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Italian Observatory on Healthcare Report 2014

Health status and quality of care in the Italian Regions

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Osservasalute Report 2013– Summary

Since 12 years, the National Observatory on Health in the Italian Regions monitors the health status of the population and the impact of the organizational determinants on which the Regional Health Services are currently based. The Report Osservasalute is divided into two parts, dealing first with issues relating to health and the needs of the population and the second to the Regional Health Systems and the quality of services offered. It has the aim to collect objective and scientifically rigorous data, to make them available to the national and international scientific community and those who have decision-making responsibilities, so that they could take appropriate action, timely and rational, likely to improve health and to meet the needs of target populations.
The data analyzed in the report Osservasalute 2014 show that the health status of the Italian is good overall, with an increase in the past 10 years of life expectancy for both genders and a decline in the infant mortality rate. It is necessary to encourage the provision of preventive services and social and health policies that specifically reduce the likelihood of getting sick and face each citizen health needs and the aging process, with the always greater onset phenomena of comorbidity and complexity in patients, also taking responsibility for significant migration flows.

Differences between geographic areas, between different regions and between men and women still persist in various areas investigated, and in some cases intensified. This heterogeneity is due to different programming decisions, organizational and management that have led, in some regions, problematic financial scenarios with consequences in the quality of services provided in the offer and equity of access to them.
This type of situations are found mainly in the South, where some areas show most critical conditions.
The so far set up scenario, of course, is compounded by the repercussions of the economic crisis that continues to invest our country and that has a decisive influence on lifestyles and on the citizens quality of life, especially for poor people. Analyses and indicators presented below show some consequences of the economic crisis on public health, but it is essential that they should be read in a positive way, as a basis for future choices.
It appears, therefore, evident that it is necessary and sometimes urgent the intervention of all the institutions, both nationally and regionally, to mitigate and possibly prevent a widening different access to health, ensuring all citizens adequate and equitable health care, regardless of the place of residence and socio-economic status.

PART ONE – Health and population needs

Population - The study of the age structure of the population is central to the policies and interventions planning in the health sector, since many phenomena related to the health needs are directly related to or influenced by the age structure of the population.

Demographic indicators confirm that in our country the process of population agingis advanced and its consequences are emphasizing over time. Regarding the relation between genders, it is shown that, at older ages, this is heavily biased in favor of women who have a higher survival. Regional differences see some areas of the country most involved in the aging process: at one extreme Liguria, that holds the record for the "oldest" region of Italy; the other Campania, where the process of aging of the population is in a relatively less advanced stage.

The analysis of the dynamics of the population, shows a significant increase of the resident population. The natural balance is negative in almost all regions, while the migration rate is positive, but low.

The average number of children per woman, for all the residents, in 2012, is 1.42 (Italian 1.29, foreign 2.37 children per woman). There are considerable regional differences. The average number of children per woman is 1.67 in Bolzano AP (Autonomous Province) compared to 1.14 in Sardegna. The average age at birth remains high, at 31.4 years (32.0 years Italian and foreign 28.4 years).

Interesting is the “Indicator on Centenarians”: the data show that the over 100 years people amount is nearly 3 out of 10,000 residents. The female gender is most represented.

Survival and cause-specific mortality - The life expectancy at birth in 2012 was 79.6 years for men and 84.4 years for women. Overall, since 2002, men have gained 2.4 year of life and women 1.4 years. The difference in the average length of life of men and women continues to shrink, remaining, however, still considerable (+4.8 years for women in 2012 compared to 5.8 years in 2002). At the regional level, there are still strong differences. For both genders the lowest values of life expectancy are observed in Campania, the highest in Trento AP.

In 2011, the infant mortality rate among residents in Italy is 3.1 (per 1,000 live births), lower if compared to 2006 when it was 3.4 (per 1,000). This decrease is due to the reduction of neonatal mortality. The leading cause of death in the first year of life is represented by morbid conditions originating in the perinatal period. In the period 2009-2011 all southern regions have a higher rate than the national one: a resident born in the South has a chance of dying within the first year of life 1.3 times higher if compared to a resident born in the Centre and 1.4 times higher than one in the North. Since 2006 the infant mortality rates of Italians were always lower than those of foreigners, although the trend is downward for both: the rate of Italians dropped from 3.23 deaths (per 1,000 live births) in 2006 to 2.99 (per 1,000) in 2011; the foreigners one from 4.99 to 4.16 deaths (per 1,000 live births). In most regions there is a gap between Italian and foreign: foreign children under one year of age die 1.5 times more than those Italian.

Risk factors, lifestyles and prevention

Smoking - In 2013, the proportion of smokers among population aged 14 and over amounted to 20.9%. The amount is slightly lower than the previous year, but is part of a trend characterized by a slow and steady decline in the percentage of smokers. The prevalence of people who stopped smoking is not linear: in 2013 it is 23.3%, higher if compared to 2012 (22.6%) and similar to 2010 and 2011 (23,4%). In the Center, in 2013, there is the highest prevalence of smokers (22.5%), in the North-East the lowest (19.4%). Still very high the difference between men and women, among smokers (26.4% men vs. 15.7% women) and ex-smokers (30.8% men vs. 16.3% women). Cigarette smoking is more prevalent among young people aged 25-34 years (36,2% of men and 20,4% of women).

Alcohol - Because of the new limits, already published by the Ministry of Health, indicators related to age youth and to adults of this edition have been updated and they are not, therefore, comparable with those published in previous editions.

The prevalence of non-drinkers and abstainers in the last 12 months amounted to 34.2% (in 2012), increased if compared to last year (33.6%). There is an increase in the percentage of non-users if compared to 2011, mainly in Piemonte and Valle d'Aosta (+3.5 percentage points), Lombardia (+2.8), Basilicata (+3.4) and Calabria (+4.2), a decrease mainly in Liguria (-4.5) and Marche (-3.5).

The prevalence of consumers at risk, considering the new indicator, in 2012, amounted to 24.0% for men and 9.7% for women, with a reduction of, respectively, 2.6 and 0.8 percentage points, if compared to the 2011 value.

Among young people (11-17 years) the prevalence of consumers at risk, in 2012, amounted to 19.7% (males 22.0%; females 17.3%), confirming the downward trend in the prevalence of young consumers at risk. At the regional level, there were no statistically significant differences of gender and the only region where there is a decrease in prevalence is Lombardia (-8.7 percentage points). Lazio is the only region with a value significantly lower than the national one.

In 2012, in the age group 18-64 years, the prevalence of consumers at risk decreased if compared to 2011 (-2.9 percentage points among men and -1.0 percentage point among women).

The prevalence of binge drinkers in the population aged 18-64 years is 13.8% among men and 4.0% among women, with higher values in the Bolzano AP (37.8% for men and 13.8% for women) and lowest in Campania among men (8.8%) and in Basilicata among women (2.0%).

Overweight and obesity - In Italy, in 2013, more than a third of the adult population (35.5%) are overweight, while one in ten is obese (10.3%); a total of 45.8% of subjects aged≥ 18 years is overweight.

The differences found in the regions are considerable and it is confirmed the North-South gradient: the southern regions have the highest prevalence of obese people (Basilicata 14.2%, Molise 12.7%, Abruzzo 12.1% and Puglia 12.0%) and overweight (Campania 41.6%, Puglia 39.2% and Sicilia 39.1%) than in northern regions (obese: Bolzano AP 6,8%, Piemonte 8,3% and Trento AP 8,8%; overweight: Liguria and Valle d'Aosta 31,6%, Lombardia 31,8%). However, it should be noted that, since 2001, in the North-West there has been an increase of 5 percentage points for overweight people.

Data for specific age groups shows that the percentage of the overweight population increases with age: the overweight rose from 15.1% of the age group 18-24 years to 46.4% of age group 65-74 years; obesity from 2.5% to 16.4% for the same age groups. There are striking gender differences: overweight is more prevalent among males than among females (44.1% vs 27.5%), as well as obesity (11.5% vs 9.3%). The age group in which there are the greatest percentage is, for both genders, the one between 65-74 years.

Overweight and obesity in under 18 age group - The data (2012-2013) show that in Italy the proportion of overweight children and adolescents is 26.5%. The phenomenon is more prevalent among males than among females (29.6% vs 23.3%), in all age groups except in children 6-10 years; it is more pronounced among adolescents (14-17 years). The highest prevalence is observed among children of 6-10 (almost 34%) and decreases with increasing age until it reaches the minimum value among teenagers of 14-17 years. We observe a strong North-South and Islands gradient with particularly high percentages in Campania (38.9%), Calabria (34.5%), Molise (32.5%), Sicilia (32.0%) and Puglia (30.0%).

An high prevalence is shown among children and young people living in families with scarce or insufficient economic resources; where the level of parental education is lower; wherein at least one of the parents is in excess weight.

Physical Activity - In 2013, in Italy, 30.6% of people aged 3 years and over claim to practice one or more sports in their free time, i.e. approximately 18 million. Among them, 21.5% usually play sports and 9.1% do it occasionally. 27.9% of the population perform physical activity, while inactive people are about 24 million and 300 thousand (41.2%). The long-term data show an increase in the percentage of people usually playing sport (from 19.1% in 2001 to 21.5% in 2013).

If compared to 2012, in 2013, in both genders, there is a significant increase in sedentary people rate (from 34.6% to 36.2% in men and from 43.5% to 45.8 % in women).

The northern regions have the highest proportion of people who play sports continuously, while the southern regions have the lowest percentage, except for Sardegna (30.8% play sport continuously or occasionally).

Increasing age lead to a decrease in sports interest (continuous or intermittent), and to an increase in the physical activity. The gender analysis shows large differences in all age groups, except for the very young (3-5 years), with levels of sport much higher among men.

Vaccination coverage of the child population - The so-called compulsory vaccination achieve the minimum established coverage fixed by the current National Vaccine Prevention Plan, in accordance with the recommendations of the World Health Organization, that is at least 95% within 2 years age.

Regional values are higher than the minimum target set, except for the Valle d'Aosta, Bolzano AP, Trento AP, Veneto (where the suspension of the mandatory vaccination was introduced from 1 January 2008), Friuli Venezia Giulia, Molise, Campania and Calabria.

The coverage of vaccination for Measles-Mumps-Rubella has not yet reached the optimal value of the 95% indicated in the National Plan for the Elimination of Measles and Rubella congenital.

Influenza vaccination coverage - The flu vaccination coverage in the general population is 15.6%, in the season 2013-2014, with slight regional differences, but without a real geographical gradient. In children and young adults coverage rates, at national level, do not exceed 2.6% in the different age groups considered. In the elderly over 65, flu coverage in any region reaches values considered minimal (75%) by the National Vaccine Prevention Plan.

In the period 2002-2003/2013-2014, regarding the vaccination coverage of the 65s, there was 8.1% decrease at the national level.

Cancer screening - The "Progressi delle Aziende Sanitarie per la Salute in Italia" (PASSI) (i.e. Progress of Local Health Authorities for Health in Italy) collects information on the coverage of screening, in the programs organized by Local Health Authorities (LHA) or on personal initiative, predictors of screening practice and promotion activities.

According to PASSI data, for mammography exam as a preventive measure, at the national level, in the period 2010-2013, 51% of the target population of women joined the programs offered by the LHA, while 19% carried out the examination, in the times recommended on spontaneous initiative. We highlight regional differences related to the proportion of women who adhere to the programs organized (the largest share), which is the mirror image of the geography of mammography spontaneous screening, with lower values in the North (17%), followed by the Centre-South and Islands (21%). The proportion of women undergoing mammography screening organized programs is higher among 50-59 (24%), among the most educated (30%) and among those who report that they have no economic difficulties (23%).

In the period 2010-2013, 40% of the target population undergoing screening for cervical cancer (Pap test and/or Human Papilloma Virus test) adhere to the programs offered by the LHA, while 37% act by spontaneous initiative. Geographical differences appear between organized programs and spontaneous screening (47% vs 38% in the North and 45% vs 35% in the Center; 30% vs 35% in the South). From 2008 to 2013 the coverage for cervical cancer organized screening grows, while spontaneous screening rate remains stable or decreases significantly in the North (-4.6%). The proportion of women undergoing screening for cervical cancer on spontaneous initiative is higher among 35-49enni (49%) and among the most educated (45%) and is particularly sensitive to economic conditions (41% between Women who report that they have no economic difficulty and 29% among those with many economic difficulties).

With regard to screening for colorectal cancer, the national coverage is far from the expected: only 39% of the target population report to have performed, as a preventive measure, one of the tests for the early detection of colorectal cancers. Strong geographical gradient North-South and Islands are shown, with coverage ratios of 61% in the North, 42% in Central and 18% in the South and Islands. Screening for colorectal cancer is more common among 60-69enni (43%), in men than women (40% vs 38%), in people without economic difficulties compared to those with many (49% vs 28%) and among Italians than foreigners (39% vs 33%).

Accidents - In 2013, in Italy, traffic accidents with people injured were 181,227 and caused 3,385 deaths and 259,500 varying severity wounded people.

Compared to 2012, there is a decrease in the number of accidents with personal injury (-2.2%) and the number of deaths (-6.9%) and injuries (-2.0%). The number of deaths has decreased in 2013 by 52.1% compared to 2001. The standardized mortality rates are significantly higher for males compared to female gender (0.92 vs 0.21 per 10,000 in 2013).

Analyzing accidents and deaths at work in the period 2011-2013, there is a decrease compared to the data presented in the previous report Osservasalute, but the regions that presented the major and minor values remain the same. The northern regions have the highest values, while all regions of the South, except for Abruzzo and Puglia, have

the lowest accident rates. As for mortality rates for accidents at work, the highest value is recorded in Molise (11.43 per 100,000), while the minimum rate in the Bolzano AP (2.32 per 100,000).

As regards to domestic accidents, they have involved, in 2013, 638 thousand people (10.5 per 1000). Women are the most affected (about 68% of all accidents), with a ratio of 13.6 injuries (per 1,000). Over 20 seniors over 65 years (1000), 28 senior citizens over 80 years (to 1000) and 11.5 children 0-5 years (to 1000) have undergone at least one domestic accident. With regard to the types of lesions diagnosed in the emergency department, 42% of the cases is represented by injuries, especially those affecting the upper limbs (high prevalence among housewives accidents in the kitchen with knives and sharp objects), about 26% by bruises, about 11% by fractures (especially in the upper and lower limbs) and about 9% by burns. The North is the geographical reality that has the largest number of domestic accidents.

Environment – The production of municipal solid waste in 2013 has nearly reached 30 million tons, equivalent to that recorded about 12 years ago; after a long period of growth, since three years a turnaround in production is confirmed, even in per capita values, decreased by about 60 kg/inhabitant per year if compared to 2006. With respect to geographic areas, the higher amount of production is in the Center (about 549 kg/inhabitant per year), followed by the North (489 kg/inhabitant per year) and the South and Islands (approximately 448 kg/inhabitant per year). With regard to the individual regions, Lombardia (15.5%) and Lazio (10.7%) together generate a quarter of the total national production of waste.

Analysis of the data shows that the municipal solid waste disposed in landfills, in 2013, amounted to just under 11 million tonnes, registering a reduction of around 7% if compared to 2012; a decrease was also observed with respect to the number of landfills, progressively reduced over the years (from 303 in 2006 to 180 in 2013). Landfilling again is confirmed as the most widespread form of management.

Regarding the thermal destruction, the ability of national incineration has reached 18.2% of the total municipal solid waste, still below the European average (24.0%) and exceeded 5.3 million tons of waste treated. In particular, incineration in 2013, compared to the previous year, recorded a modest increase in absolute amount of waste incinerated (about 300 thousand tons) and, as regards the relationship with the waste products, a very slight increase, rising from 17.0% in 2012 to 18.2% in 2013.

The separate collection has reached in 2013, at the national level, a percentage equal to 42.3% of the total production of municipal solid waste, an increase of 2.3 percentage points compared to 2012 (about 516 thousand tons). The macro area that has contributed most to this increase is the South, which increases the amount of recycling in absolute value, between 2012-2013, of about 176 thousand tons, followed by the Centre (+175 thousand tons), and North (+166 thousand tons).

In 2010, the total amount of special waste produced was approximately 137.9 million tons, almost entirely made up of non-hazardous waste (93%). Compared to 2009 the total production of special waste shows an increase of 2.4% due, almost entirely, to the production of non-hazardous waste. Northern Italy shows production values per capita higher than the national average (2,670 kg/inhabitant per year of non-hazardous waste; 196 kg/inhabitant per year of hazardous waste). With regard to the management, the total amount of treated waste amounts to almost 145 million tons and there was an increase of 7.3% on the total managed if compared to 2009.

The analysis related to fine particulate pollution show that Italy is fragmented into different "multi-speed" realities between the North and the South so that, the good spread and management of count units in the North is not matched by an equal good management and distribution of the same in the South and Islands. The data of 2012 show, concerning the average annual daily average concentrations of fine particulate (PM10), a compliance with the limit value (PM10: 40µg/m3) in all regions. For the average number of days exceeding the limit value of the daily average concentrations of particulate matter (PM10), our country shows a worsening trend, in 2012, with an overall average of exceeding the maximum threshold of 50 mg/m3 (daily average) for PM10, along 27 days/year.

Analyzing data on the average annual daily average concentrations of particulate matter (PM 2.5) for 2012, a national value of 17 ug/m3 is shown, value standing below the maximum limit of 25 mg/m3 of PM2.5 to be compulsory reached by 2015, as set by the European Directive 2008/50/EC.

With regard to asbestos and production of Waste Containing Asbestos (WCA), in 2012 in Italy 264 938 m3 of WCA were disposed (WCA average 0.0045 m3 per inhabitant) , going from 52 502 m3 in Lombardia, to 106 m3 in Bolzano AP, although the Valle d'Aosta, Trento AP, Veneto, Umbria, Lazio, Molise, Campania, Calabria and Sicilia, appear not to have sites dedicated to the WCA disposal.

Cardiovascular and cerebrovascular diseases – In our country, the mortality rate for ischemic heart disease affect almost twice men than women; in particular, in 2011, there were 13.47 deaths (10,000) among men and 7.46 deaths (10,000) among women. At the regional level the negative record is in Campania for both men (17.14 per 10,000) and for women (10.61 per 10,000). There is a downward trend regarding mortality from ischemic heart disease since 2003 in both gender, in all age groups and in all regions.

The Global Absolute Cardiovascular Risk at 10 years (RCVGA-10) is an indicator to assess the likelihood of getting a major cardiovascular event in subsequent years, knowing the level of certain risk factors. The majority of men (41.2%) is at "Moderate-Low" risk (3-9 RCVGA-10%), while women (64.7%) show a "Low" risk (RCVGA-10 <3%). For both genders the majority of those who belonged to the lower risk classes (RCVGA-10 <3% and 3-9%) have not changed their risk class after 1 year: 80.49% of the men in the class <3% and 78.27% of those in the class 3-9%; for

women 91.84% and 76.59%, respectively. Moving to higher risk classes, the proportion of those who maintain the same level of risk at 1 year decreases and the proportion of those who improve their risk condition increases. The encouraging fact is that the 71.43% of women and 37.62% of men at "High" risk (RCVGA-10 ≥20%) at 1 year, improved their risk factors, switching to a class of lower risk. Overall, after about 1 year, 14.99% (19.25% men; 10,74% women) of assessed people improves its risk class, while 10.54% (14.43% men; 6, 65% women) worsen it.

Metabolic diseases – Diabetes mellitus is one of the most common chronic diseases worldwide, representing one of the major health problems.

Concerning hospitalization under the Ordinary type of Hospitalization (RO) and Day Hospital (DH), in 2013, standardized rates are higher in the South and the Islands, as evidenced in previous years and for both genders. The standardized rate of hospital discharges under the RO is highest in Puglia (95.25 per 10,000), followed by Molise (87.85 per 10,000) and Campania (86.55 per 10,000). Considering the DH, however, the highest values are observed in Molise (28.14 per 10,000) and Campania (18.96 per 10,000). The data 2005-2013, nationally, showed a steady decline for all schemes of hospitalization.

Mortality data in 2010, stratified by region and gender, show that the highest rates are found, for both genders, in two southern regions: for men in Sicilia (5.45 per 10,000) followed by Campania (4,68 to 10,000), while for women in Campania (4.98 per 10,000) followed by Sicilia (4.68 per 10,000). In 2011, the situation is similar. For both years there is a geographical gradient of mortality North-South and Islands and more involvement of advanced age groups.

Concerning the hospitalization for lower limb amputation, as a complication of diabetes, in the decade 2003-2012 the standardized discharge rate for amputation remained essentially stable, with a national average of 18.2 (per 100,000). It is found, however, a reduction of major amputation (6.2 vs 5.0 per 100,000) and, by contrast, a growing trend of minor amputation. The rate of discharge increases strongly with age in both genders, and as recorded in all age classes, amputations are more common among men than women. The regional variability is significant, without a gradient North-South and Islands.

The hospitalization for short term complications, compared to 2012, includes the following diagnoses: ketoacidosis resulting from diabetes (51.6%), followed by hyperosmolarity (29.8%) and diabetes with other type of coma (18, 7%). The rate of hospitalization for acute complications is higher in men (30.9 per 100,000) than women (23.8 per 100,000) and increases strongly with age in both genders. There was a significant regional variability with standardized rates, ranging from 15.7 (per 100,000) in Marche to 52.0 (for 100,000) in Basilicata. This variability remains even considering the prevalence of the disease in different geographical areas, as already observed in previous years. Evaluating the 2001-2012 trend a strong decrease in hospitalizations for acute complications is observed, with a total reduction of 53.2%.

Infectious Diseases - Infectious diseases represent a major public health problem despite the availability, for many of them, of effective preventive and therapeutic interventions. In this edition of the Report the rate of incidence of some respiratory transmitted diseases (measles, parotitis, rubella and varicella) were considered.

The measles incidence from 1996 to 2012 shows an endemic-epidemic trend, with very high peaks during some epidemics. In 1996-1997 (67.49 cases per 100,000 in 1997) and in 2002-2003 (30.92 cases per 100,000 in 2002), were mainly affected regions of the South and the Islands and the age group 0-14 years; in 2008 (8.81 cases per 100,000) and 2011 (11.08 cases per 100,000), the regions of the North and Centre and the age group 15-24 years.

The trend in the incidence of parotitis in the period 1996-2012, has a higher value in 1996 with 108.86 cases (per 100,000) and in 1999 with 68.96 cases (per 100,000), above all in the Centre-North. Since 2000, the incidence is rapidly decreased to reach the minimum in 2012 (1.03 cases per 100,000) and is always higher among men and in the age group 0-14.

Rubella has resulted in three outbreaks between 1996 and 2012: in 1997 (55.66 cases per 100,000) and 2002 (10.45 cases per 100,000) affecting the age group 0-14 years and in 2008 (10 , 22 cases per 100,000) affected, above all, the age group 15-24 years. Centre-North regions are more affected as the male gender.

Rubella shows a decreasing trend between 1996 and 2012, with some fluctuations. The highest incidence was recorded in 2004 (214.76 cases per 100,000) and the lowest in 2012 (66.99 cases per 100,000). The disease affects mostly men and the age group of 0-14 years, with a clear North-South and Islands gradient.

Health and disability – The number of persons with functional limitations in daily activities who live in a family amounted in 2013 to 3,166,738 (5.5% of the Italian population), and around 370.000 are guests of residential social-care institution.

Rates analysis showed a gradient North-South and Islands, considering the use of people in the South to keep people with disabilities in their own family, as well as the lower supply of residential facilities dedicated in South. 35.2% of subjects with functional limitations does not declare any serious chronic disease, 30.5% have a serious chronic disease, while the 34.3% have two or more chronic diseases. More than half of people with functional limitations declares a bad perception of their health, with a best result in the North than in the Centre-South and Islands.

The analysis of quitting care because of economic reasons, investigating, in particular, the abandonment of specialist visits, usually paid by ticket or out of pocket, shows how the 12.4% of people with functional limitations have given up visits, invoking economic motivation (44.8%), with clear geographical gradient North-South and Islands.

Compared to people without functional limitations, the proportion of people with limitations that is forced to give up a visit is increased by about 50% (12.4% vs 7.6%), with economic motivation invoked less frequently (44.8% vs 56.6%).

Mental health and addictions – The national trend, in 2010-2013, concerning the number of hospitalizations for Parkinson's and Alzheimer's disease showed a steady reduction both as total value (from 12.63 to 10.87 per 10,000) than in the stratification by gender value (from 14,01 to 12,12 per 10,000 in men; from 11.61 to 9.96 per 10,000 in women). Analyzing regional data, there is a trend in variability of both genders, without a regional gradient. In 2013, hospital discharges from public and private institutions accredited for Parkinson's disease and Alzheimer's disease, considering the distribution by gender and age, show in men greater than women, an increase with increasing age, especially in the 75 years and over.

About the use of antidepressant drugs, after the steady increase registered in the decade 2001-2011, the prescriptive volume seemed to have reached a stability in 2012 (36.9 Defined Daily Doses-DDD/1,000 inhabitants/day in 2011; 36.8 DDD/1,000 inhabitants/day in 2012), while, in 2013, there is a new increase (39.1 DDD/1,000 ab day). The increasing trend may be attributable to several factors among which, for example, the use of this pharmacological class for not strictly depressive psychiatric disorders control (e.g. anxiety disorders), the reduction of the stigma referring to problems of depression and the increased attention of the General Practitioner (GP) on such diseases. The higher consumption in 2013 was in Toscana, in Bolzano AP and Liguria, while lower consumption was registered in Campania, Basilicata and Molise.

About the mortality rate for suicide, in 2010-2011, the crude rate was equal to 7.62 (per 100,000) of residents aged 15 and over. In 78.7% of cases, suicide victim is a man. Is important to note that the distribution of rates by age shows an increase with age, especially marked for men over 65 years, reaching maximum values in the age group 85 years and over. For women the suicide mortality data reaches higher values in the age group 70-74 years and then fall in the older groups. The indicator has also a strong geographical variability with rates generally higher in the northern regions (with the exception of Sardegna). The indicator has also a strong geographical variability with rates generally higher in the northern regions (with the exception of Sardegna). About the trend, after the historical low value reached in 2006, there was a new upward trend in recent years, mainly focused on men for whom, in the last 4 years, there was an increase in mortality suicide in the working age group (30-69 years), if compared to a reduction of the youngest and among the elderly (except for the extreme age). There were no noteworthy changes for women.

Mother and child health – The maternal and child health is an important part of public health as pregnancy, childbirth and the postnatal period are, in Italy, the first cause of hospitalization for women.

In 2011, 9.4% of births occurred in facilities with a volume <500 deliveries per year, a volume which does not meet a quality standard acceptable. This amount is high in many southern regions among which Sardegna (24.22%) and Molise (19.68%). A Neonatal Intensive Care Unit is present in 122 of the 565 analyzed birth facilities and only 95 of them are in birth facilities with at least 1,000 deliveries per year.

The proportion of Caesarean section (TC) is still high despite the continuous small reduction from 2006. The total rate of TC is reduced from 36.6% to 36.5% between 2012-2013. There is a North-South and Islands gradient, with highest values of primary TC in Campania (33.54%), Molise (29.16%) and Sardegna (28.64%).

Births by Medically Assisted Procreation are 11,974 in 2012. The rate of pregnancies (indicator of success) and the proportion of multiple births (indicator safety techniques) have not undergone major changes if compared to 2011. The number of cycles started with the application of FIVET and ICSI techniques is increasing, even if slightly, from 924 to 932 cycles per million inhabitants, with differences between North and South and Islands.

With reference to the voluntary interruption of pregnancy (IVG), Italy shows lowest values among the Developed countries. Between 2011-2012 the abortion rate continues to decrease (7.6 cases per 1,000 women) in all age groups. The number of abortions performed with RU 486 is equal to 7,855 in 2012 (8.5% of the total), although in some regions this proportion is considerably higher (more than 15% in Liguria, Valle d'Aosta, Piemonte and Emilia-Romagna). Since the recommendations of the “Consiglio Superiore di Sanità”, the Italian Drug Agency (AIFA) and the Ministry of Health make available the Ordinary Hospitalization if IVG by RU 486 is performed, we have about 90% of admissions in Day Hospital (DH) in the case of surgical abortions and about 38% of admissions to DH when administering the RU 486, unlike in other countries.

For miscarriage it should be noted that in 2012 the ratio calculated per 1,000 live births has increased from 137.4 to 139.5 (per 1,000), if compared to 2011, involving mainly the central age groups (30 -39 years).

Immigrants and Health – At the date of October 9, 2011, foreign residents in Italy are just over 4 million: the foreign presence has considerably increased in one decade (during the previous census there were "only" 1.3 million foreign residents).

Nationally, more than half of foreign residents (53.0%) comes from a country on the European continent, in particular 27.5% from a country of the European Union (EU) and the remaining 25.5% from a European but not EU country. The citizens from Africa amounted to 21.0% (in particular, around two out of three African residents come from a country in North Africa), 17.7% of residents coming from Asia and only 7.8% from Central-South America.

In the last decade there was a significant increase in the weight of the newborn from at least one foreign parent. In particular, in 2012, about 19% of births, or nearly one in five, was born from a foreign mother, regardless of the

nationality of the father. This indicator has significantly increased compared to 2000 (when it was 6.4%). Similar rate trend can be observed when considering newborn with at least the foreign father and born from two foreign parents (about 15% of births).

The report provides a broad overview on lifestyles and health conditions of the immigrant population.

The proportion of regular smokers among foreign citizens aged 14 and over is 23.2%. There is a different smoking habits between the gender: 32.4% of men against 15.1% of women. The comparison with the Italian population shows that smoking is a risk factor more prevalent among Italian women (19.5%) compared to foreign women, while for men the proportion of smokers is almost equal.

Around 7.9% of the foreign population 18 years and over is obese, similar to 7.8% of the Italian population. Significant differences emerge between different citizenships: values above average are found for Albanian citizens (9.4%) and from Romania (9.3%). Chinese citizens have the obesity percentage lower than the average (1.4%), followed by the Poles (4.4%). If in the Italian population, obesity is a male prerogative (9.0% compared to 6.7% of women), among foreigners the phenomenon interested in the same way men and women (respectively, 8, 1% and 7.8%).

The rate of foreign citizens aged 14 and over who consumed at least one alcoholic drink during the year is equal to 56.2%. As for smoking, the consumption of alcoholic beverages among foreigners interested more men than woman (65.7% of cases consume alcohol in the year compared to 47.9% of women). Overall, the attitude to the consumption of alcohol is less common among foreigners than Italians (for the latter, 69.4% consume alcoholic beverages in the year, namely 82.1% of men and 57.5% women).

Foreigners aged 14 and over who had at least one risk behavior in the consumption of alcohol (a daily unmoderated consumption of alcohol, six or more units of alcohol on a single occasion) are 13.2%, similar to the Italian population of the same age (12.4%). Among the foreigners aged 14 and over, the male population has risky habits of alcohol consumption three times higher than women (20.1% of men have at least one risk behavior compared to 7.1% of women). The foreign consumers at risk are concentrated among adults aged 25-44 years (14.4%).

Binge drinking is a phenomenon that affects 9.3% of the foreign population 14 years and over, with a prevalence in the age group 18-24 years (11.7%). In particular, for men in this age group, the peak of 17.8% is reached.

The standardized discharge rate, in the ordinary hospitalization, for immigrants aged 18 and over from countries with high migratory pressure, in 2011, is 79.9 (per 1,000 foreign residents) for men and 101.1 (per 1,000 foreign residents) for women, both lower than the Italian one (120.4 and 124.3 per 1,000, respectively).

The standardized mortality rates of foreigners aged 18-64 years in 2011 varies according to the geographical area of origin: is equal to 9.3 (per 10,000) for those coming from countries with high migratory pressure, 11.2 (per 10,000) for those in advanced development and 14.4 (per 10,000) for foreigners coming from the new member states of EU. The standardized mortality rates lower than the one registered in Italy can be explained by the fact that immigrant populations are made up of individuals on average healthier, able to deal with a difficult experience as the migration; Moreover, many individuals immigrants choose to return home when they fall into a state of serious illness.

PART TWO – *Regional Health Systems and quality of services*

Economic-financial framework – In this edition a new indicator of health spending was presented: current public health expenditure by function, in relation to Gross Domestic Product (GDP). The current public health expenditure/GDP is 7% in 2012. At the regional level the lowest is in Lombardia, (5.33% of GDP), while the highest value was recorded in Molise (10,42%). The total amount of current expenditure is made by three different spending functions: public health expenditure for the current services provided directly (from a minimum of 2.80% of GDP in Lombardia, to a maximum of 6.50% in Sardegna); current public health spending for other expenses (from a minimum of 0.26% of GDP in Lombardia, to a maximum of 0.64% in Calabria); current public health spending for services provided in agreement (minimum 1.36% of GDP in the Bolzano AP to a maximum of 4.27% in Molise). This last item of expenditure is divided into spending on pharmaceutical care (0.57%), private nursing homes (0.58%), specialist medical care (0.30%) and for rehabilitation assistance, integrative and prosthetic (0 , 25%). In all regions of the component that plays a primary role is the pharmaceutical expenditure. Some exceptions are the Bolzano AP (the largest share of spending for general medical care) and Lombardia, Lazio, Molise, Campania and Puglia (greater share of spending for private nursing homes).

In 2013, public health expenditure per capita is € 1,816, lower if compared to other countries with similar health care system. This value is the result of a downward trend for national health expenditure (-2.36% between 2010 and 2013 with an average annual compound rate of -0.79% and a decrease of 1, 50% last year alone). At the regional level, the Bolzano PA has the highest per capita expenditure (€ 2,231), while the Campania has the lower with € 1,686. The distribution of expenditure between regions is not homogeneous without, however, a clear North-South and Islands gradient.

In 2012, the national health deficit amounts to about 1.043 billion euro, less than 2011 (€ 1.261 billion), confirming the trend of systematic reduction started after the peak (€ 5.790 billion) achieved in 2004. Even the deficit per capita, in 2012 (18 €) is the lowest of the whole period considered (2002-2012). Interregional differences remain strong, with a large North-South and Islands gradient.

Institutional and organizational structure - The staff of the National Health Service is undergoing a constant contraction. In fact, at the national level, the data show that the compensation rate of turnover, in all 4 years used as a reference, is <100. Analyzing the 2009-2012 trend, the compensation rate has steadily decreased over the period, reaching to score 68.9 percentage points in 2012, about 10 percentage points lower than the previous year (78.2% in 2011). In 2012, therefore, the trend of sharp contraction recorded from 2010 onwards is confirmed. At the regional level, there is a strong heterogeneity of the compensation rate of turnover with only two regions (Valle d'Aosta and Trentino-Alto Adige) showing in 2012 values >100; in general, the North-South and Islands gradient is less marked than in previous years. The values of Lazio, Puglia, Campania, Molise and Calabria are all <25%. These values are probably attributable to the effects of the Realignment Plans in which all regions of the South, except for Basilicata, are engaged from 2007-2008.

The analysis of data on personnel expenditure, compared to the population residing in the period 2009-2012, shows a decrease of 0.37% from a value of € 601.7 to € 599.5. As usual, there are profound regional differences in the rough values of per capita expenditure. The Bolzano AP registered the higher spending per capita (€ 1,133.8), followed by the Valle d'Aosta (€ 893.7); Puglia, Campania, Lombardia and Lazio are the regions which recorded lowest values of per capita expenditure, between 505.0 € and 527.6 €.

The amount of General Practitioners, in all regions, respects the values of benchmark which provides a value of 0.67 doctors per 1,000 choices (in persons aged 14 and over). In 2011, the national average is 0.87 doctors per 1,000 residents, which is 1 doctor for every 1,200 residents, with a ratio decreasing from 2006, when it stood at 0.91 doctors per 1,000 residents. The data for the region show a high variability in the area, leading to the identification of three different groups of regions. The first group (Piemonte, Trento AP, Emilia-Romagna, Valle d'Aosta, Veneto and Lombardia) has a ratio which fall in the benchmark, but is lower than the national figure. Most regions, however, have values close to the national average, while Basilicata, Lazio and Sicilia have a rate close to unity, therefore, close to the ratio of 1 doctor per 1,000 residents.

The value of the national availability of paediatricians (PLS) is 0.97 per 1,000 residents (in childhood). Most of the regions recorded a declining value, with the exception of Bolzano PA, Liguria, Molise, Campania, Puglia, Calabria and Sicilia. The regions with the lowest value of PLS are the Bolzano PA and Piemonte, while Sardegna is the region that has the highest value (1.33 per 1,000 residents) together with Sicilia (1.30 pediatricians per 1,000 residents in childhood). The majority of the regions is around a mean value of 1.00 pediatrician per 1,000 residents in childhood.

A very important element that provides an evaluation for the modernization of Local Health Units (LHU) is the use of Web 2.0 channels for communication to the citizen. The data obtained show a marked increase in the use of this tool throughout the country: the LHU using at least one channel Web 2.0 are 80 of 143 (55.9%) in 2014 (in 2013 were about 32%). In the North-West is Lombardia to record the most significant value (73.3%); in the North-East, beyond the Bolzano PA, is the Emilia Romagna to record the highest value (72.7%). As for the Center, compared to 2013, Umbria (where now both LHU using at least one channel web 2.0) and Toscana (now at 50.0%, although still below the national average) have higher values, while Marche and Lazio (respectively, 100% and 41.7%) confirmed the data. In the South and Islands a marked improvement is observed in Basilicata (100%), Puglia (66.7%), Calabria (60.0%), Campania (57.1%) and Sicilia (44.4%); Abruzzo and Sardegna were maintained at the same level of the previous analysis (50.0% and 25.0%, respectively).

Local and community care – Nationally, in 2012, 634 986 patients were assisted at home. The number of patients treated in Integrated Home Care (ADI) is growing, reaching a value of 1,069 cases (100,000), an increase of 6.07% compared to 2011. By comparison with previous years, a considerable variability of the indicator still remains, linked to the regional heterogeneity: a minimum rate of 145 patients treated in an Integrated Home Care setting (per 100,000) of the Bolzano AP to a maximum value of 3,009 (per 100,000) of Emilia-Romagna, followed by Friuli Venezia Giulia and Umbria (2,048 and 1,452 per 100,000, respectively).

Considerable heterogeneity is found between the different areas of the country with respect to the rate of patients to be treated in an Integrated Home Care setting: it goes, in fact, from a value of 1,356 (per 100,000) of the northern regions, at a rate of 895 (for 100,000) of the central regions (less than 2011) and 788 (per 100,000) of the South and Islands (an increase compared to 2011).

There is considerable variability in the number of elderly patients treated in an Integrated Home Care setting relate to the same elderly resident: concerning subjects aged> 65 years assisted in ADI, a minimum of 4.0 cases (1000) were registered in the Valle d'Aosta and a maximum of 119.4 (1,000) cases in Emilia-Romagna.

As regards the number of ADI facilities addressed to “end of life” patients, the Central regions show the highest rate (103.5 per 100,000) than in the North and the South and Islands (respectively, 88.8 and 103.3 per 100,000). Compared to 2011, these values were higher for the regions of North and South (respectively + 7.4% and + 21.0%), while there was a significant decrease in the central regions (-14.1%).

Residential social care facilities, provide medical care and assistance to people in long-term condition of dependency or high need for health protection. Their activity occupies an important role in the process of integration between health care and social assistance. The beds in these facilities are, in total, 312,174 that is 523.0 (per 100,000 inhabitants). The largest part of the offer is intended to accommodate the elderly (450.9 per 100,000), while remaining portions are intended for users with disabilities aged <65 years (72.1 per 100,000). The offer is mainly concentrated in the North and undergoes substantial reductions in other areas of the country, the central regions are placed in an

intermediate position, except for Lazio that detect only 248 beds (per 100,000); among the southern regions, the lowest number of hospital beds is found in Campania and Calabria (respectively, 113.9 and 149.7 per 100,000).

Elderly guests in the residential facilities are, on the whole, 261,259. Adults and children with disabilities are fewer, respectively 44,670 (120.7 per 100,000) and 1488 (14.8 per 100,000).

In line with the framework of supply, an increased use of residential facilities is observed in the northern regions, especially for the elderly, for which the highest rates of hospitalization is found in Trento PA, Bolzano PA and Valle d'Aosta (respectively, 4561.7, 4279.3 and 3547.7 per 100,000). In the South and Islands the rate of hospitalization is reduced considerably: minimum values are in Campania and Calabria where they, respectively, 534.7 and 432.7 elderly (per 100,000) are hospitalized, values far below the national average (2,067,0 to 100,000).

Potentially avoidable hospitalization is a valid measure of the quality of territorial care. The indicator "potentially avoidable hospitalization rate for long-term complications of diabetes mellitus" shows regions with lower rates, Marche, Basilicata and Sardegna, while the higher ones are observed in Puglia, Lombardia and Veneto.

Potentially avoidable hospitalization rate for chronic obstructive pulmonary disease (COPD) show the most virtuous regions as Toscana, Piemonte and Valle d'Aosta (aggregate data), Campania and Calabria the worst.

The potentially avoidable hospitalization rate for heart failure without procedures is lower in Toscana, Trentino-Alto Adige and Sardegna, while recording the highest values in Calabria, Molise and Abruzzo.

The rate of potentially avoidable hospitalization for asthma in children is higher in the South, with the exception of Molise, Basilicata and Sardegna, while the regions of Northern and Central show hospitalization rates significantly lower than the Italian value.

The potentially avoidable hospitalizations for gastroenteritis in children is higher in the South, except for Molise and Basilicata, while the regions of the North and Centre, with the exception of Bolzano AP and Umbria, show hospitalization rates significantly lower than the Italian rate. The regions with the highest rates are Sicilia (5.45 per 1,000) and Abruzzo (5.23 per 1,000).

Pharmaceutical health care - In 2013, the territorial pharmaceutical consumption registered + 4.8% compare to the previous year; 1,032 doses (per 1,000 inhabitants) of medication were prescribed daily. In public and private pharmacies a total of around 1.3 billion packs (on average, twenty-two packs per citizen) were sold, among which 608 million paid by the National Health Service. The increased amount of drugs prescribed from the previous year is common to all regions, with increases ranging from + 1.4% to + 10.4% in Molise the Trento AP.

There is still a significant regional variability that, with regard to the territorial pharmaceutical consumption weighted by age, ranges between the maximum value of 1,190 (Defined Daily Doses-DDD/1,000 resident per day) of Lazio to 898 (DDD/1,000 resident per day) in Liguria (excluding the Bolzano AP, that could not be directly compared to other regions). A clear North-South and Islands gradient is observed: almost all the southern regions (except for Molise and Basilicata) and also Umbria and Lazio stood above the national rate of 1,032 (DDD/1,000 resident per day). Lazio and Calabria had the highest consumption of the entire country, but also had, if we exclude Trento AP, the highest growth rates, respectively 8.5% and +6.8%.

The population over 65 years absorbs about 70% of the DDD; on the contrary, the population under 14 years consumes about 1.5% of the doses. It is also interesting that, in the period 2010-2013, compared with an increase in consumption of 8.4% in the general population, there is a reduction in consumption in the younger age groups and also a substantial increase in the elderly age groups, which reaches 42.1% in 75 years and over. Therefore, the older classes not only have the highest consumption, but also the greatest growth in consumption.

In 2013, the NHS public pharmaceutical expenditure decreased by 2.7% if compared to 2012 and by 10.6% if compared to 2001. As noted in 2012, the region with highest Class A drugs (NHS-paid) public expenditure is Sicilia with €235.9 per capita, while the one with the lowest value is Emilia-Romagna with € 145.4 per capita (excluding Bolzano AP and Trento AP). In the period 2010-2013 all regions experienced a decrease in gross expenditure per capita with a 12.7% reduction at national level (from € 215.1 to € 187.7). In particular, Calabria, Emilia-Romagna and Liguria have around 19% reductions. The region with the lowest reduction in expenditure in the considered period is the Campania (-5.4%). Lazio, Abruzzo, Campania, Puglia, Calabria, Sicilia and Sardegna are the regions with the highest per capita spending. These regions are the same who had the highest consumption of NHS-paid drugs.

In 2013, the total cost required to citizens amounted to 1 billion and 436 million euro (an increase of the per capita spending of about 2% compared to 2012 and by 46% compared to 2010).

The per capita expenditure amounted to € 24.1 with an impact on gross pharmaceutical spending of 12.8%, the highest value of all the period 2003-2013. Among the regions in which, in 2013, the ticket was imposed by the Region, the lower “out of pocket” citizens expenditure were observed in Toscana (€ 15.3 per capita, 10.2%) and Emilia Romagna (15, € 1 per capita, 10.4%), the highest were observed in Sicilia (€ 34.2 per capita, 14.5%) and Campania (€ 35.3 per capita, 15.5%).

In 2013, the territorial consumption of antibiotics (NHS-paid) was EUR 23.8 (DDD/1,000 resident per day), registering an increase of 3.5% over the previous year and 8.7% compared to 2001. In the period 2012-2013 there is an increase at national level, by 3.5%, that in some regions (Marche and Abruzzo) exceeds 7%. Sardegna is the only region that in the past two years shows a decline in consumption. In the period 2001-2013, compared with a national increase of 8.7%, we are witnessing in some regions a considerable increases: + 41.9% in Friuli Venezia Giulia, + 31.9% in Emilia-Romagna and +28.0 % in Bolzano AP. As in previous years, there is a wide regional variation in prescribing

antibiotics, characterized by a marked North-South and Islands gradient. The region with the largest consumption continues to be Campania (33.2 DDD/1,000 resident per day), followed by Puglia (30.4 DDD/1,000 resident per day), Calabria (28.6 DDD/1,000 resident per day) and Sicilia (27.9 DDD/1,000 resident per day), while there are lower consumption Friuli Venezia Giulia (18.3 DDD/1,000 resident per day), Liguria (17.2 DDD/1,000 resident per day) and the Bolzano AP (15, 1 DDD/1,000 resident per day). Umbria, Lazio, Marche and all southern regions have a higher value than the national consumption of 23.8 (DDD/1,000 resident per day), with the exception of Sardegna.

Hospital care – The supply structure was evaluated by analyzing the regional allocation of hospital Beds (PL) by type of activity and inpatient or day case activity. Data relating to January 1, 2013, showed 3.74 PL (per 1,000 residents), of which 3.15 (for 1000) for acute care, 0.16 (for 1000) for long-term care and 0, 43 (for 1000) for rehabilitation. The allocation of PL for acute care consists of 2.77 PL (for 1000) dedicated to hospitalization and 0.38 PL (for 1000) dedicated to day care. The allocation of the overall PL is close, and in some regions is below, the target of 3.7 PL (for 1000) (Italian law: Act no. 135/2012), although, generally, the acute care component is oversized if compared to the rehabilitative and long-term care. The data show a marked geographical gradient with a number of PL higher than the national and standard value in all regions of the north and center, with the exception of Toscana and Umbria, while recording a lower rate in the South.

Analyzing the clinical and organizational appropriateness, the percentage of interventions for hip fracture performed within 2 days of admission has sharply increased, from 35.1% in 2010 to 50.2% in 2013, showing an increase of 6.0 percentage points last year alone. Despite this good result, recorded values remain far from the objectives set by the International Guidelines and achieved in other countries, particularly in Northern Europe. It also confirms the strong regional variability with a range between 16.4% of Molise and values slightly above 85% of the Valle d'Aosta and the Bolzano AP.

In 2013, it is confirmed high regional variability even for hospitalization rates for the three procedures considered because of their high social impact (hip replacement, heart bypass surgery and coronary angioplasty). During the four years considered (2010-2013) there has been an increase in the rate of hospitalization for hip replacement and heart bypass surgery and a reduction in the rate of coronary angioplasty. All measured values show a clear North-South and Islands gradient, with higher rates in the North for hip prosthesis and angioplasty.

Transplants – The examined indicators concern the activities of donation and transplant procurement and evaluation of outcomes. After a decade of strong increases in organ donation, in recent years there the registered value is about 1,100 used donors, with a median age of used donors that continues to grow, increasing from 52 years in 2002 to 62 years of 2013. In the same year, compared to the recorded investigations of death number (with neurological standard), objections have been 29.4%. In 2012, the highest levels of used donors are recorded in Toscana (34.9 per million of population-PMP), while smaller values are observed in Molise (3.2 PMP).

The regional gap between the Centre-North and the South persists even in the activity of transplantation and centers distribution by type of organ, generating a patient mobility to the northern regions, highlighted by the percentage and the number of transplants performed on subjects coming from other the region. Specifically, for the first time in recent years, the Emilia-Romagna is no longer the region with the highest percentage of transplants outside the region (37.9%), because it is passed by Veneto, Marche and Toscana (44.5%, 41.7% and 41.6%, respectively).

For the outcomes evaluation, data on patient survival at 1 and 5 years after transplantation were examined. Differences between values of survival are due to different types and complexity of the transplants. The percentage of survival "Italian" at 1 year after transplantation appears to be 83.1 ± 0.6 concerning the patient and 82.6 ± 0.6 concerning the organ. In Emilia Romagna, survival values, both for the patient and the organ, are above 90%.

Mortality amenable to health care services - Mortality amenable to health care services is an important indicator to assess the quality and effectiveness of health services and to monitor changes over time. The "mortality amenable to health care services", or amenable mortality, includes "considered premature deaths, which should not occur in the presence of appropriate and timely care". In other words, includes the "deaths attributable to conditions for which there are effective diagnostic and therapeutic interventions".

From 2006 to 2011, at the national level, there has been a reduction in the rate, from 80,87 (per 100,000) in 2006 to 74.92 (per 100,000) in 2011.

Mortality amenable to health care services is less than the national value (equal to 75.14 per 100,000) in eight regions: Lombardia, Bolzano AP, Trento AP, Veneto, Emilia-Romagna, Toscana, Umbria and Marche. Values significantly higher than the national figure are recorded, however, in Lazio, Campania, Calabria and Sicilia.

Incidence, mortality and prevalence of major cancers: impact of primary and secondary prevention interventions - This year, for the first time estimates of incidence and prevalence for cancers that take advantages from primary and secondary prevention interventions were made: lung, colorectal, breast and cervix.

The analyses show that the incidence and mortality estimates in Italy for lung cancer have strongly differentiated trends between men and women, non-homogeneous in the country. Among men there is a significant reduction in both the incidence (-23.3%) and mortality (-26.8%), respectively, switching from 76.9 and 65.4 (per 100,000 persons/year) in 2003 and 59.0 and 47.9 (per 100,000 persons/year) in 2013. Among women, however, the rate

of incidence and mortality, although still much lower than those of men, are steadily rising, with an increase of 17,7% for the incidence and 9.4% for mortality, in 2003-2013. These trends reflect the strong reduction of the prevalence of smoking among men and the corresponding increase among women. The highest incidence rates of lung cancer are estimated in Campania for men (79.9 per 100,000 persons/year) and Lazio for women (31.4 per 100,000/year). These values are in line with the temporal trends in the prevalence of smoking observed in the last 20 years: the Campania is the region with the highest prevalence of smoking among men and Lazio among women. The prevalence of lung cancer also presents significant geographical and gender differences. In the central and northern regions it is estimated a decrease in men, respectively -10.6% and -3.3%, and a steady rise in the South (+ 25.2%), so that in 2013 the Campania region is the one with higher proportion (179.8 per 100,000/year). Opposite trends to those estimated in men are estimated in women. The prevalence increases in all geographic areas, but it is more accentuated in the Centre-North (increments over 50%) and more moderate in the South and Islands. Unlike men, women resident in the central regions present higher levels (especially in Lazio: 85.1 per 100,000 persons/year) in recent years. Overall, for 2013, it is estimated that, in Italy, there are 92 new cases of lung cancer per 100,000 men and 35 new cases per 100,000 women. The total number of new diagnoses is estimated at 38,460, of which 27,440 men and 11,020 women. Lung cancer is still the leading cause of cancer death among men, and in 2013 deaths are estimated to be 22,830.

Breast cancer is the most common cancer among women. In 2013, it is estimated that in Italy there are approximately 54,320 new diagnoses, i.e. 173 new cases per year per 100,000 women.

The trends of the risk of getting breast cancer, registered between 2003 and 2013 an increase (+ 10.5%) and the standardized rate of incidence rose from 105.1 to 116.1 (per 100,000 persons/year). These trends have, however, a strong geographical variability. Main increases are observed in the South (+ 34.3%) and lowest in the central regions (+ 7.7%) and a slight reduction in the north (-2.3%). The levels of incidence in the South and Islands were, in the past, lower than the rest of the country. In 2013 the South and Islands levels (119.8 per 100,000 persons/year) are similar to the Centre (123.4 per 100,000 persons/year) and higher than the North (109.5 per 100,000 persons/year), so that the historical advantage of the southern regions as areas of lower risk is decreasing over time. The prevalence of breast cancer is estimated to increase in all regions, but with growth rates and levels well differentiated. Lower levels but a faster growth are estimated for the southern regions than the rest of the country. Between 2003 and 2013 the proportion of standardized prevalence increased on average by 59.8% in the South and Islands (from 677.5 to 1082.7 per 100,000 persons/year) unlike areas of Central and North where the increases are lower, respectively by 32.7% (from 1120.5 to 1486.6 per 100,000 persons/year) and 21.3% (from 1149.1 to 1393.3 per 100,000 persons/year). In 2013 a total of 663,800 prevalent cases of breast cancer are estimated.

The incidence of colorectal cancer in the period 2003-2013, show a slight increase in men (+ 6.5%) and a downward trend in women (-3.3%). The standardized incidence rates increased from 65.7 to 70.0 (per 100,000 persons/year) and from 39.4 to 38.1 (per 100,000 persons/year), respectively, for men and women. In 2013, 113 new cases of colorectal cancer per 100,000 men and 80 new cases per 100,000 women were estimated. The total number of new diagnoses is estimated at 58,680, of which 33,650 men and 25,030 women. The estimated trends in Italy are not homogeneous in the territory. The incidence among men, although a slight increase, tends to stabilize in the northern and central regions, while increases faster in the South (+ 20.6% on average). However, the levels estimated in the South and Islands (62.7 per 100,000 persons/year) are lower than those of the Centre (74.3 per 100,000 persons/year) and North (73.1 per 100,000/year). The southern regions are always the lower risk areas of the country, but the gap with the Centre-North is reduced if compared to the past. In women, however, the stabilization of the risk of illness is common in all regions, with lower levels in the South. The prevalence for colorectal cancer is estimated to increase in all regions for both genders. Women have levels and growth rates lower than men. In the southern regions than the rest of the country lower levels are estimated, however, the gap between North and South and Islands is shrinking. In 2013, 393,650 people have had a diagnosis of colorectal cancer over lifetime, among which 211,920 men and 181,730 women.

The temporal trends in the incidence and mortality rates for cervical cancer are in sharp decline across the country (over 30%). Between 2003 and 2013 the standardized rate of incidence modified from 5.7 to 3.8 (per 100,000 persons/year), while the standardized mortality rate has decreased from 2.3 to 1.5 (per 100,000/year). In 2013, 1,580 new cases of cervical cancer are estimated and about 720 deaths, i.e. 5 new cases per year per 100,000 women and two deaths per year per 100,000 women. The incidence and mortality for cervical cancer are estimated fairly homogeneous across regions both in levels and in reduction rate, and slightly more pronounced in the southern regions. In 2013, the standardized incidence was estimated to be 4.2 (per 100,000 persons/year) in the North, 4.0 (per 100,000 persons/year) in the Centre and 3.3 (per 100,000 persons/year) in the South and islands, while mortality is virtually equivalent: 1.4 (per 100,000 persons/year) for the Centre-North and 1.6 (per 100,000 persons/year) for the South.

The prevalence of cervical cancer 15 years after diagnosis is, however, decreasing in all regions and southern regions have the lowest values. In 2013, 17,620 women have had a diagnosis of cervical cancer over the past 15 years.