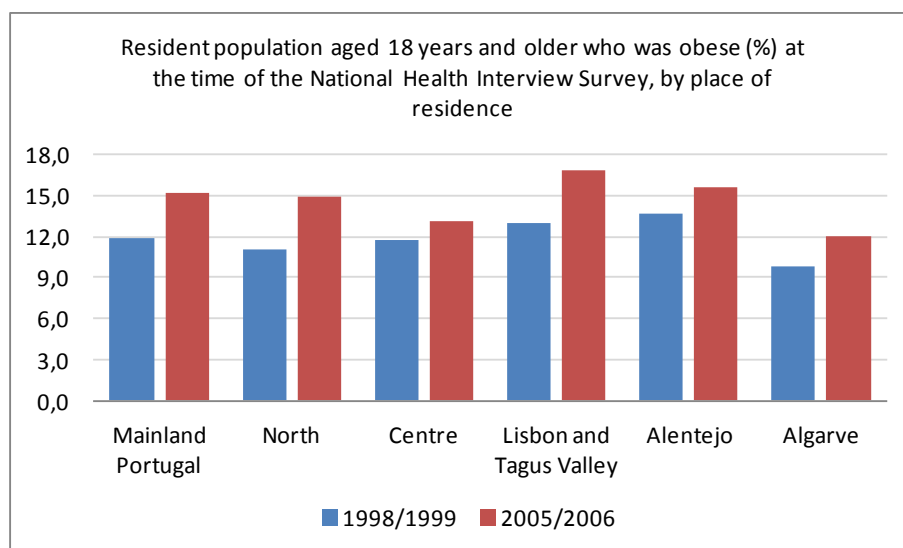
**TABLE 2.7 - RESIDENT POPULATION AGED 18 AND OLDER WHO WAS OBESE (%), BY GENDER AND PLACE OF RESIDENCE (2006)**

|                         | MF   | M    | F    |
|-------------------------|------|------|------|
| North                   | 14.9 | 14.6 | 15.2 |
| Centre                  | 13.1 | 12.5 | 13.6 |
| Lisbon and Tagus Valley | 16.8 | 15.5 | 18.0 |
| Alentejo                | 15.5 | 13.3 | 17.6 |
| Algarve                 | 12.0 | 12.5 | 11.5 |
| Mainland Portugal       | 15.2 | 14.4 | 15.9 |

Source: Compiled from data taken from the 4th National Health Interview Survey 2005-2006, INE/INSA, 2009.

31. In mainland Portugal, the prevalence of obesity increased by 3.2 percentage points between 1999 (12.0%) and 2006 (15.2%). The North and the Lisbon and Tagus Valley regions recorded the strongest increases, with 14.9% and 16.8%, respectively, in 2006, compared to 11.1% and 12.9% in 1999 (INE/INSA, 2009).

**FIGURE 2.5 - RESIDENT POPULATION AGED 18 AND OLDER WHO WAS OBESE (%) AT THE TIME OF THE NATIONAL HEALTH INTERVIEW SURVEY, BY PLACE OF RESIDENCE**



Source: Compiled from data taken from the 3rd and 4th National Health Interview Surveys 2005-2006, INE/INSA, 2009.

32. The results from the Eurobarometer Survey on Sport and Physical Activity (Special Eurobarometer Survey, 2010) indicate that most of the Portuguese population<sup>11</sup> (55%) never play sports or exercise and that 11% do so rarely. Only 9% of Portuguese reported a regular practise of sports (at least 5 times a week), and this proportion was higher among males aged 15 to 24 (24%). The proportion of the Portuguese population who practise any sports or exercise with some regularity (1-2 or 3-4 times a week) reaches 24%.

33. The practise of some type of physical activity, excluding the practise of sports - cycling, walking,

<sup>11</sup> Figures pertaining to Portugal, including the Autonomous Regions.

dancing or gardening, for example - is more common than the practise of an organised sport: 17% of the Portuguese population report doing it regularly and 31% with some regularity. The youngest age group (15-24) is the one that registers the highest proportion of people practising some type of physical activity on a regular basis. The reason most cited by the Portuguese who play sports or engage in some other physical activity (65%) is the improvement of their health status.

**TABLE 2.8 - RESIDENT POPULATION AGED 15 AND OLDER WHO PRACTISES SPORTS/PHYSICAL EXERCISE OR ENGAGES IN OTHER PHYSICAL ACTIVITIES (%) BY GENDER AND AGE GROUP (2009)**

|                   | Practise of sports/physical exercise regularly |   | Other physical activities with some regularity |    |
|-------------------|--|---|--|----|
|                   | M  | F | M  | F  |
| 15 to 24 years    | 24   | 7 | 48   | 39 |
| 25 to 39 years    | 7  | 6 | 31   | 32 |
| 40 to 54 years    | 7  | 8 | 23   | 34 |
| 55 to 69 years    | 8  | 7 | 27   | 31 |
| 70 years or older | 10   | 6 | 23   | 23 |

Source: Compiled with data from Special Eurobarometer, 2010.

34. Out of all EU countries, Portugal is the one with the highest percentage of citizens who said they never did any physical activity (36%), a figure much higher than the European average (14%). The proportion of Portuguese who, at least once a week, play sports or do some physical exercise is 33%. In the case of other physical activities, the proportion reaches 48%. These values are below the average of the best 5 European figures, respectively 64% and 82%.

**TABLE 2.9 - PRACTISE OF SPORTS/PHYSICAL EXERCISE AND OTHER PHYSICAL ACTIVITIES AT LEAST ONCE A WEEK (%) IN 2009**

|                                | Practise of sports/physical exercise | Other physical activities |
|--------------------------------|--------------------------------------|---------------------------|
| Portugal <sup>12</sup>         | 33                                   | 48                        |
| Average of EU's 5 best figures | 64                                   | 82                        |

Source: Compiled with data from Special Eurobarometer, 2010.

35. Other determinants associated with risk behaviours show an improvement, there being a decrease in the proportion of hospital admissions exclusively attributable to alcohol, as well as in the proportion of motor accident casualties with blood alcohol level of 0.5 g/l or higher.

36. In 2008, hospital admissions exclusively attributable to alcohol accounted for 1.8% of hospital total admissions in the Portuguese Mainland public hospitals, whereas in 2003, they represented 2.5% (ACS, 2010). Of the total number of fatal victims in motor accidents autopsied by the National Legal Medicine Institute (INML) in 2011, 27% had a blood alcohol level of 0.5 g/l or higher; in 2007, this percentage was over 31% (INML, 2012).

37. Mortality due to motor vehicle accidents and work-related accidents has also shown a generally decreasing trend.

38. In 2009, the standardised mortality rate due to accidents with motor vehicles under the age of 65

<sup>12</sup> Figure pertaining to Portugal, including the Autonomous Regions.

was 7.6 deaths per 100,000 inhabitants, showing a large disparity between the figures for the male and female population (12,4 *versus* 2,9), as well as between regions. It was also observed that premature mortality due to accidents with motor vehicles in Portugal was about twice the average of the 5 EU countries with the best figures, for the same year.

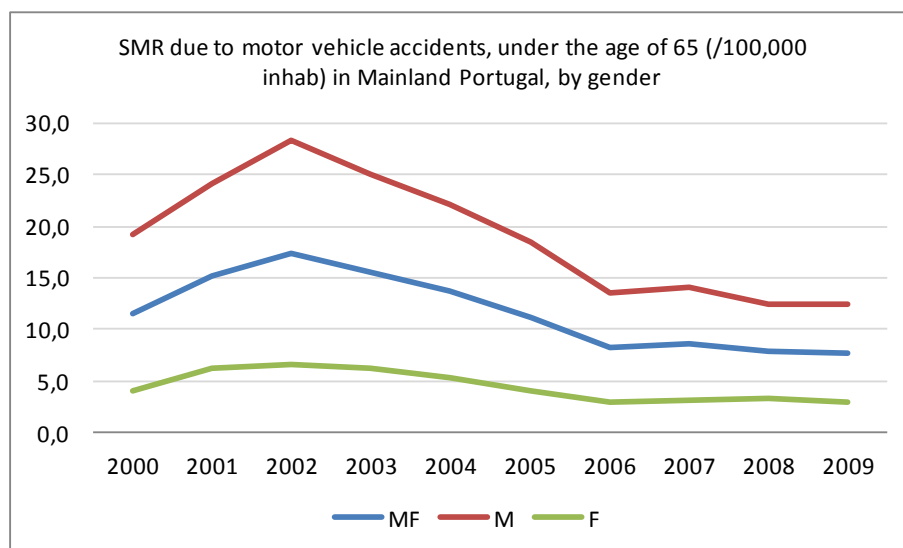
**TABLE 2.10 - STANDARDISED MORTALITY RATE DUE TO MOTOR VEHICLE ACCIDENTS, UNDER THE AGE OF 65 (/100,000 INHAB.), BY GENDER AND PLACE OF RESIDENCE (2009)**

|                                | MF   | M    | F   |
|--------------------------------|------|------|-----|
| North                          | 5.4  | 8.2  | 2.6 |
| Centre                         | 9.9  | 16.2 | 3.8 |
| Lisbon and Tagus Valley        | 7.7  | 12.8 | 2.7 |
| Alentejo                       | 13.0 | 21.1 | 4.5 |
| Algarve                        | 12.2 | 22.1 | 1.8 |
| Mainland Portugal              | 7.6  | 12.4 | 2.9 |
| Average of EU's 5 best figures | 3.6  | 5.6  | 1.5 |

Source: Compiled from data available on the INE portal and the WHO, Health for All Database, 2012.

39. The evolution of this indicator from 2000 to 2009 was characterised by an increase up to 2002, followed by a period of decrease and stabilisation. The evolution was similar for men and women.

**FIGURE 2.6 – STANDARDISED MORTALITY RATE DUE TO MOTOR VEHICLE ACCIDENTS, UNDER THE AGE OF 65 (/100,000 INHAB.), IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data available on the INE portal, 2012.

40. The standardised mortality rate due to work-related accidents in 2008 was 1.8 deaths per 100,000 inhabitants. As in the case of mortality due to motor vehicle accidents, mortality due to work-related accidents is higher among the male population (3.4 *versus* 0.1).

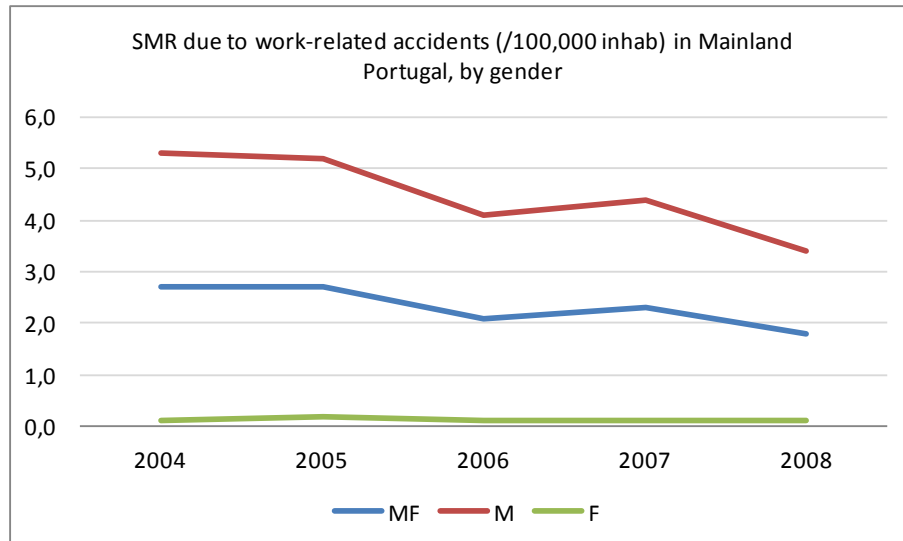
**TABLE 2.11 - STANDARDISED MORTALITY RATE DUE TO WORK-RELATED ACCIDENTS (/100,000 INHAB.), BY GENDER AND PLACE OF RESIDENCE (2008))**

|                   | MF  | M   | F   |
|-------------------|-----|-----|-----|
| North             | 1.5 | 2.9 | 0.1 |
| Centre            | 2.5 | 5.0 | 0.1 |
| Lisbon            | 1.3 | 2.5 | 0.1 |
| Alentejo          | 2.4 | 4.5 | 0.3 |
| Algarve           | 2.0 | 3.5 | 0.5 |
| Mainland Portugal | 1.8 | 3.4 | 0.1 |

Source: Compiled from data made available by the Strategy and Planning Office - Ministry for Solidarity and Social Security, 2011.

41. Standardised mortality rate due to work-related accidents, in Mainland Portugal, for the 2004-2008 period, decreased from 2.7 to 1.8 deaths per 100,000 inhabitants. For male gender, the trend in the same period was also decreasing: from 5.3 to 3.4 deaths per 100,000 inhabitants. Mortality due to work-related accidents for women, being much lower to that of men, varied during the period in question between 0.1 and 0.2 deaths per 100,000 inhabitants.

**FIGURE 2.7 - STANDARDIZED MORTALITY RATE DUE TO WORK-RELATED ACCIDENTS (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data made available by the Strategy and Planning Office - Ministry for Solidarity and Social Security, 2011.

42. Other determining factors, such as premature mortality due to alcohol-related diseases and suicide, showed a trend to increase in the last few years. In 2009, the mortality rate due to alcohol-related diseases under the age of 65 reached 12.9 deaths per 100,000 inhabitants and male rate was about 6 times higher than the female rate, indicating this is a problem which conditions fundamentally men's health. Regional values varied between 9.2 and 15.0 deaths per 100,000 inhabitants.

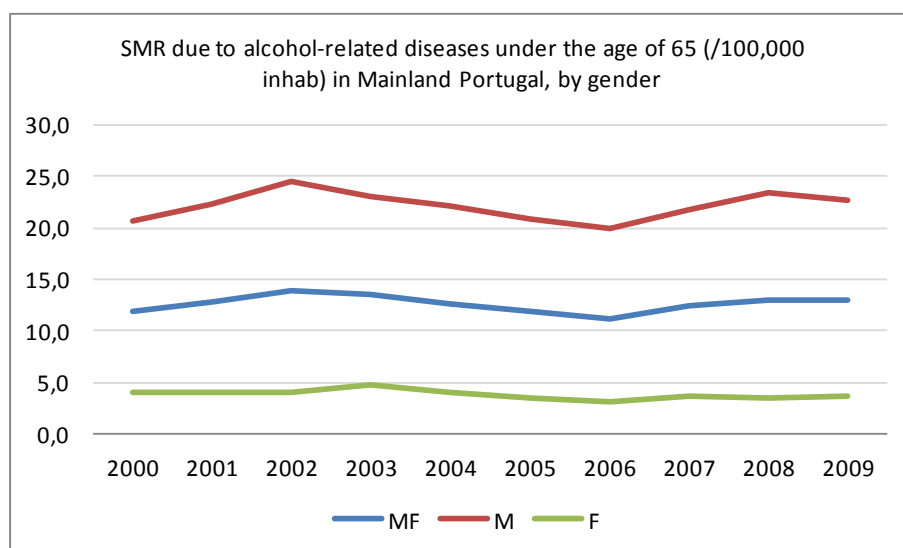
**TABLE 2.12 - STANDARDIZED MORTALITY RATE DUE TO ALCOHOL-RELATED DISEASES UNDER THE AGE OF 65 (/100,000 INHAB.), BY GENDER AND PLACE OF RESIDENCE (2009)**

|                         | MF   | M    | F   |
|-------------------------|------|------|-----|
| North                   | 15.0 | 25.7 | 5.0 |
| Centre                  | 13.3 | 24.2 | 3.0 |
| Lisbon and Tagus Valley | 10.8 | 19.7 | 2.7 |
| Alentejo                | 9.2  | 16.8 | 1.8 |
| Algarve                 | 14.4 | 23.8 | 4.9 |
| Mainland Portugal       | 12.9 | 22.7 | 3.7 |

Source: Compiled from data available on the INE portal, 2012.

43. In the evolution of this indicator in the decade 2000-2009, there is a maximum value (13.9/100,000 inhab.) in 2002, followed by a period of decrease until 2006. Between 2006 and 2009, the rate increased from 11.2 to 12.9 deaths per 100,000 inhabitants.

**FIGURE 2.8 - STANDARDIZED MORTALITY RATE DUE TO ALCOHOL-RELATED DISEASES UNDER THE AGE OF 65 (/100,000 INHAB.), IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data available on the INE portal, 2012.

44. In 2009, the standardized mortality rate due to suicide under the age of 65 was of 5.9 deaths per 100,000 inhabitants, the male rate being 4 times higher than the female rate. Spatial variability was also high, with regional rates between 3.7 and 12.6 deaths per 100,000 inhabitants. Within the European context, Portugal remains still between the countries with less premature mortality due to suicide.

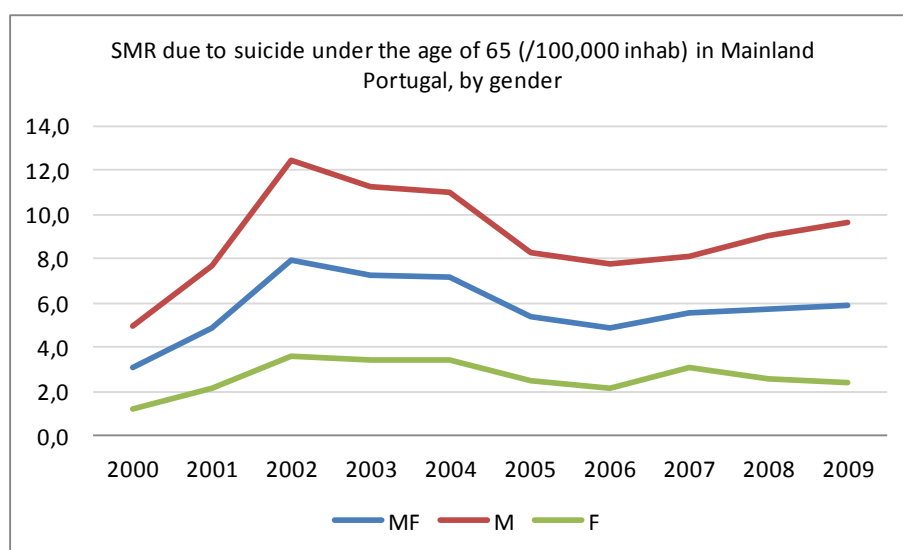
**TABLE 2.13 - STANDARDIZED MORTALITY RATE DUE TO SUICIDE UNDER THE AGE OF 65 (/100,000 INHAB.), BY GENDER AND PLACE OF RESIDENCE (2009)**

|                                | MF   | M    | F   |
|--------------------------------|------|------|-----|
| North                          | 3.7  | 6.1  | 1.5 |
| Centre                         | 6.9  | 11.3 | 2.6 |
| Lisbon and Tagus Valley        | 6.5  | 10.9 | 2.4 |
| Alentejo                       | 12.6 | 18.0 | 6.9 |
| Algarve                        | 8.2  | 12.5 | 3.7 |
| Mainland Portugal              | 5.9  | 9.6  | 2.4 |
| Average of EU's 5 best figures | 4.6  | 7.3  | 1.5 |

Source: Compiled from data available on the INE portal and the WHO, Health for All Database, 2012.

45. In the decade 2000-2009, the standardized mortality rate due to suicide under the age of 65, in Mainland Portugal, presented an evolution similar to that of alcohol-related diseases, with alternate periods of growth and decrease. The highest value was recorded in 2002 (7.9 deaths per 100,000 inhabitants) and after 2006 the trend was again of growth. Between 2006 and 2009, the rate increased from 4.9 to 5.9 deaths per 100,000 inhabitants.

**FIGURE 2.9 - STANDARDIZED MORTALITY RATE DUE TO SUICIDE UNDER THE AGE OF 65 (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data available on the INE portal, 2012.

46. In a global analysis of the data presented for health determinants related to lifestyles, there are remarkable differences between genders. Those are mostly related to alcohol and tobacco consumption, in all age groups studied, and to mortality related to labour accidents and with motor vehicles, alcohol related diseases and suicide, the higher values corresponding to male gender.



## Access to health services

47. In 2006, 81.1% of the resident population resorted mostly to the National Health Service (NHS) to have access to health services, a figure slightly inferior to that recorded in 1999 (82.5%). The second most mentioned subsystem corresponded to the Civil Servants Health Subsystem (ADSE), used by 10.1% of residents in 2006 and by 8.8% in 1999 (INE/INSA, 2009).
48. In 2006 most of Portuguese population did not have health insurance: only 10.5% of residents in Mainland Portugal declared having such type of insurance. However, it was found that between 1999 and 2006 the proportion of residents with health insurance almost doubled (according to the 3rd INS, it was estimated that 5.5% of all residents had health insurance in 1999). Among residents in Mainland Portugal with health insurance in 2006, 30.8% stated that the insurance included hospitalisation, appointments and complementary diagnostic tests and therapies coverage; 40.3% chose to include the additional medication coverage.
49. The National Vaccination Programme (PNV), universal and free, operational since 1965, surpassed the coverage of 95% of all population.
50. The National Long-term Care Network (RNCCI) was created in 2006, to ensure the provision of healthcare and social support, both palliative and for recovery, to all those who, regardless of age, find themselves in a position of dependency, and to support their relatives or informal caregivers, in qualification and provision of care. The number of contracted beds for long-term integrated healthcare has been increasing, reaching 5948 in June 2012: 906 for "convalescence", 1808 for "medium-term and rehabilitation", 3041 for "long-term and maintenance" and 193 for "palliative care", with occupancy rates between 94% and 100% in the various health regions. The care-providing capacity of the domiciliary Long-term Integrated Care teams (ECCI) corresponded to 6964 domiciliary beds in the Network, representing 54% of the total number in the RNCCI (UMCCI, 2011).
51. Since the creation of the RNCCI, 122,523 patients have been referred by Primary Healthcare or by Hospital Care. The total number of patients referred to the Network during the first half of 2012 was of 17,226 patients, representing a growth of 18% compared to those referred during the first half of 2011 (14,618 patients). The national distribution of origin of referral by entity demonstrates a percentage growth of referral by Primary Care Centres, increasing to 35%, strengthening the role of referral from the community.

**TABLE 2.14 - NUMBER OF HOSPITALISATION AND ECCI BEDS AND POPULATION COVERAGE, BY HEALTH REGION (1ST HALF OF 2012)**

|                         | No. of places |      |       | No. of places per 100,000 inhab. 65 years and older |      |       |
|-------------------------|---------------|------|-------|---|------|-------|
|                         | Beds          | ECCI | TOTAL | Beds  | ECCI | TOTAL |
| North                   | 1888          | 1730 | 3618  | 297   | 273  | 570   |
| Centre                  | 1666          | 1188 | 2854  | 421   | 301  | 722   |
| Lisbon and Tagus Valley | 1279          | 1961 | 3240  | 182   | 279  | 461   |
| Alentejo                | 702           | 570  | 1272  | 544   | 442  | 986   |
| Algarve                 | 413           | 1515 | 1928  | 467   | 1714 | 2181  |
| Mainland Portugal       | 5948          | 6964 | 12912 | 305   | 357  | 662   |

Source: Compiled with data from UMCCI, 2011.

52. In the last decade, there have been increases in the average number of medical appointments per capita, as well as in the percentage of first appointments in the total of outpatient appointments. In NHS hospital units, there was a slight decrease in more recent years both in the number of patients discharged as in the number of patients seen in the emergency services (since 2005 in the first case and 2007 in the second). However, this temporal analysis should take into account the emergence of new private hospital facilities, which may lead to substantial variations of the results. In 2009, for example, the patients discharged from NHS hospital units represented 77.1% of the total number of patients discharged. In the case of patients observed in the emergency services, in the same year, 86.8% of those were observed in NHS hospital units (DGS, 2011).

53. In 2010, each inhabitant of Mainland Portugal went, on average, 4.2 times to the doctor<sup>13</sup>. In the health regions, the average values varied between 3.9 and 4.9 medical appointments per inhabitant. By discriminating this information according to healthcare levels, it is possible to see that people resorted more to appointments in primary care centres than in hospitals (2.7 *versus* 1.5). This trend was observed in all regions, being clearer in the Alentejo region (3.9 *versus* 1.0) and less evident in the Northern region (2.3 *versus* 1.6) and Lisbon and Tagus Valley (2.5 *versus* 1.6).

**TABLE 2.15 - MEDICAL APPOINTMENTS (PER INHAB./YEAR), BY LEVEL OF CARE AND HEALTH REGION (2010)**

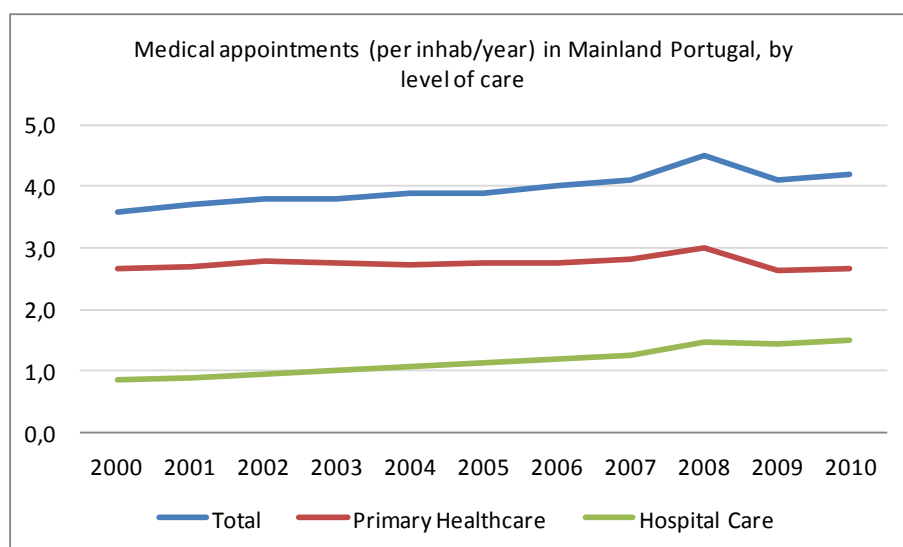
|                         | Primary Healthcare | Hospital Care | TOTAL |
|-------------------------|--------------------|---------------|-------|
| North                   | 2.3                | 1.6           | 3.9   |
| Centre                  | 3.4                | 1.3           | 4.8   |
| Lisbon and Tagus Valley | 2.5                | 1.6           | 4.2   |
| Alentejo                | 3.9                | 1.0           | 4.9   |
| Algarve                 | 2.9                | 1.0           | 3.9   |
| Mainland Portugal       | 2.7                | 1.5           | 4.2   |

Source: Compiled from data available on the INE portal, 2012.

54. The average number of medical appointments per inhabitant increased from 3.6 in 2000 to 4.2 in 2010. This variation was mostly due to the increase in the average number of medical appointments in hospitals (from 0.8 in 2000 to 1.5 in 2010), since the average annual number of appointments per inhabitant in primary care centres remained close to 2.7 throughout the period.

<sup>13</sup> To calculate the average figure for medical appointments, we considered external consultations at hospitals (every specialty) and appointments at Primary Care Centres (following specialities: General and Family Medicine/General Practice – Adult Health, Gynaecology/Obstetrics, Family planning, New-born, child and adolescent health, Maternal health).

**FIGURE 2.10 –MEDICAL APPOINTMENTS (PER INHAB./YEAR) IN MAINLAND PORTUGAL, BY LEVEL OF CARE**



Source: Compiled from data available on the INE portal, 2012.

55. In 2010, from the total of outpatient appointments in NHS hospital units, 28.7% were first appointments. At regional level, this indicator reached higher values in the regions of Alentejo and Algarve (31.4%).

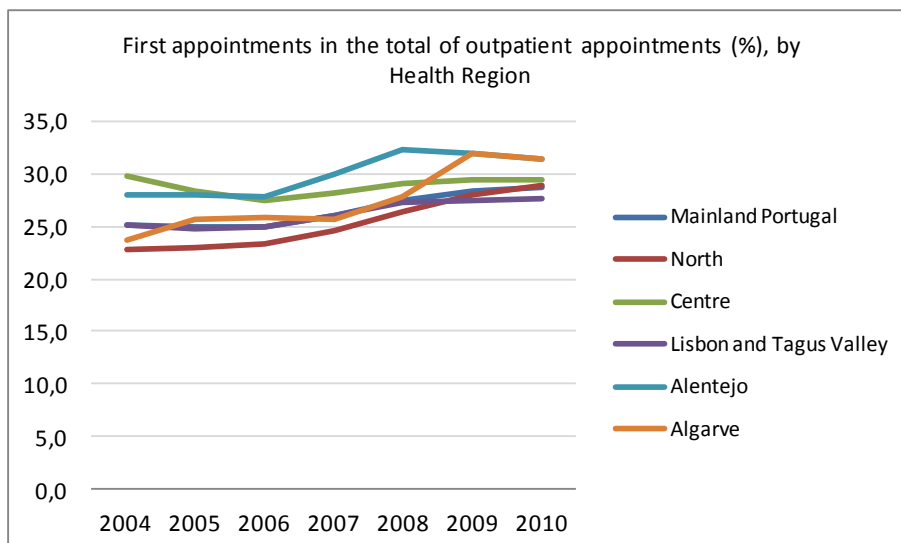
**TABLE 2.16 - FIRST APPOINTMENTS IN THE TOTAL OF OUTPATIENT APPOINTMENTS IN NHS HOSPITAL UNITS (%), BY HEALTH REGION (2010)**

|                         | 1st appointments/total |
|-------------------------|------------------------|
| North                   | 28.9                   |
| Centre                  | 29.4                   |
| Lisbon and Tagus Valley | 27.6                   |
| Alentejo                | 31.4                   |
| Algarve                 | 31.4                   |
| Mainland Portugal       | 28.7                   |

Source: Compiled from data made available by the ACSS, 2011.

56. During the 2004-2010 period, there was an increase in the percentage of first appointments in the total of hospital outpatient appointments in all health regions, except in the Centre region, where there was a slight decrease.

**FIGURE 2.11 – FIRST APPOINTMENTS IN THE TOTAL OF OUTPATIENT APPOINTMENTS (%), BY HEALTH REGION**



Source: Compiled from data made available by the ACSS, 2011.

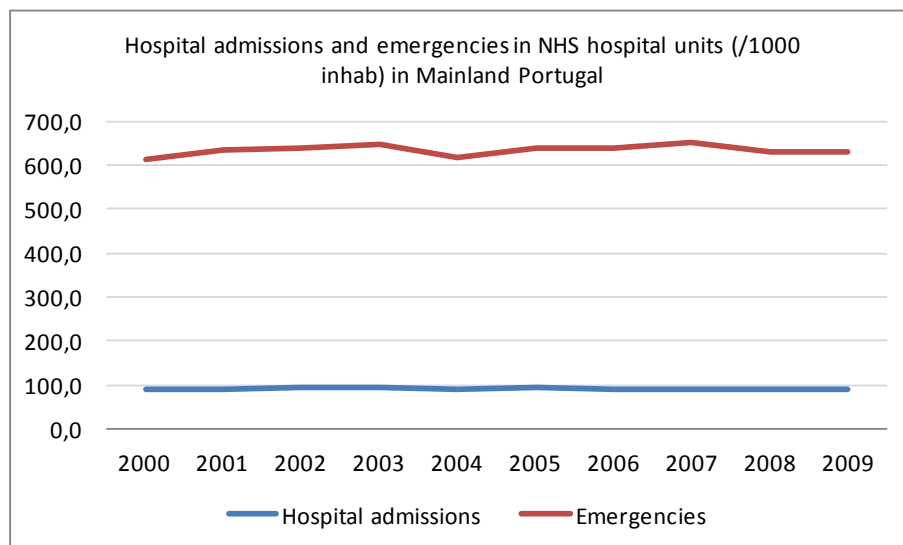
**TABLE 2.17 – HOSPITAL ADMISSIONS AND EMERGENCIES IN PRIVATE AND NHS HOSPITAL UNITS (/1000 INHAB.), BY HEALTH REGION (2009)**

|                         | Hospital admissions | Emergency episodes |
|-------------------------|---------------------|--------------------|
| North                   | 86.3                | 595.0              |
| Centre                  | 108.3               | 753.6              |
| Lisbon and Tagus Valley | 83.8                | 609.9              |
| Alentejo                | 69.3                | 561.2              |
| Algarve                 | 76.1                | 645.5              |
| Mainland Portugal       | 88.0                | 628.8              |

Source: Compiled with data from DGS, 2011.

57. To study time evolution, only patients discharged from hospital or seen in the emergency services of NHS hospitals are considered, as there are no available data on private units since 2000.

**FIGURE 2.12 - HOSPITAL ADMISSIONS AND EMERGENCIES IN NHS HOSPITAL UNITS (/1000 INHAB.) IN MAINLAND PORTUGAL**



Source: Compiled with data from DGS, 2003 to 2011.

58. Concerning access to surgical care, according to the Summarized Report on Elective Surgical Activity (ACSS, 2012), the demand for surgical care (assessed by the registration of new episodes – entries – in the waiting list for surgery) tends to grow continuously ever since a systematic measurement was introduced. Growth versus the first half of 2006 is of 41.5%, reaching over 319,000 entries in the first half of 2012, which compared the same period of the previous year represents an increase of 1.8% (5,769 episodes).

59. The waiting list for surgery (LIC), which represents the cumulative episodes awaiting surgery, had been declining steadily since the introduction of the system for management of patients waiting for surgery (SIGIC) and reversed the trend for the first time December 2011, presenting an increase of 11.2% when compared to the same period of the previous year. However, and although the value for the first half of 2012 is still higher than that of the first half of 2011, there was a decrease of 3.3% compared to 31st December, 2011.

60. The behaviour of the median waiting time (TE) of users who are waiting for surgery is similar to that of the LIC. In the first half of 2006 it presented a value of nearly 7 months and since then it had been steadily decreasing, presenting in the first half of 2011 a value of 3.13 months. This trend was reversed in the second half of 2011, which presented a value of 3.33 months. Already in the first half of 2012, although the median TE of the LIC has decreased slightly to 3.30 months, this figure is still higher than in the first half of 2011 (5 more days).

61. The public/agreed specialised structures network for the treatment of addictions associated with alcohol and drug abuse, consisting of outpatient units, rehabilitation units, therapeutic communities and day centres, has increased nationwide, facilitating integration into rehabilitation programs. In 2010, the public network for the treatment of drug addiction (outpatient) integrated 37,983 users, of which 8444 were new users (first appointments) (IDT, 2011).

62. The investment in means of basic and advanced life support, with a ratio per 100,000 inhabitants which has more than doubled in recent years, ensures a faster and more accurate provision of care to victims of accidents or sudden illness. During the year 2011, 56% of cases (at national level) were screened by the Centres Guidance Emergency Patients (CODU) by sending emergency resources to the site of occurrence, and there has been an increase of 3% compared to the year 2010. Given the percentage of situations, 44%, which did not result in sending medical emergency resources and, with the objective of providing improved quality of care, at the end of 2011 a new procedure related to non-emergency calls was initiated. Thus, a set of calls listed as non-emergency, i.e., calls where the triage does not result in sending emergency means, started being transferred to the Saúde 24 service (INEM, 2011).

63. The *per capita* consumption of medicines, in the total market, increased from 288 euros in 2002 to 327 euros in 2009 (INFARMED, 2009).

## 2.1.2. HEALTH STATUS

64. Life expectancy at birth in Mainland Portugal for the 2008/2010 triennium reached 79.38 years, with women living, on average, 6 more years than men. The difference between the regions where, on average, people live longer and those where people live less is of 1.24 years (INE portal, 2012). There is also a difference of about 2.4 years between the life expectancy at birth in Mainland Portugal and the average value of this indicator in the five EU countries where people live longer. This difference is clearer for men (3.1 years) than for women (1.8 years).

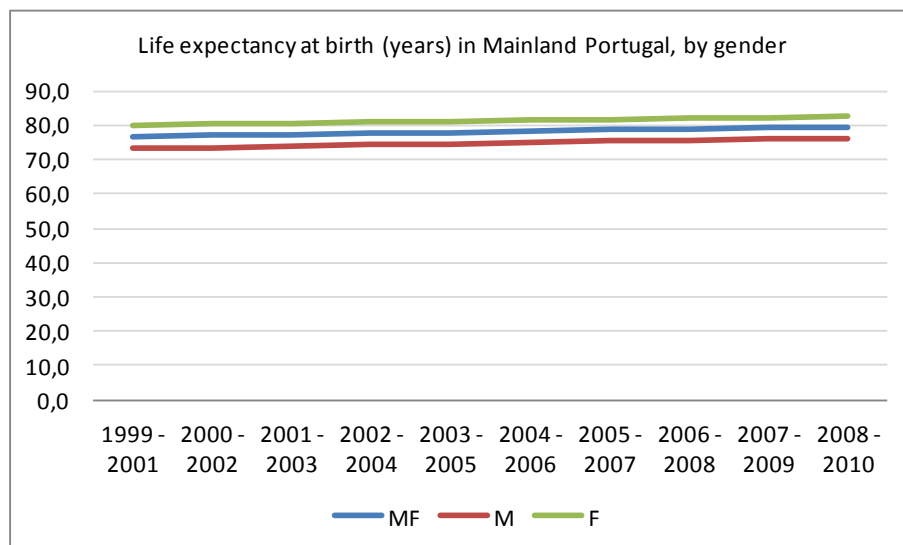
**TABLE 2.18 - LIFE EXPECTANCY AT BIRTH (YEARS), BY GENDER AND PLACE OF RESIDENCE (2008-2010)**

|                                | MF    | M     | F     |
|--------------------------------|-------|-------|-------|
| North                          | 79.58 | 76.48 | 82.44 |
| Centre                         | 79.59 | 76.58 | 82.48 |
| Lisbon                         | 79.22 | 76.05 | 82.10 |
| Alentejo                       | 78.35 | 75.29 | 81.27 |
| Algarve                        | 78.66 | 75.63 | 81.80 |
| Mainland Portugal              | 79.38 | 76.26 | 82.37 |
| Average of EU's 5 best figures | 81.80 | 79.36 | 84.18 |

Source: Compiled from data available on the INE portal and the WHO, Health for All Database, 2012.

65. Between the 1999/2001 and the 2008/2010 triennia, life expectancy at birth increased significantly, from 76.6 to 79.4 years. In 1999/2001, the difference between genders was 6.6 years and, in 2008/2010, 6.1 years.

**FIGURE 2.13 – LIFE EXPECTANCY AT BIRTH (YEARS) IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data available on the INE portal, 2012.

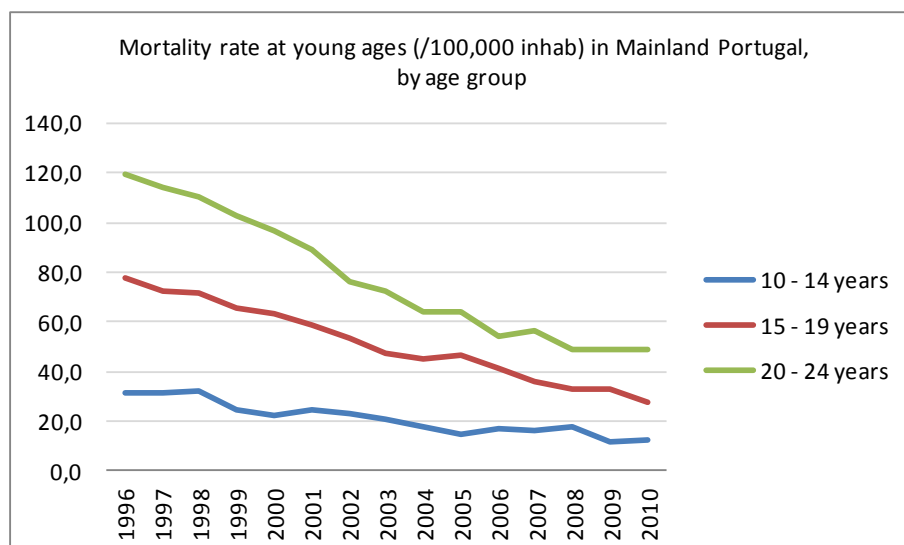
66. However, when analysing healthy life years in Portugal, for the year 2010, it is seen that men live on average 59.3 years with no limitations to their activity, while for women the healthy life years is 56.6 years (Eurostat, 2012).

67. The positive evolution of maternal and child health in Portugal has been referred as an example of good health policies. The WHO (WHO, 2008) considered Portugal one of the most successful countries in the consistent reduction in mortalities, particularly perinatal, infant, from 1 to 4 years, and maternal mortality. The growth of GDP *per capita* and the development of the Primary Healthcare and Hospital Care network is one of the factors identified as crucial to this development. However, the sustainability of these results depends on social evolution. Later motherhood, infertility treatment and smoking are causes for a larger number of high-risk pregnancies, more preterm new-borns and more low birth weight new-borns, and intrauterine growth restriction, situations with a future potentially disastrous impact on public health, namely in obesity, diabetes, hypertension and cardiovascular diseases (Gluckman, 2005; Machado, 2008).

68. In the last decade (2001-2011), infant mortality decreased from 4.8 to 3.1 deaths and the risk of dying before the age of 5 from 6.2 to 3.9 deaths of children under 5 years of age (per 1000 live births). The number of live births to adolescent women (under 20 years of age) decreased from 5.9 to 3.6; the number of preterm live births increased from 5.7 to 7.5 and the number of live births with low birth weight from 7.2 to 8.4 (per 100 live births). The number of caesarean section deliveries increased from 29.7 to 36.1 (per 100 live births) between 2001 and 2010 (INE portal, 2012).

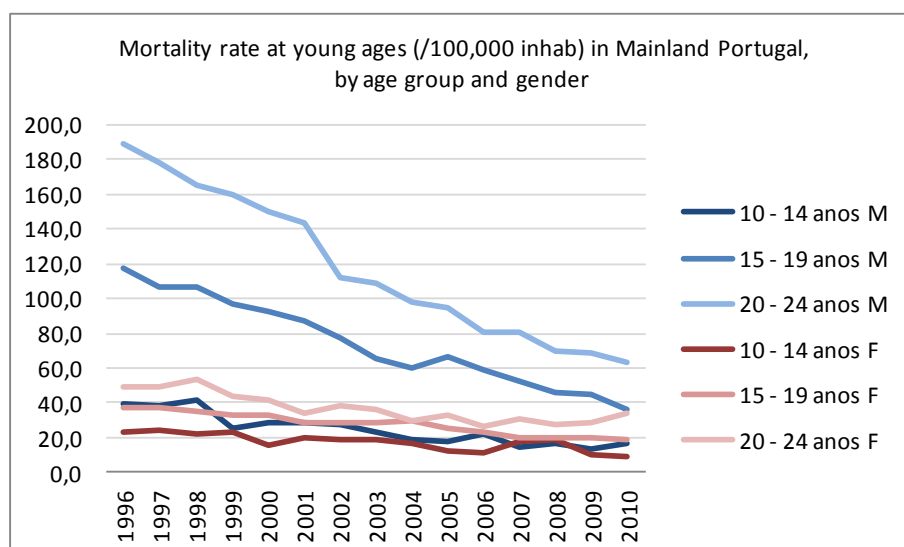
69. Mortality at young ages (10 to 24) is reduced, compared to that observed at later ages, but still has decreased steadily over the past two decades. Mortality rates are higher for males than for females. However, the difference has been progressively decreasing. In the 10 to 14 age group, until 2006, mortality rates for boys showed systematically higher values than those for girls, a situation that no longer occurred in 2007 and 2008, years in which the rates for girls were higher. According to DGS (DGS, 2005), mortality in the 10 to 14 age group is associated with natural causes, while in the following age groups it derives predominantly from violent causes.

**FIGURE 2.14 - MORTALITY RATE AT YOUNG AGES (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY AGE GROUP**



Source: Compiled from data available on the INE portal, 2012.

**FIGURE 2.15 - MORTALITY RATE AT YOUNG AGES (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY AGE GROUP AND GENDER**



Source: Compiled from data available on the INE portal, 2012.

70. The main causes for hospital admission of children and young people under 18 are respiratory (22.8%) and digestive (13.9%) diseases. In adult population, diseases of the circulatory system and malignant neoplasms represent, respectively, 10.1% and 7.9% of all hospital admissions (DRG database, ACSS, 2010).

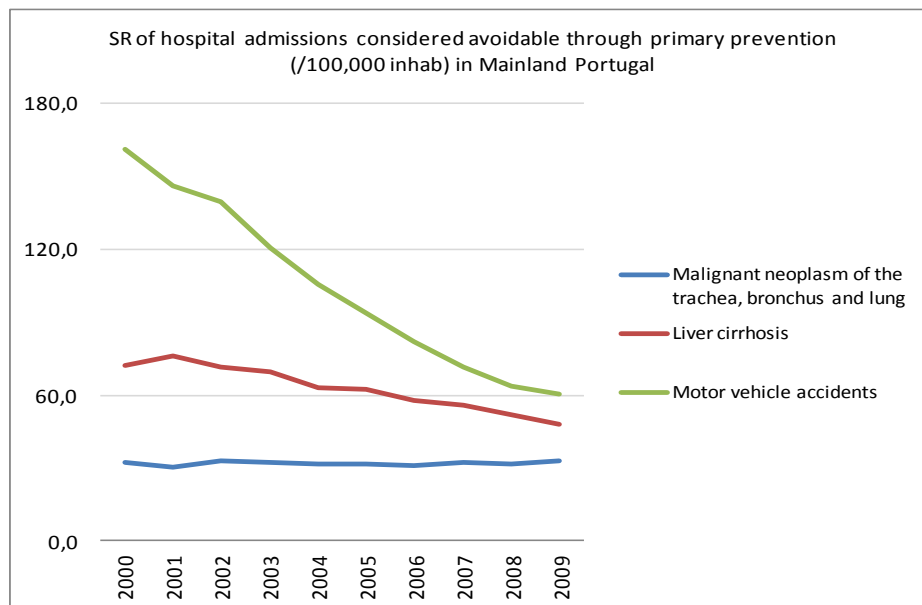
71. In hospital admissions considered avoidable through primary prevention, including hospital admissions for malignant neoplasm of the trachea, bronchus and lung (0-74 years), liver cirrhosis (0-74 years) and motor vehicle accidents (all ages)<sup>14</sup>, the admissions due to motor vehicle accidents stand out with greater expression (43.5%). Considering hospital admissions avoidable through

<sup>14</sup> Ellen Nolte Methodology (Nolte and McKee, 2004) for mortality preventable through primary prevention.



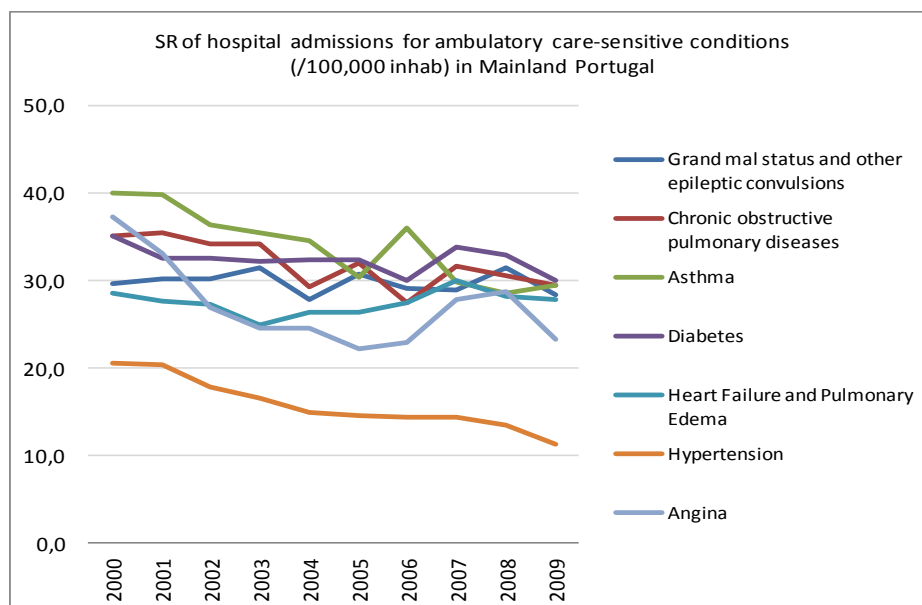
ambulatory care,<sup>15</sup> those related to diabetes stand out (18.9%).

**FIGURE 2.16 - STANDARDISED RATE OF HOSPITAL ADMISSIONS CONSIDERED AVOIDABLE THROUGH PRIMARY PREVENTION (/100,000 INHAB.) IN MAINLAND PORTUGAL**



Source: Compiled from the database of Diagnosis-related Groups, ACSS, 2010.

**FIGURE 2.17 - STANDARDISED RATE OF HOSPITAL ADMISSIONS FOR AMBULATORY CARE-SENSITIVE CONDITIONS (/100,000 INHAB.), IN MAINLAND PORTUGAL**



Source: Compiled from the database of Diagnosis-related Groups, ACSS, 2010.

<sup>15</sup> Hospital admissions considered: grand mal status and other epileptic convulsions, chronic obstructive pulmonary disease (COPD), asthma, diabetes, heart failure and pulmonary oedema, hypertension and angina pectoris (0-74 years). Methodology of the Canadian Institute for Health Information (CIHI, 2012).

72. Morbidity and mortality due to infectious diseases have suffered a significant and sustained decrease since the implementation of the National Vaccination Programme (PNV), in 1965. The 2nd National Serological Survey (2001-2002) (DGS, 2004) demonstrated that the majority of the population was vaccinated against diseases avoidable through vaccination. However, despite the significant improvements recorded, the incidence of tuberculosis and HIV infection in Portugal is still very high when compared with the average of the 5 EU countries with the lowest incidence rates.

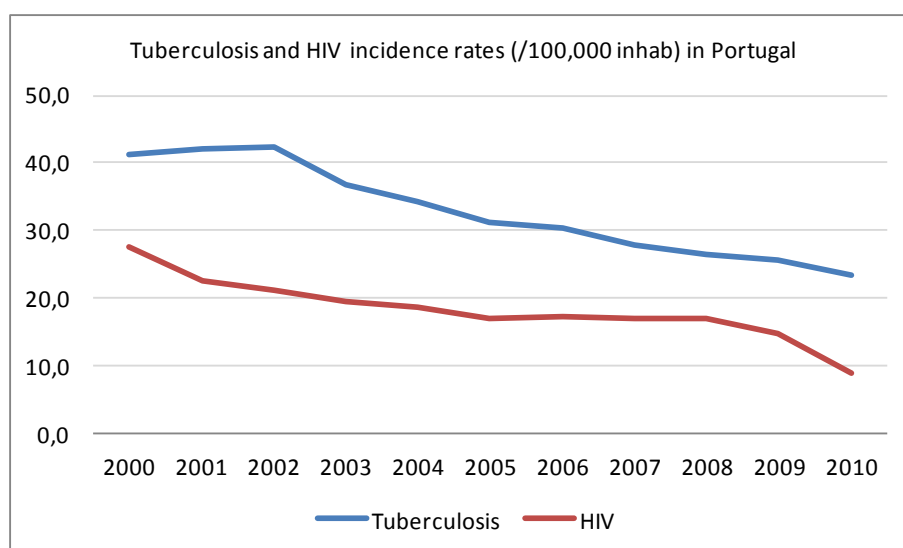
**TABLE 2.19 - INCIDENCE RATES (/100,000 INHAB.) IN 2010**

|                                | Tuberculosis incidence | HIV incidence |
|--------------------------------|------------------------|---------------|
| Portugal <sup>16</sup>         | 23.4                   | 9.0           |
| Average of EU's 5 best figures | 3.7                    | 1.3           |

Source: Compiled with data from the WHO, Health for All Database, 2012.

73. Between 2000 and 2010, the tuberculosis incidence rate decreased from 41.3 to 23.4 and HIV incidence rate decreased from 27.6 to 9.0 (per 100,000 inhabitants) (WHO, Health for All Database, 2012).

**FIGURE 2.18 - TUBERCULOSIS AND HIV INCIDENCE RATES (/100,000 INHAB.) IN MAINLAND PORTUGAL**



Source: Compiled with data from the WHO, Health for All Database, 2012.

74. Circulatory diseases (32%), malignant neoplasms (23%) and respiratory diseases (11.1%) are, for both genders, the leading causes of mortality. The fourth leading cause includes accidents, poisoning and violence, for males, and diabetes mellitus, for females (INE portal, 2012).

75. Premature mortality, measured by the Potential Years of Life Lost (PYLL), is the lowest in the northern regions of the country, the highest being in Alentejo. The values of this indicator, which considers all causes of death, are also found to be higher for males than for females (twice as high).

<sup>16</sup> Figure pertaining to Portugal, including the Autonomous Regions.

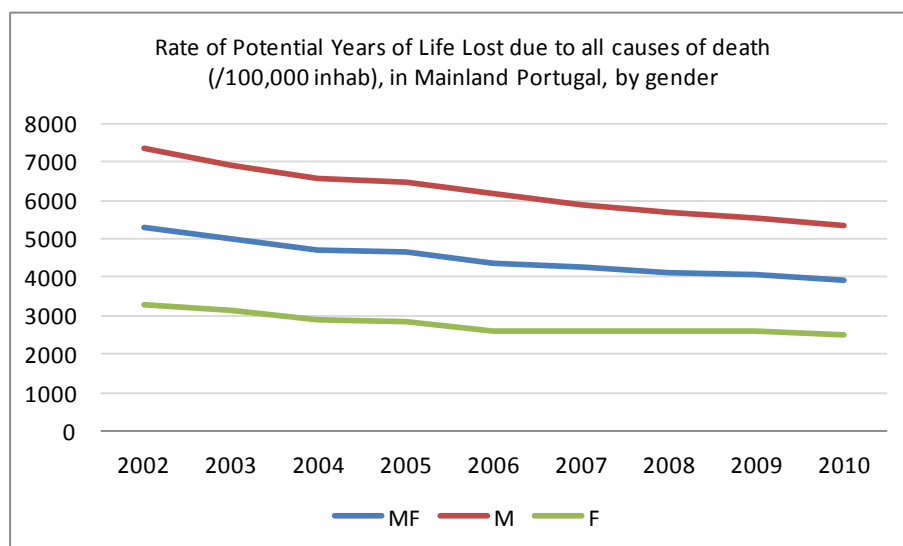
**TABLE 2.20 - RATE OF POTENTIAL YEARS OF LIFE LOST (/100,000 INHAB.), BY GENDER AND PLACE OF RESIDENCE (2010)**

|                   | MF   | M    | F    |
|-------------------|------|------|------|
| North             | 3622 | 5099 | 2179 |
| Centre            | 3776 | 5115 | 2452 |
| Lisbon            | 4218 | 5651 | 2823 |
| Alentejo          | 4386 | 5921 | 2809 |
| Algarve           | 4259 | 5569 | 2885 |
| Mainland Portugal | 3906 | 5337 | 2497 |

Source: Compiled from data available on the INE portal, 2012.

76. The PYLL rate evolved positively in the last decade. From 2002 to 2010, there was a substantial reduction: from 5280 to 3906 years of life lost per 100,000 inhabitants. This evolution is more pronounced in males, for which the problem of early death is more important. In recent years, there seems to be some tendency towards convergence in these rates. However, although it is clear that in the values concerning males there is a considerable margin for positive progression (to reach the level of PYLL observed in females, for example), the female gender appears to have reached the nadir point which presents serious challenges as to the policies to follow in order to obtain gains in this indicator.

**FIGURE 2.19 - RATE OF POTENTIAL YEARS OF LIFE LOST DUE TO ALL CAUSES OF DEATH (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



Source: Compiled from data available on the INE portal, 2012.

77. The leading causes of premature mortality, as measured through the PYLL rate, include malignant neoplasms (31.7%), external causes (16.3%) and circulatory diseases (11.5%), and it should be pointed out that undetermined causes actually come in 3rd (13.0%) (INE portal, 2012).

**TABLE 2.21 - 10 LEADING CAUSES OF PREMATURE MORTALITY (PYLL RATE/100,000 INHAB.) IN MAINLAND PORTUGAL (2010)**

|  | MF   | MF order | %     |
|--|------|----------|-------|
| All causes   | 3906 | -        | 100.0 |
| Malignant neoplasms  | 1239 | 1        | 31.7  |
| External causes of death   | 636  | 2        | 16.3  |
| Symptoms, signs, abnormal results and ill-defined causes                   | 507  | 3        | 13.0  |
| Circulatory diseases   | 450  | 4        | 11.5  |
| Malignant neoplasms of the digestive system and the peritoneum             | 386  | 5        | 9.9   |
| Malignant neoplasms of the respiratory system and of intra-thoracic organs | 243  | 6        | 6.2   |
| Alcohol-related diseases   | 236  | 7        | 6.0   |
| Digestive system diseases  | 231  | 8        | 5.9   |
| Some infectious and parasitic diseases                                     | 231  | 9        | 5.9   |
| Transport accidents  | 230  | 10       | 5.9   |

Source: Compiled from data available on the INE portal, 2012.

78. The leading causes of PYLL for both genders are fully in line with the pattern observed in males, which is understandable, since premature mortality is particularly associated with males.

**TABLE 2.22 - 10 LEADING CAUSES OF PREMATURE MORTALITY (PYLL RATE/100,000 INHAB.) FOR MALES IN MAINLAND PORTUGAL (2010)**

|  | M    | M order | %     |
|--|------|---------|-------|
| All causes   | 5337 | 0       | 100.0 |
| Malignant neoplasms  | 1519 | 1       | 28.5  |
| External causes of death   | 987  | 2       | 18.5  |
| Symptoms, signs, abnormal results and ill-defined causes                   | 765  | 3       | 14.3  |
| Circulatory diseases   | 644  | 4       | 12.1  |
| Malignant neoplasms of the digestive system and the peritoneum             | 528  | 5       | 9.9   |
| Malignant neoplasms of the respiratory system and of intra-thoracic organs | 407  | 6       | 7.6   |
| Alcohol-related diseases   | 406  | 7       | 7.6   |
| Transport accidents  | 368  | 8       | 6.9   |
| Some infectious and parasitic diseases                                     | 353  | 9       | 6.6   |
| Traffic accidents involving motor vehicles                                 | 351  | 10      | 6.6   |

Source: Compiled from data available on the INE portal, 2012.

79. The distribution of the leading causes of PYLL in females shows a different pattern. Causes such as malignant neoplasms of the respiratory system and of the intra-thoracic organs, alcohol-related diseases, transport accidents and some infectious and parasitic diseases are leading causes of premature mortality in males but not in females. By contrast, conditions gaining importance as causes of premature mortality in females include specific malignant neoplasms (bones, skin and breast or in genital-urinary organs, for instance).

**TABLE 2.23 - 10 LEADING CAUSES OF PREMATURE MORTALITY (PYLL RATE/100,000 INHAB.) FOR FEMALES IN MAINLAND PORTUGAL (2010)**

|  | F    | F Order | %     |
|--|------|---------|-------|
| All causes   | 2497 | 0       | 100.0 |
| Malignant neoplasms  | 964  | 1       | 38.6  |
| External causes of death   | 291  | 2       | 11.6  |
| Malignant neoplasms of bone, skin and breast                           | 266  | 3       | 10.7  |
| Circulatory diseases   | 258  | 4       | 10.3  |
| Symptoms, signs, abnormal results and ill-defined causes               | 253  | 5       | 10.1  |
| Malignant neoplasms of the digestive system and the peritoneum         | 246  | 6       | 9.9   |
| Malignant neoplasm of the female breast                                | 241  | 7       | 9.6   |
| Malignant neoplasms of genital and urinary organs                      | 134  | 8       | 5.4   |
| Digestive system diseases  | 119  | 9       | 4.8   |
| Malignant neoplasms occurring in other areas and unspecified locations | 117  | 10      | 4.7   |

Source: Compiled from data available on the INE portal, 2012.

80. PYLL due to causes regarded as avoidable through primary prevention and healthcare<sup>17</sup> amount to 36% of overall PYLL (12% and 24%, respectively).

81. In terms of causes of PYLL that are avoidable through primary prevention, in 2002 and 2010, the leading causes included motor vehicle accidents (2002-2010: 53,552 - 19,372 years) and malignant neoplasm of the trachea, bronchus and lung (16,298 - 17,763 years).

82. Despite improvements achieved, between 2002 and 2010, cerebrovascular diseases (24,109 - 13,960 years) and ischemic heart diseases (24,900 - 13,845 years) remained the most significant causes of PYLL avoidable through healthcare.

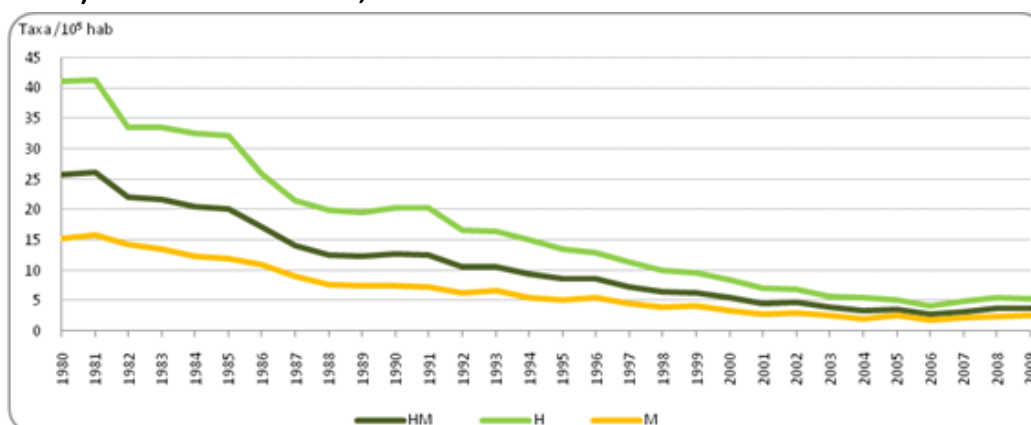
83. Ageing and less healthy lifestyles result in a higher prevalence of chronic diseases, namely cardio-cerebrovascular diseases, hypertension and diabetes. Not only are hypertension and diabetes chronic diseases, but they are also major risk factors for other illnesses. From 1999 to 2006, the population reported as suffering from hypertension rose 34%, with a 38% increase for diabetes (INE/INSA, 2009). It is estimated that the prevalence of hypertension is around 46% (Espiga de Macedo, 2007) with diabetes at 12,3% (OND, 2010)

84. Some of the available indicators regarding smoking-related diseases show favourable progress. The standardised mortality rate from chronic obstructive pulmonary disease (COPD) has dropped consistently since 1980, having reached the lowest levels during the first decade of the 2000's. The standardised mortality rate from ischemic heart disease (IHD) has decreased since the early 1990's, and in 2009, it achieved the lowest level of the three previous decades. Finally, the standardised mortality rate from a malignant neoplasm of lung appears to have attained its highest level in the late 1990's.

**FIGURE 2.20 – STANDARDISED MORTALITY RATE FROM CHRONIC OBSTRUCTIVE PULMONARY DISEASE (/100,000**

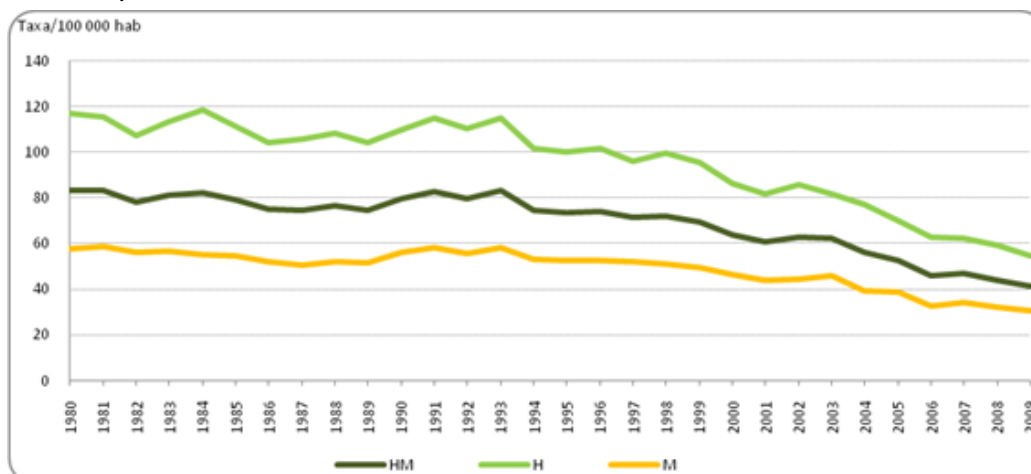
<sup>17</sup> Causes of death selected on the basis of the Ellen Nolte Methodology (Nolte and McKee, 2004)

**INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



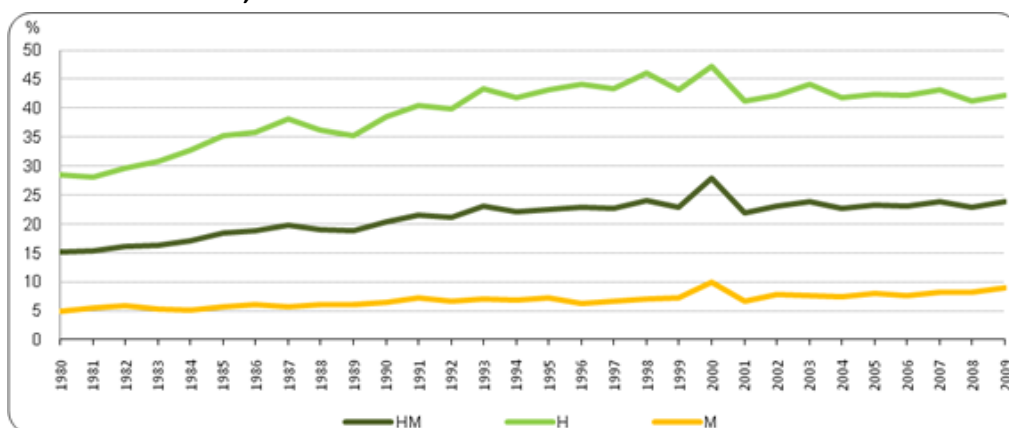
Source: Directorate-General of Health Division of Epidemiology: Mortality Statistics 1980-2006. INE: Mortality Statistics 2007, 2008 and 2009.

**FIGURE 2.21 – STANDARDISED MORTALITY RATE FROM ISCHEMIC HEART DISEASE (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



Source: Directorate-General of Health Division of Epidemiology: Mortality Statistics 1980-2006. INE: Mortality Statistics 2007, 2008 and 2009.

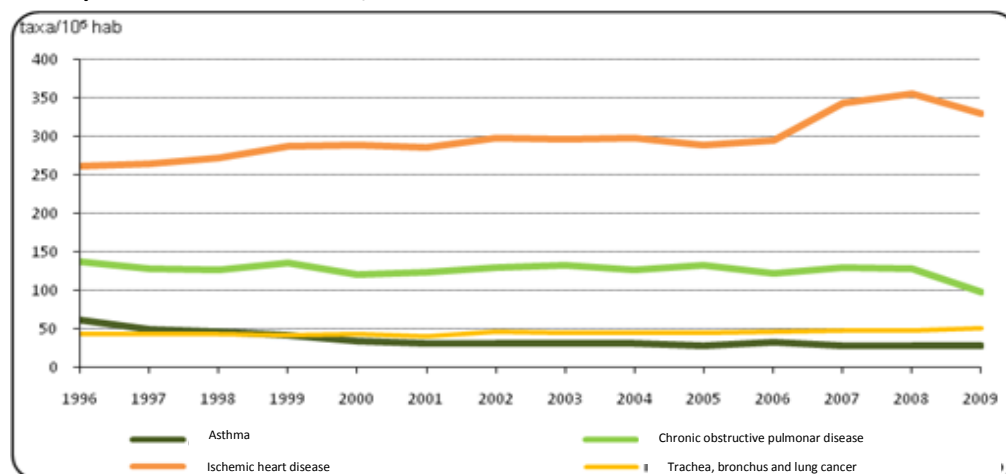
**FIGURE 2.22 – STANDARDISED MORTALITY RATE FROM MALIGNANT NEOPLASM OF LUNG (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY GENDER**



Source: Directorate-General of Health Division of Epidemiology: Mortality Statistics 1980-2006. INE: Mortality Statistics 2007, 2008 and 2009

85. In terms of morbidity, the rates of patients discharged from public hospitals due to asthma, COPD and IHD also showed positive aspects. The rate due to IHD increased until 2008, with a decrease in 2009; the rate of COPD also dropped substantially in 2009, and the rate for asthma has continued its downward trend since the mid-1990s.

**FIGURE 2.23 - PATIENTS DISCHARGED FROM PORTUGUESE NATIONAL HEALTH SERVICE HOSPITAL UNITS (/100,000 INHAB.) IN MAINLAND PORTUGAL, BY DISEASE**



Source: Directorate-General of Health Division of Health Statistics. Database of Diagnosis-related Groups

86. The average number of working days lost due to illness<sup>18</sup> has been decreasing, though in the last year there has been an opposite trend, reaching 7.3 days. The number of disability pensioners has also been decreasing (data provided by MSSS, 2010).

87. The self-perceived health status is an important predictive indicator of mortality and morbidity, as well as the use of healthcare services. From 1999 to 2006 (INE/INSA, 2009), the proportion of individuals with a favourable (good or very good) assessment of their health status rose from 47% to 53%. However, regional asymmetries are large, with figures ranging from 46.8% to 57.2%. In every age group, females show a less positive self-perception of their health status.

<sup>18</sup> Ratio of Days of Absence due to Illness/Natural Persons with at least one income and/or contribution during the year (MSSS/GEP, 2010).

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## 2.2. ORGANISATION OF RESOURCES, PROVISION OF HEALTHCARE AND FUNDING

### 2.2.1. STRUCTURE

88. The provision of healthcare in Portugal is characterised by the co-existence of a NHS, public and private subsystems specific for certain professional categories and voluntary private insurance (Barros *et al*, 2011). The NHS, the main structure providing healthcare, was created by Law No. 56/79, dated 15th September, as a government instrument for ensuring every citizen's right to healthcare, regardless of their economic and social status, as well as for foreigners, under a system of reciprocal treatment, stateless persons and political refugees. The NHS includes every kind of healthcare, from promotion and surveillance to disease prevention, diagnosis and treatment, as well as medical and social rehabilitation (Law No. 56/1979, dated 15th September).

89. The last decade was marked by a set of reforms, with particular incidence on the hospital network and on hospital emergencies, on Primary Healthcare and on Long-term Care (CCI). Mainland Portugal's hospital network comprises 212 hospitals, 91 of which are private (INE portal, 2012). The 363 Primary Care Centres were organized into 74 Groups of Primary Care Centres (ACES). In 2012, 342 Family Healthcare Units and 186 Community Care Units were in operation (CSP, 2012). The number of available beds until the 31st December, 2011, in the RNCCI, was 5595. These beds were distributed according to the following types: 906 for convalescence, 1747 for medium-term and rehabilitation use, 2752 for long-term and maintenance use, and 190 for palliative care (UMCCI, 2011).

90. This restructuring process and the creation of new healthcare services were accompanied by a positive evolution in the number of healthcare professionals. The ratio of physicians per 1000 inhabitants rose from 3.3 to 4.0 from 2001 to 2010, although there are specialties that now have or expect to have a shortage of doctors, such as General and Family Medicine, Paediatrics, Anaesthesiology and Internal Medicine, among others. Likewise, the ratio of nurses per 1000 inhabitants increased: from 3.8 to 6.0, between 2001 and 2011 (INE portal, 2012).

91. The geographical distribution of healthcare services and human resources shows asymmetries, resulting in a greater supply along the coast compared to the interior.

### 2.2.2. FUNDING AND EXPENDITURE

92. The Portuguese Health System simultaneously includes public and private funding. The NHS is mostly (90%) funded with taxes, with subsystems funded by workers and employees, while private healthcare funds come from co-payments and direct payments from patients, as well as from the health insurance premium (Barros *et al*, 2011).

93. The population's increased longevity and the growing use of medication and technology have brought about increased healthcare expenditures, resulting in an ever-growing portion of Portugal's Gross Domestic Product (GDP). Curative care and rehabilitation services and medical devices made available to outpatients comprise the most significant expenditures, in both private and public healthcare providers.

94. In 2010, current costs with healthcare rose 1.6% compared to 2009, to 17.5347 billion euros, amounting to 10.2% of the GDP and a *per capita* expenditure of 1648.41 euros. Preliminary results



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show that in 2011 there was a decrease of around 4.6% in the current healthcare costs. That year, expenditure dropped to 16.7277 billion euros, thus accounting for 9.8% of the GDP (INE, 2012b). In 2010 and 2011, the relative weight of current expenditure borne by public funding bodies<sup>19</sup> decreased, particularly in the last year (65.5% in 2011, 1.8 percentage points less than in 2010, the lowest figure since 2000).

95. With regard to private funding bodies<sup>20</sup>, in 2010 and 2011, current expenditure rose slightly (2.5% and 0.6%, respectively). From 2006 to 2011, in accumulated terms, private current healthcare expenditure jumped 12.1 percentage points higher than public current expenditure. On average, the former achieved an annual growth rate of 3.6%, while the latter rose 1.4%. The year 2011 was decisive for this difference.

96. Medication expenditures in Portugal account for 21.8% overall health costs, for a total of €3.362 billion, which corresponds to 2.1% of the GDP (2nd highest among OECD countries) [2006 data]. However, public funding of this expenditure is only 55.9%, one of the lowest percentages within the European context. At NHS hospitals, we notice a sustained growth trend in the medication market; in nominal terms, the figure for medication expenditures more than doubled, from 2002 to 2009, thus achieving an average annual growth over 10% (Portuguese Court of Auditors, 2011). At such institutions, cancer therapy, anti-retrovirals and biological medication account for 70% of medication expenditures. Anxiolytics, hypnotic drugs, sedatives and antidepressants are those which have contributed most toward such an increase, within the scope of outpatient care. The use of antibiotics, namely quinolones and cephalosporins, used as a quality indicator, has been decreasing.

97. The use of anxiolytics, hypnotic drugs, sedatives and antidepressants on the overall NHS market (DDD/1000 inhab./day) recorded a relative increase exceeding 40% from 2002 to 2009 (2002: 115.6; 2009: 162.3). The use (DDD) of antibiotics decreased from 65,279,709 to 63,635,373 from 2006 to 2009, and the percentage of cephalosporins and quinolones on the total of antibiotics dropped, from 2002 to 2009, respectively, from 12.6% to 9.2% and from 14.9% to 12.6% (data provided by INFARMED, 2010).

## 2.3. HEALTH TRENDS

98. In the last few years, health in Portugal has shown a very positive evolution, and the idea is to ensure and strengthen it in the near future. Thus, despite the added challenge that the current economic context poses, priorities need to be set which, together with the rationalisation of existing resources, allow to continually improve the health of the population.

99. Potential health gains (GPS) comprise a multidimensional nature, including aspects pertaining to mortality, morbidity, incapacity and self-perception of health.

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<sup>19</sup> Public funding bodies encompass public administration bodies, such as those included in the National Health Service (NHS), public healthcare subsystems and social security funds.

<sup>20</sup> Private funding bodies encompass private insurances (private healthcare subsystems and other private insurances), families, non-profit institutions serving families and other companies.

**TABLE 2.24 - DIMENSIONS AND INDICATORS FOR IDENTIFYING HEALTH GAINS AND SETTING PRIORITIES**

| GROUP                  | INDICATOR  | SOURCE   |
|------------------------|--|--|
| <b>MORTALITY</b>       | <b>Number of Potential Years of Life Lost (PYLL)</b><br><br>- Avoidable causes through primary intervention<br><br>- Avoidable causes through healthcare | INE  |
| <b>MORBIDITY</b>       | <b>Hospital admission rate per 100,000 inhabitants</b><br><br>- Hospital admissions for ambulatory care-sensitive conditions                             | Database of Diagnosis-related Groups (DRG), ACSS |
| <b>INCAPACITY</b>      | <b>Permanent:</b> Disability pensioners; Years of work lost due to disability  | MSSS   |
|                        | <b>Temporary:</b> Absenteeism from work due to illness   | MSSS   |
| <b>SELF-PERCEPTION</b> | <b>Self-perceived health status</b>  | National Health Interview Survey, INE/INSA       |

100. In Portugal, in the last decade, premature mortality, measured by the PYLL, has decreased 30% (data provided by the INE, 2011). In 2009, leading causes included: malignant neoplasms; external causes; circulatory diseases; certain conditions originating in the perinatal period; infectious and parasitic diseases; digestive system diseases; respiratory diseases; congenital and chromosomal anomalies; diseases of the nervous system and sensory organs, as well as endocrine, nutritional and metabolic diseases.

101. However, there are other illnesses with low mortality rates and high incidence rates. This aspect should be considered when outlining priority areas. Examples of this include mental health problems.

102. A high proportion of PYLL is due to deaths whose causes are classified as "symptoms, signs, abnormal exams and ill-defined causes" and "otherwise unspecified malignant neoplasms". The excessively high rates of death without a defined diagnosis undermine the information's usefulness and point to the need to improve records.

**TABLE 2.25 - STANDARDISED RATE OF POTENTIAL YEARS OF LIFE LOST (/100,000 INHAB.) DUE TO CAUSES SENSITIVE TO PRIMARY PREVENTION OR HEALTHCARE, IN MAINLAND PORTUGAL (2009)**

| Cause of death                                       | PYLL Rate |
|--|-----------|
| Transportation accident involving motor vehicles     | 241.7     |
| Conditions originating in the perinatal period       | 236.3     |
| Malignant neoplasm of the female breast              | 159.7     |
| Malignant neoplasm of the trachea, bronchus and lung | 144.4     |
| HIV/AIDS   | 128.5     |
| Chronic liver disease                                | 128.5     |
| Suicide  | 123.8     |
| Cerebrovascular diseases                             | 119.9     |
| Ischemic heart disease                               | 105.9     |
| Malignant neoplasm of colon, rectum and anus         | 86.6      |
| Pneumonia  | 58.5      |
| Malignant neoplasm of cervix uteri                   | 40.3      |
| Diabetes Mellitus                                    | 40.1      |

Source: Compiled from data provided by the INE, 2011.

103. Among the causes of death regarded as more sensitive to primary prevention and healthcare, those registering the highest number of PYLL in Mainland Portugal were identified: accidents with motor vehicles, certain conditions originating in the perinatal period, malignant neoplasms (with special relevance to female breast, trachea, bronchus and lung, colon, rectum and anus and cervix uteri), chronic liver disease and cardio-cerebrovascular diseases.

104. Some of these can undergo primary prevention, by controlling their risk factors (smoking, alcohol, unbalanced diet, a sedentary lifestyle), or secondary prevention, through screenings and early detection (malignant neoplasm of breast, cervix uteri and colon and rectum). Also, access to treatment at the proper time is vital for minimizing the consequences of conditions such as cardio-cerebrovascular diseases.

105. The TABLE below compares the PYLL due to causes sensitive to primary prevention or healthcare in Portugal and in the EU. The causes given are those showing a greater difference between the two groups being studied, i.e., with a greater potential for improvement in Portugal.

**TABLE 2.26 - STANDARDISED RATE OF PYLL (/100,000 INHAB.) DUE TO CAUSES SENSITIVE TO PRIMARY PREVENTION OR HEALTHCARE (MAINLAND PORTUGAL AND EU COUNTRIES THAT ARE OECD MEMBERS, 2007): DECREASING ORDER OF DIFFERENCES**

|  | Portugal | Average of the top 5 countries in the EU | PT-EU difference |
|--|----------|--|------------------|
| HIV/AIDS   | 166      | 2  | 164              |
| Land transport accidents                             | 298      | 182                                      | 116              |
| Chronic liver disease                                | 144      | 52                                       | 92               |
| Cerebrovascular diseases                             | 127      | 69                                       | 58               |
| Malignant neoplasm of colon, rectum and anus         | 85       | 56                                       | 29               |
| Pneumonia*   | 48       | 19                                       | 29               |
| Conditions originating in the perinatal period       | 186      | 148                                      | 28               |
| Malignant neoplasm of the female breast              | 164      | 145                                      | 19               |
| Malignant neoplasm of cervix uteri                   | 35       | 16                                       | 19               |
| Malignant neoplasm of the trachea, bronchus and lung | 141      | 125                                      | 16               |
| Diabetes Mellitus                                    | 40       | 25                                       | 15               |

NOTE: The 2007 figures of the EU countries that are OECD members represent the last available year in the OECD Health Data 2010 database.

\* The OECD data are for Pneumonia and Influenza. The figures ascribed to Influenza are very low and do not affect rates.

Source: Compiled from data provided by the INE, 2011 and OECD Health Data, 2010.

106. PYLL indicators regarding suicide and ischemic heart disease showed figures below the average of the top five figures for the countries being examined. Nonetheless, suicide has recorded a growing trend between 2000 and 2009.

107. The last decade has shown a drop in the hospital admissions for ambulatory care-sensitive conditions per 100,000 inhabitants, which went from 220.4 to 179.7 (a relative decrease of 18.5%).

108. In 2009, the main causes of hospital admissions avoidable through appropriate outpatient care were diabetes, asthma and chronic obstructive pulmonary disease (COPD).

**TABLE 2.27 - STANDARDISED RATE OF HOSPITAL ADMISSIONS (/100,000 INHAB.) DUE TO AMBULATORY CARE-SENSITIVE CONDITIONS, IN MAINLAND PORTUGAL (2009)**

| Causes   | 2009 Rate |
|--|-----------|
| Diabetes   | 30.0      |
| Asthma   | 29.5      |
| COPD   | 29.4      |
| Grand mal status and other epileptic convulsions | 28.3      |
| Heart failure and pulmonary edema                | 27.9      |
| Angina pectoris                                  | 23.3      |
| Hypertension                                     | 11.3      |
| Total  | 179.7     |

Source: Compiled from the database of Diagnosis-related Groups, ACSS, 2010.

109. In Portugal, the average number of absent days from work due to illness showed a relative decrease of 18.9%, from 2005 to 2009, as it dropped from 9.0 to 7.3 days (MSSS, 2011). From 2000 to 2009, the number of disability pensioners in the 18-to-64 age range (per 100,000 inhab.) decreased 23.9%, going from 55.6‰ to 42.3‰. In 2010, the average number of work days lost due to disability was 11.2 days (data provided by the Ministry for Solidarity and Social Security, 2011).

110. Nationwide, the percentage of the population considering their health status to be "good" or "very good" increased between the 3<sup>rd</sup> and the 4<sup>th</sup> INS. However, significant differences can be seen between age groups, genders, education levels, occupations, incomes or residence regions. The lowest figures are seen among the elderly, in females, in people with low education levels and lower incomes, in farmers or unskilled workers, and among those living in the Centre region (Graça L, 2002), thus reflecting demographic, social and economic inequalities which need to be acted upon.

111. The percentage of resident population that positively assesses their health status has been increasing, reaching 53.2% in 2006 (INE/INSA, 2009).