

Crises, political changes and disparities in the access to health services in Portugal

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ABSTRACT

This paper is a reflection about the situation of health in Portugal until 2009, pointing demands and problems of health system, created by the patterns of spatial distribution of population and by the aging population process. In the first part, is developed a theoretical framing, on the Portuguese health system, and the access and use of health services. In the second part, is analyzed the demographic reality and the problem of aging. Also is demonstrated the perception that the population have of their own health and through access and use indicators is analysed the provision and saturation of health services in a regional context.

Understand the demography of the country, in this context, is important because provides a direct assessment of health conditions, through indicators as the infant mortality and average life expectancy and also the population age structure used to understand the demand for health services. This analysis of the health sector, intend to reflect about the access to health of the population in some regions, about the provision of services degree of fit between the needs of the users, and the services and resources used.

1. INTRODUCTION

It is a fact that the Portuguese population's health improved considerably over the past 20 years, a consequence of socioeconomic changes occurred in the country, related to better nutrition, hygiene, sanitation and housing and also the improvement in the health services. In thirty years Portugal has become one of the most aged European Countries, increasing the requirement for more health care. On the other hand, the existence of regional inequalities in the distribution of health and access to health public services restricts the accessibility of different population groups to these services. The inequalities of health care provision, between rural and urban areas, as well as between the coast and inland, in many cases, restricts the use of population that requires more health care, and have lower access in less urbanized areas. The inter-regional differences, particularly between more or less urbanized

areas, are relevant to explain the difference in health and healthcare of the population, the area in which people live has influence on their health, even more than their socioeconomic circumstances (Graham, 1999; Diez Roux, Link & Northridge, 2000). Socially, there are also inequalities in access to services that are related to the social class, education level of the individual, with the age, family structure, with its physical mobility to health care, and with the costs of access to services, among other factors. Often those who are more socially disadvantaged and live in precarious situations, are less healthy and use health services with lower frequency than those with better quality of life, on the other hand, physical variables such as distance, location of health services and spatial distribution affect in the same way the access of consumers. The use of services is conditioned by many factors, internal and external to the health sector, and in this context, the individual choices are also crucial, because not all the needs are converted into demands and not all demands are attended.

This framing of the situation raises questions concerning the regulation of the National Health Service, which, as fundamental principles, guarantees the right to health for all citizens, based on free and universal access to health care, but that, however, has limitations imposed by financial, human and technical resources. The unequal access to health also has as responsible factors, the population dynamics related to the rarefaction of the interior population, the urban concentration along the coast, the phenomenon of aging, the growth of the functional dependence of these individuals and the diversification of health care needs resulting from the increased life expectancy. These demographic changes besides influencing the access and equitable use of public services will consequently exclude population groups of health care system, because accessibility is not the same in all geographic areas or in all population groups and the movements increase the costs to individuals and families, especially in rural and interior areas.

The notion of accessibility of public services in the concept of territorial cohesion is relatively new in European political texts, but constantly reaffirmed (Ruffray; Hamez, 2009). Territorial cohesion is linked among many dimensions, with the promotion of social inclusion and the improvement of access to health care and education to the population, thereby linking the component of social inclusion with the component of social mobility. The geographical unequal access to services in question, in rural and interior areas (such as Alentejo and Center Region), create problems and disadvantages between populations. In these areas, statistics reveal that population aging is more intense, is verified a higher mortality rate, in infant and in active age people, there is a higher percentage of elderly living alone, with an higher average of medical appointments per individual, and a less diverse network of health care services, a

value that has been declining in the statistics, result of the restructuration of these services and the economic situation of the country. Based on this contextualization, the present paper, aims the reflection on the relations between the health needs, the practices of the population, the offer of services within the regions, and relates this frame of Portuguese health with demographic characteristics of the regions, in order to measure the wellbeing of the population and the sustainable development of the region.

2. PORTUGUESE HEALTH SYSTEM - HISTORICAL CONTEXTUALIZATION

2.1 PORTUGUESE HEALTH SYSTEM UNTIL 1974

The Health in Portugal before the revolution of April 25, 1974, was supported in many small subsystems, independent and uncoordinated. The mercies, institutions of social solidarity, that managed most of the hospitals and other services; the Medical Social Services, that provided medical care to beneficiaries of the Welfare Fund, the Public Health Services, that were designed primarily for the protection of health (immunizations, maternal and child protection), the State Hospitals, general and specialized, that were mainly located in large urban centres, and the private services, mainly addressed to higher socio-economic strata. In 1971, together with other changes in Portuguese society were instituted major reforms in the Portuguese health system, where the state has assumed effective responsibility for health policy and its implementation. The new structure of the Ministry of Health, has restructured the central, regional, district and local services, and started to coordinate, through the General Direction of Health (GDH) and Hospitals (substantive organs of the system) all health policy, having been recognized by the first time the right to health to all citizens. The main policy objective was to reduce the barriers to accessing medical care, whether in financing (ability to pay for medical care), either in physical access (expansion of supply). In the 1960s, Portugal when compared with the EU countries had the worst values in some traditional indicators of health status (OECD, 1998). Portugal was the country with the worst performance in terms of infant mortality rate (77,5 deaths per 1000 births in 1960, and 55,5 deaths per 1000 births in 1970 to a European average of 23 deaths per 1000 births). In 1970, Portugal spent on health 2,4% of GDP while the EU average was 4,4%, for the same year.

	Infant mortality rate per 1000 births		Average life expectancy		Health expenditure	
	Portugal	EU	Portugal	EU	Portugal	EU
1960	77,5	32,3	63,9	70,2
1970	55,5	23	66,7	71,4	2,4%	4,4%

Data: OCDE Health Data (2012)

2.2. PORTUGUESE HEALTH SYSTEM - BETWEEN 1974 AND 1990

With the Revolution in 1974, there was a change of health policy; this period had a philosophy of political action in the health field very clear; the intention was ensuring access to health as a social right. In the Republic's Constitution was enshrined in 1976, the principle of citizens' rights to health, with the creation of "a universal National Health Service, general and free". However; a number of factors determined the current health system, and also hampered their future. For Barros (1999), the 1980s were oriented mainly to contain costs, by reason of the general pressures on public expenditure growth. In the 1990s, we see the concern with the efficiency and effectiveness in resource utilization, resulting from the idea often expressed that the Portuguese health system "badly spent" the funds that are made available.

The universal and general nature of NHS has never been questioned, however the characteristic of "gratuity" evolved into "tend free" (Barros, 1999). The contradictions and internal struggles, led to a structural weakness in the construction of the SNS, but despite the flaws, the performance of the NHS has enabled remarkable advances in the health of the general population by giving priority to primary health care units, reorganizing the hospitals, restructuring and stabilizing the medical and nursing careers. The creation of the National Health Service had very positive consequences in the evolution of health indicators as the infant mortality rate (from 37,9 deaths per 1000 births in 1974 to 11 deaths per 1000 births in 1990), and in the average life expectancy (68,1 year in 1974 to a average life expectancy of 74,1 years in 1990) (OECD, 2012). From 1974 to 1990, the percentage of GDP spent on health care in Portugal increased of 3,6% to 5,7% of GDP, while the European average for the same years was of 5,6% to 7% of GDP. According to OECD data, Portugal showed the same tendency of international growth of health spending, this growth was achieved also by way of private financing component, with an evident decrease of the public part, which is an indication of the removal of State's responsibility in health financing, and on the other hand, an effort by the families to afford the health expenses.

	Infant mortality rate per 1000 births		Average life expectancy		Health expenditure	
	Portugal	EU	Portugal	EU	Portugal	EU
1974	37,9	18,8	68,1	71,9	3,6%	5,6%
1990	10,9	9	74,1	74,8	5,7%	7,0%

Data: OCDE Health Data (2012)

2.3. THE HEALTH SYSTEM TODAY

The Portuguese health system was regulated from 1990, for two basic diplomas, the Basic Law of Health and the Statute of the National Health Service. The Basic Law, put into question three principles of the NHS Law, the state-level responsibility for health protection, the gratuity and the respective functioning and nature of the entity, service or institution providing health services. The responsibility of the charges resulting from the provision of health care provided within the NHS, has become beyond the state, of the users not beneficiaries of the SNS, of the beneficiaries on their part regard, of the health subsystems and all entities and institutions that are bound to it (Baganha, 2002). Regarding health indicators, more precisely infant mortality, the most remarkable record corresponds to the expulsion of Portugal's of the last place in European rank. The life expectancy in Portugal of 74,1 years in 1991 increased to 77 in 2001 and 79,5 years in 2009. According to OECD data, the efficacy of SNS in the coverage of the population in 2007 was 100% of the population covered. The evolution of indicators of health has also brought an increase in total expenditure on health between 1991 and 2001, arriving in 2008 to exceed the EU average (OECD, 2012). With regard to public and private expenditure on health, it was found, from 1991 to 2001, a constant increase (from 6,2% to 9,3%), exceeding the EU average (6,8% to 8,1%), with regard to private expenditure, this is the highest in the European Union. In 1991, Portugal had private health expenditure in the order of 2,3% of GDP, while the European average was 1,5% of GDP. In 2001, these expenses increased slightly to 3,1% of Portuguese GDP and 1,9% of GDP in the European average. From 2001 to 2008 there was an increase of Portuguese health expenditures to 10,1% GDP, with 3,5% of private investment, while the European average is around 8,4% of GDP with an average of 2,4% of private investment.

The increase of the costs and of the co-financing by private entities led to unequal access to health care, leading to the questioning of equity in access to health. According to the OECD report, the growth of spending on health in OECD countries is due mainly to two factors: the new technologies and population aging (OECD, 2006). On the issue of population aging,

there is no consensus. The need for health care is determined by the state of health of the people, which is strongly correlated, but not totally dependent, with the average age of the population. Other authors consider that, despite the aging population to be a factor often quoted to explain the increased spending on health, the effects of this trend are smaller than what is generally believed (Barros, 1995). As regards the factors of technological order, influence the growth of health spending, because entails a more intensive hand labour due to increasing per capita consumption of care and the habits of the population. This will contribute to the growing problems in the health system, the growth of health expenditure, the growth of “waiting lists”, excessive use of the emergency service, a dissatisfaction of users and professionals. Thus the resources remain limited and inadequate to the needs of the population, requiring, for part of these in addition to tax charges, a strong reimbursement in health expenditures.

	Infant mortality rate per 1000 births		Average life expectancy		Health expenditure	
	Portugal	EU	Portugal	EU	Portugal	EU
1991	10,8	8,9	74,1	74,9	6,2%	6,8%
2001	5,0	5,1	77	77,2	9,3%	8,1%
2009	3,6	3,5	79,5	75,8	10,1%	8,4%

Data: OCDE Health Data (2012)

2.4. CHARACTERISTICS OF THE NATIONAL HEALTH SYSTEM

In the Statute of the National Health System (1993, p. 15), the NHS is defined as “an ordered and hierarchical set of institutions and official services providers of health care, working under the superintendence and supervision of the Ministry of Health”. Its organization is decentralized, being dominated by health regions, which establish contact between the local level and the Ministry of Health. In Portugal, there are five health regions: North, Centre, Lisbon and Tagus Valley, Alentejo and Algarve. There are 18 sub-regions, corresponding to each administrative districts of the country (Almeida, 1999; Simões, Barros, 2007). The provision of health care is ensured, in each region, by Health Centers and by Hospitals, respective, to primary health care and differentiated care. What occurs in practice is that health centers have a weakened position to the Hospital, even though in the political level, the primary health care has always been considered as the basis of the Health System. The gateway to the public health system is the health center, through the family doctor. As stated

by Barros and Simões (2007), theoretically, people do not have direct access to hospital care. However, in practice, many people access directly to the emergencies, for several reasons such as lack of the family doctor, delay in obtaining a medical appointment, in order to be referenced to specialist care. The functioning of hospital services is seriously affected by the excessive use of emergency services, but also can indicate serious problems of accessibility to primary health care. The people covered by health subsystems and health insurance have direct access to private hospitals and specialists, this because private doctors can make referrals to NHS hospitals (Simões, Barros, 2007). There is still to be added an unequal regional distribution of primary care services, with a clear bias in favor of the coastal districts, which reinforces the lack of equity in access to health care in Portugal. For some authors are not exactly the inequalities of resource allocation that affect access to health care, but the socio-economic levels of the population, that stratify the same access. The NHS has been unable to give a satisfactory response to increased demand that there has been these last 20 years. "Evaluating the situation in terms of regional differences, it is noted that in accordance with the reported state of health, the differences between regions are essentially related to characteristics of the population. More than regional differences are significant differences in income, especially in terms of resource utilization (consultations in the public sector or private sector) (Barros, 1999, p. 32). So, a few essentials of the National Health System, namely, the universality and gratuity, find themselves reduced to the ideals of citizenship, against the power and strength of sectors whose interests do not coincide with those principles.

3. ACCESS AND USE OF HEALTH SERVICES

The utilization of health care services represents the centre of the functioning of healthcare systems. The concept of use includes, all direct contact, through medical consultations, hospitalizations, or indirectly, through the implementation of preventive and diagnostic examinations. The behaviour of the individual is generally responsible for the first contact with health services, and the health professionals are responsible for subsequent contacts. The determinants of utilization of health services can be described as factors related to the need of health (morbidity, severity and urgency of the disease), to the users (demographic characteristics (age and sex), geographical (region), socioeconomic (income, education) , cultural (religious) and psychological), to the service providers (speciality, professional experience, type of practice, form of payment), to the organization (available resources, characteristics of supply (availability of doctors, hospitals, ambulatories), mode of remuneration , geographic and social access), to the policy (type of health system, financing,

type of health insurance, quantity, type of distribution of resources, legislation and professional and system regulations). The influence of each of the factors that determine the use of health care services varies according to the type of service (ambulatories, hospital, and domiciliary care) and preventive or curative care and rehabilitation.

Access is a complex concept, often used imprecisely, and unclear in its relation to the use of health services. It is a concept which varies between authors and which changes over time and according to the context. In the international literature we find concepts such as access and accessibility, among which may be drawn some lines of agreement among the authors. This can be a general characteristic (Donabedian, 1973; Frenk, 1985), or the geographic accessibility (Penchansky, 1981). Other authors such as Andersen opt for term access, in general, centred, as a dimension of performance of healthcare systems associated with the offer. Authors also vary in relation to the focus of the concept: some centred on the characteristics of individuals; others focused it in the details of the offer, some in both characteristics or in the relationship between individuals and services (supply). Donabedian defines accessibility as a factor of the supply, important for explaining variations in use of health services of population groups. Accessibility in this case refers to the characteristics of services and health resources that facilitate or limit its use by potential users. This author distinguishes two dimensions of accessibility, socio-organizational and geographical, and indicates that these dimensions are related. The socio-organizational accessibility includes all the features of the supply of services, except the geographical aspects that hinder or enhance the ability of people to use services, for example, policies that select patients based on their social status, economic situation or diagnosis. The geographical accessibility is related to the linear distance, the distance, the travelling time and cost of the trip. Despite the attributes of individuals (social, cultural, economic and psychological) don't make part of the concept of accessibility from the author, their relation with the use of services is mediated by the accessibility, i.e., the accessibility expresses the characteristics of the supply, intervening in the relationship between individual characteristics and the use of services. Donabedian defines the goal of your concept of accessibility, by excluding the steps of perception of health problems (needs) and the process of decision making in the demand for services by individuals, however, for him the accessibility indicates the degree of fit between the needs of the users, and the services and resources used. On the other hand, Andersen (1995) emphasizes the term access, presented as a component of health care systems, connected to organization of services, which refers to the entry into health service and continuity of care. In this model, the influence of access in the use of health services is mediated by individual factors, defined as factors

predisposing, factors that exist before the onset of health problems, and that affect the predisposition of people to use health services, an example of this is the gender, because women tend to show greater predisposition for the use health services than men. The author also refers the enabling factors, or available resources to people to obtain health care, and health needs or health conditions perceived by the people or diagnosed by health professionals. For Andersen the concept of access is multidimensional, composed of two elements: "potential access" and "access performed". Potential access is characterized by the presence of enabling factors in the use of services, while access performed represents the real use of these services and is influenced by other factors beyond those that explain the potential access, for example waiting time, consultation time , cost of medical appointment, transportation, quality of care, etc.. Andersen also introduces the concepts of "effective access" and "efficient access", the first, refers to the use of services that improve the health conditions or people's satisfaction with the services, and the second, refers to the degree of change in health or satisfaction regarding the volume of health services consumed. The concept of access performed, (use) which starts to include the effects on health and satisfaction of the people, customer satisfaction (convenience, cost, coordination, hospitality, information and quality) is seen as an explicit result of the use of services health (Andersen, 1995, 2008). However, access performed (use) is not explained by the determinants of potential access, such as, its impact on health and satisfaction (effective access) can't be explained only by the determinants of use of services. The use of services depends on predisposing factors, health needs and contextual factors, and the effective and efficient use depends on individual factors and internal factors to health services that affect the quality of care provided. Penchansky (1981) uses the term access, focused on the degree of fit between users and the health care system, includes attributes that are taken, not based on supply, but in the relationship between supply and individuals. Identifies several dimensions that comprise the concept of access: availability of services in relation to need (volume and type), accessibility (one dimension of access), characterized by the adequacy between the geographic distribution of services and users, the host, which represents the relationship between the way services are organized to receive the users and the ability of users to adapt to this organization, the purchasing capacity, defined by the relationship between forms of financing of services and the possibility of people pay for these services, and the acceptability, which represents the attitudes of people and health professionals regarding the characteristics and practices of each. The expansion of the concept of access scope, with the incorporation of different dimensions is not followed by many authors, such as Frenk, that prefers to keep the concept in a more restricted domain. Frenk develops the concept of accessibility, basing itself

the proposal of Donabedian. This systematizes the events between the need and the obtaining the necessary care (health needs, desire for health care, demand, entry into service, continuity of care) and limits of the scope of accessibility to the stages of search and entry into service. Frenk develops the concept of accessibility by the idea of complementarity between the supply and characteristics of the population. For this author, accessibility is the relationship between a set of obstacles to seek and obtain care ("resistance") and the corresponding capacity of the population to overcome such obstacles ("Power to use"). The resistance includes those impediments which do not relate solely to the availability of services, but to the individual's predisposition to use. The power to use is discriminated in the possession of time and transport, financial power, and power to deal with the organization. The core of this approach is that neither of these two components (resistance and power to use of the population) defines the degree of accessibility, but the relationship between them. For example, the impact on the accessibility of the increase of the price of the health services can only be measured when compared to the level of income of the population. For Starfield accessibility refers to characteristics of the supply, and access is the way people perceive accessibility. Other authors also suggest that how people perceive the availability of services affects the decision to search for them. This perception is influenced by past experience with health services. Goddard & Smith highlight the fact that the availability of services may also not be known by all, and that different populations vary in the degree of information they have about the services available to them. Thus, experience with the services and the information they have, influence how people perceive the difficulties / facilities to obtain health services they need and therefore access to them.

3.1. INEQUALITIES IN THE USE OF HEALTH SERVICES

The use of health services depends on the needs and behavior of individuals in relation to their health problems, as well as of forms of financing and the availability of services and resources to the population. The pattern of use of health services in a particular population group is mainly explained by their profile of health needs (Hulka & Wheat, 1985). Several studies indicate that the position of the individual in the social structure is an important predictor of health needs, and the observed pattern of risk tends to be disadvantageous for individuals belonging to less privileged social groups (Evan, 1994). The pattern of use of services is conditioned also by several other factors, both internal and external to the sector, related both to the way it is structured the provision of services (Wennberg, 1985) as the

user's preferences and choices. The availability, type, quantity of services and resources (financial, human, technological), geographic location, among others, are aspects of supply that influence the pattern of consumption of health services. On the other hand, individual choices are also crucial, although not all the needs will turn into demands and not all demands are assisted. Conversely, by induction of supply, there is the use of services not related to the needs. In fact, according to the law of Hart (1971), the several mechanisms that influence the supply of services, make the resources distributed inversely to the needs. Thus, inequalities in the use of health services, that is, in the attitude of looking for them, gain access and benefit from the assistance received, reflect inequalities in individual risk of illness and death, differences in the behavior of the individual to the disease, as well as the characteristics of supply of services that are available. The inequalities in health reflect social inequalities, and depending on the effectiveness of health actions, equality in use of health services is an important condition, however, not sufficient to reduce inequalities in illness and death (Travassos, 1992).

4. PORTUGUESE POPULATION HEALTH

4.1. DEMOGRAPHIC REALITY

Demography is an important science to public health, among other reasons because provides fundamental concepts and measures of population health. Some demographic indicators are often used for a direct assessment of health conditions: the case of infant mortality and average life expectancy. The population age structure on the other hand, is recognized as a variable fundamentally linked to the demand for health services and determines organizational and technological needs of the health system as a whole. Changes in age structure originate necessarily, changes in demand for health services. This paper analyzes the evolution of the age structure of the Portuguese population until 2009, pointing, demands and problems created to health system, by the new demographic pattern typical of an aged population.

In 2009, the population density was 113,9 inhabitants/ km², value unevenly distributed by the Portuguese territory: the highest population densities are found in the littoral, while in the interior, and particularly in the Alentejo, the densities are around 24hab/km². Alentejo, although the region with the largest area in km² also remains the one with the lowest population density (Figure 1), showing that the areas of higher population density continue to attract population, and the areas of low and medium density are unable to fix or attract

population. Is verified that desertification is spreading to a significant part of the territory, contrasting with the increase in population density observed in some regions. Also has worsened the imbalance in population distribution over the territory and the coastal municipalities experienced indicators of population density higher than those inland. This pattern of littoralisation of the country has been strengthened in the last decade, also accentuated the trend towards concentration of population around large metropolitan areas of Lisbon and Porto (Figure2).

	Area	Resident population	Population density
	Km 2	Nº	Hab./Km ²
Continent	88 971,3	10 135 309	113,9
North	21 283,9	3 745 439	176
Centre	28 200,1	2 383 284	84,5
Lisbon Tagus Valley	2 940,1	2 819 433	95,9
Alentejo	31 551,2	757 069	24
Algarve	4 996,0	430 084	86,1

Figure 1: Resident population and population density in 2009

Data: INE, Demographic Statistics

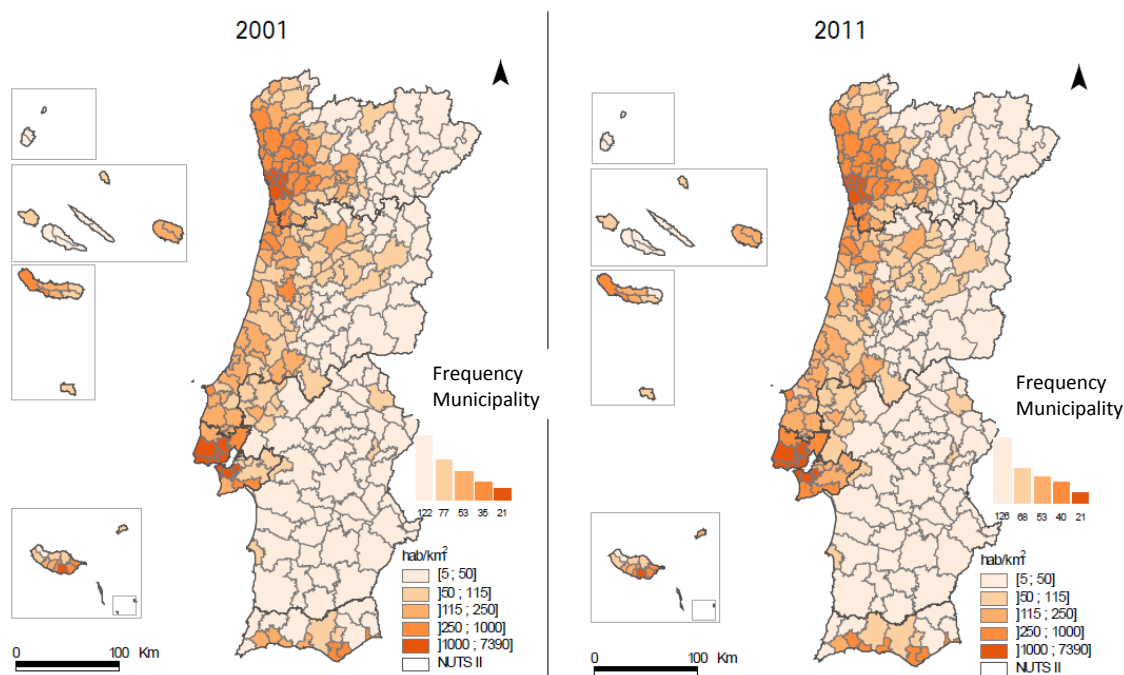


Figure 2: Population density by municipality

Source: Demographic Statistics (INE)

In less than 40 years, Portugal passed of a mortality profile typical of a young population to a condition characterized by complex and costly diseases, typical of older ages (Gordilho [et al.] 2000). Demographic Statistics demonstrates an increasing proportion of

elderly population, with 65 or more years old, increasing in 2009, its relative importance to 17,9%. The working age population (15-64 years) follows the trend of aging population and increases to 66,9% in 2009. The Region of Lisbon Tagus Valley has the largest proportion of youth (16,1%) and North the lowest percentage of elderly (15,8%). In the opposite situation is found in the Alentejo, with the lowest proportion of young people (13,3%) and highest percentage of elderly people (23,1%). The North is the region where the relative importance of the working age population in total population exceeds the national average (66,9%). On the other hand, in Alentejo is where there is the lowest value of working age population (63,6%), followed by the Algarve (65,2%), (Figure 3).

The continuous process of aging, either by reducing the effective population of young people as a result of low birth rate, or by the increase of the elderly, due to increasing longevity, is well evidenced.

Resident population by age group by NUT II 2009			
	0-14 years (%)	15-64 years (%)	65 + years (%)
Portugal	15,2	66,9	17,9
North	15,4	68,9	15,8
Centre	13,8	65,6	20,7
Lisbon Tagus Valley	16,1	66,3	17,6
Alentejo	13,3	63,6	23,1
Algarve	15,6	65,2	19,2

Figure 3: Resident population by age group by NUT II in 2009

Data: INE, Demographic Statistics

The total dependency ratio, i.e., the number of young people (individuals from 0 to 14 years old) and elderly (individuals aged 65 or more years old) in every 100 people of working age (15 to 64 years age) increased from 48,5 (2004) to 49,4 (2009), as a result of two opposing trends in this period: the youth dependency ratio (number of young per 100 persons of working age) decreased from 23,2 in 2004 to 22,7 in 2009, while the elderly dependency ratio (number of elderly per 100 persons of working age) increased from 25,3 to 26,7.

In the Alentejo, Centre, and North, there were youth dependency ratios, below the national average. In the elderly dependency ratio, there were values below the national average in the North and Lisbon, and in Alentejo higher value (36,2). The analysis of the elderly dependency ratio, reveals an asymmetry North / South, the same pattern of regional distribution is shown by the aging index, being the North and Lisbon and Tagus Valley the

regions with aging rate below the national average, and the Alentejo region with the highest aging index (172,88) (Figure 4).

Dependency ratio				
	Total	Young	Elderly	Aging index
Portugal	49,4	22,7	26,7	115,48
North	45,2	22,3	22,9	99,34
Centre	52,6	21	31,5	147,17
Lisbon Tagus Valley	50,9	24,3	26,6	108,12
Alentejo	57,2	20,9	36,2	172,88
Algarve	53,3	23,9	29,4	123,54

Figure 4: Dependency ratio by NUT II in 2009

Data: INE, Demographic Statistics

Although regional differences are quite clear, an analysis by a municipality reflects reality more detailed regional differences, which in turn give emphasis to the north-south asymmetries, and even more clearly, to the interior-coast asymmetries (Figure 5) .

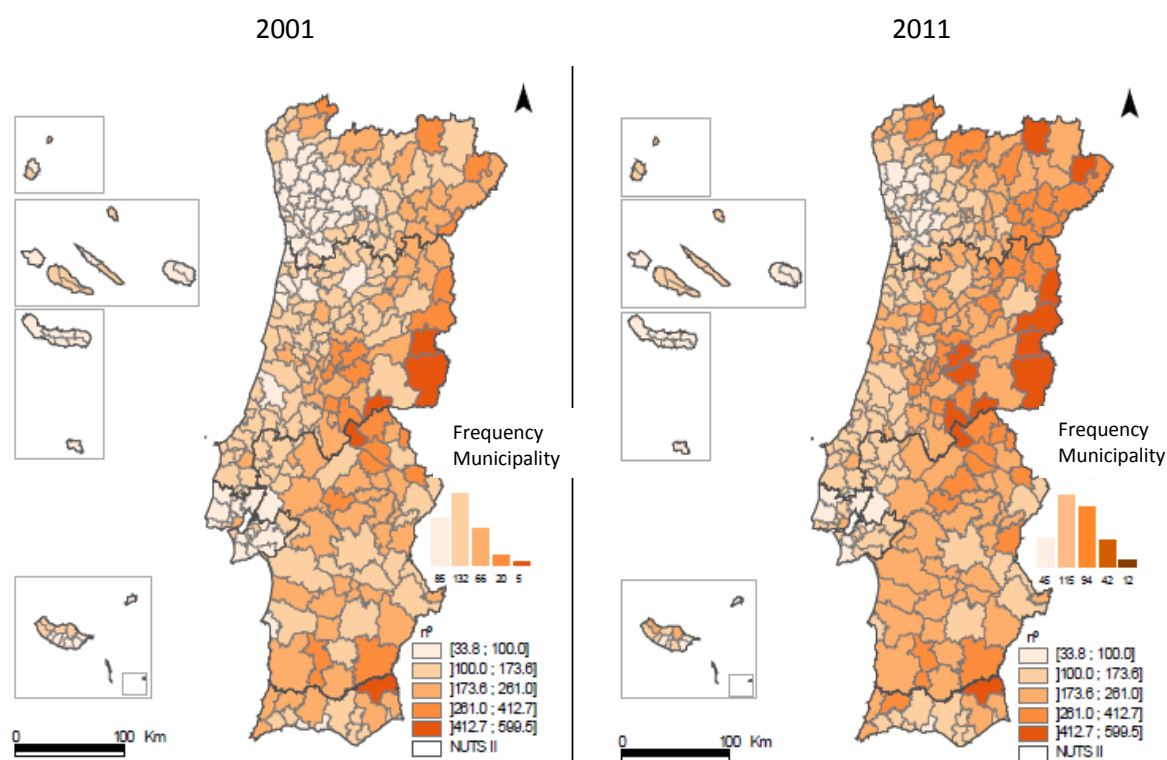


Figure 5: Aging Index by municipality

Source: Demographic Statistics (INE)

When we focus on statistics related to life expectancy, for the Portuguese regions, we find that the life expectancy has increased year after year. has been in the centre, where there has been higher values of life expectancy, 79,4 years in 2009, followed by the North and Lisbon and Tagus Valley (79,3 and 79 years). The regions with the lowest average life expectancy are the Algarve and the Alentejo where the values do not exceed the 78 years (Figure 6).

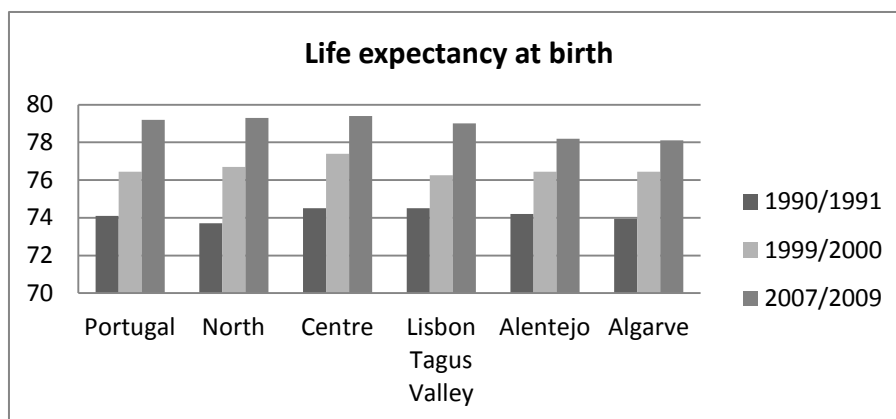


Figure 6: Life expectancy at birth

Data: INE, DECP/SEP e PNS 2004-2010

The infant mortality rate clearly shows the evolution of care and health care in the country, in 1991 the rate was 10,8 deaths per 1000 births, in 2001 this rate decreased to 5,7 and then in 2009 to 3,6 deaths per 1000 births. The infant mortality rate has shown a downward trend in recent years, however, increased between 2008 and 2009, passing, respectively, from 3,3 to 3,6 deaths of infants under one year per thousand live births. The number of deaths per 1000 births between 2004 and 2009, declined in most of the regions except the regions of Lisbon and Tagus Valley and the Alentejo, where there was an increase in infant mortality rate of 3,6 to 4,1 in Lisbon, and from 4,1 to 5,9 in the Alentejo. The regions, Center and Algarve recorded in 2009, the lowest infant mortality rates (2,6 in the North and 2,5 in the Algarve).

The mortality rate between 25 and 44 years per 100 000 individuals, showed a significant decrease of 169 individuals in 2001, to 107,3 in 2009. The Algarve and Alentejo were again the areas with higher mortality, in 2009, 141,5 and 123,8 respectively. The Centre and the North are the areas with lower mortality rates.

Regarding the mortality rate of 45 to 64 years per 100 000 individuals, there is again a decrease of values, being of 574,4 in 2001, and decreased in 2009 to 507,3. In this context, in the North and Centre, were recorded the lowest mortality rates for this age group, while higher rates were recorded to Algarve and Alentejo (572,1 and 561,8 respectively).

4.2. PERCEPTION OF HEALTH

The percentage of men from 35 to 44 years that considered their health poor or very poor is lower than the percentage obtained for women, a fact that occurred in all regions of Portugal. The difference between the responses of men and women was higher in the Algarve, where there are more women with a poor appreciation of his health, when it comes to the opposite sex is the area with the lowest negative self-evaluation. On the other hand, the North and Alentejo, are the regions where people feel most ill. As the previous situation, the percentage of men from 55 to 64 years that considered their health poor or very poor is lower than the percentage obtained for women in all regions of Portugal. The difference between the responses of men and women was higher in Alentejo, having the women's a worse self assessment of their health status than men. The percentage of individuals from 65 to 74 years that considered their health poor or very poor is higher in the regions of the North, Centre and Alentejo, having the higher values of negative self-assessment in both genders.

4.3. OFFER AND USE OF HEALTH SERVICES IN PORTUGAL

Throughout the history of the NHS, the quality of health centres and public hospitals improved, providing better conditions of service and care. During this period a large number of health centres were built all over the country. Most recent information, points to an increasing human resources in health, and to a generic decline in installed supply capacity. In 2001 there were 391 health centres in the country, and in 2009 there was a reduction in the number of equipment to 375. With regard to hospitals, they also led to improvements not only in the geographical accessibility of populations to hospital care, as well as, the improvement of physical conditions of these. However currently there is a decline in their numbers, in 2001 there were 217 hospitals in the country, already in 2009, this number fell to 186 (Figure 7).

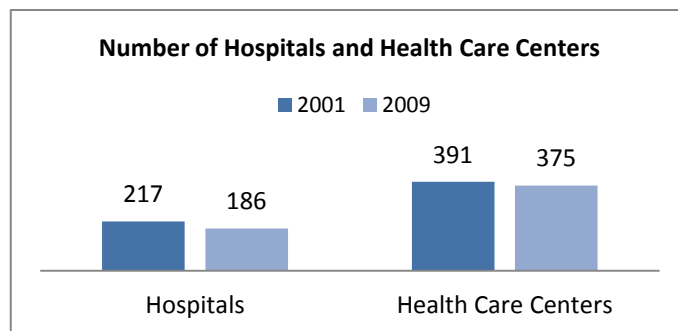


Figure 7: Number of Hospitals and Healthcare Centres

Data: Statistics INE-DGS/MS, PORDATA (2001-2009)

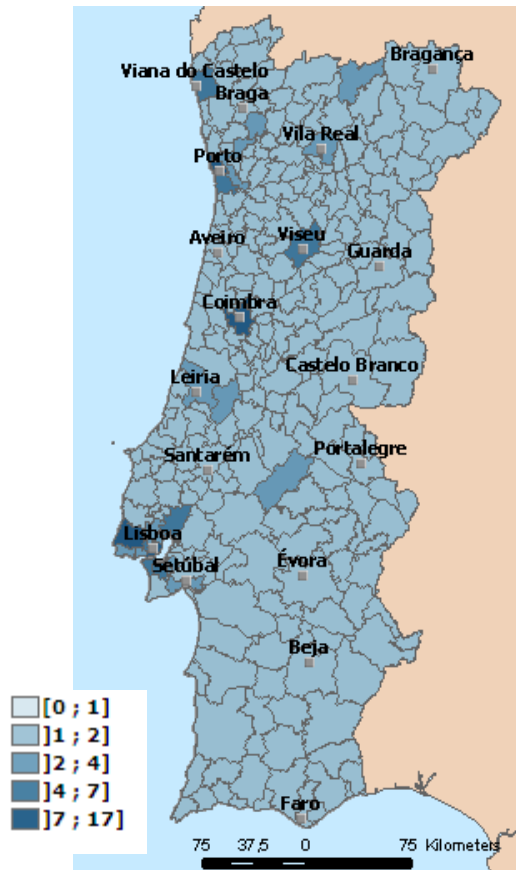


Figure 8: Healthcare Centers (No.)
by Municipalities 2009

Data: Statistics of health facilities (INE)

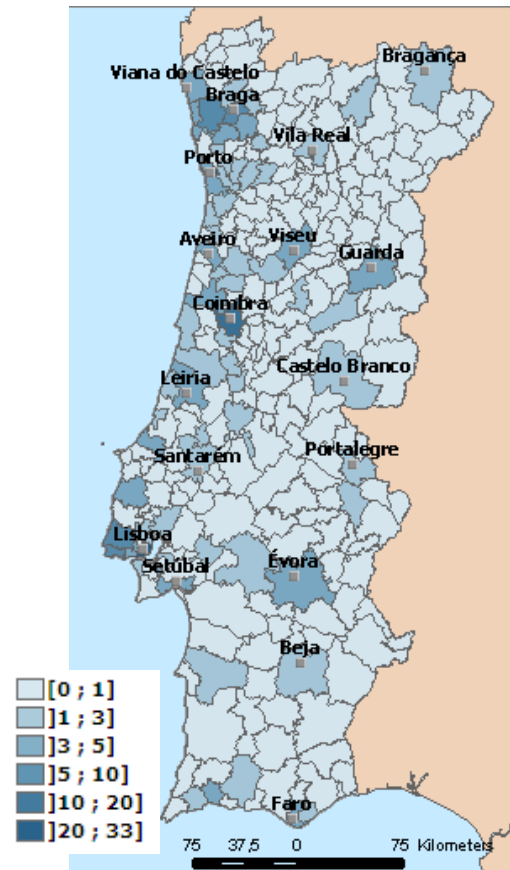


Figure 9: Hospitals (No.)
by Municipalities 2009

Data: Statistics of health facilities (INE)

The map of healthcare centres demonstrates a decrease of the number of facilities in the littoral mostly in the metropolitan areas of Lisbon and Oporto (Figure 8). Concerning the map of hospital's distribution is demonstrated that the provision of health care varies geographically in Portugal; there are inequalities between rural and urban areas, as well as, coastal and littoral asymmetries (Figure 9).

If it's important to know the health facilities available to the population, is also essential confirm if these are close geographically of population, the figure 10 shows the classification of each region in terms of proximity to primary health care network. There are a major number of healthcare centers in the regions with higher population density. Thus, regions like Oporto, Lisbon, Aveiro, Coimbra, Leiria and Braga are those that provide a better indicator of proximity while Alentejo and Braganza have a low indicator of proximity. The regional iniquities verified in areas as Alentejo, could restrict the accessibility to different socioeconomic strata of population, as show in the figure 11 that points out to a disadjustment of the network of health centers with the population.



Figure 10: Proximity to primary care in the NHS

Source: Study of the access to healthcare of NHS



Figure 11: Adjustment of the network of health centers to the population

Source: Study of the access to healthcare of NHS

Regarding the number of beds in health facilities (practiced allotment) per 1000 inhabitants in 2002 was 3,7, falling to 3,4 in 2009, representing a decrease of 0,3 beds per 1000 inhabitants. The regions with the number of beds below the Portuguese average are the region of Alentejo, Algarve and North (2,1, 2,2 and 2,9 respectively) (Figure 12).

Number of beds in health facilities (practiced allotment) per 1000 inhabitants, by region (NUTS II)		
	2002	2009
Portugal	3,7	3,4
North	3	2,9
Centre	3,7	3,4
Lisbon Tagus Valley	4,5	4
Alentejo	2,6	2,2
Algarve	2,6	2,1

Figure 12: Number of beds in health facilities (practiced allotment) per 1000 inhabitants, by region (NUTS II)

Data: Statistics of health facilities (INE)

When placed under analysis the human resources of the health system for the Portuguese regions, is clear that the higher number of physicians are allocated in the littoral consistent with the areas of higher population density, but also in the administrative district capitals, in the major hospitals and where are the facilities that support their presence (Figure 13).

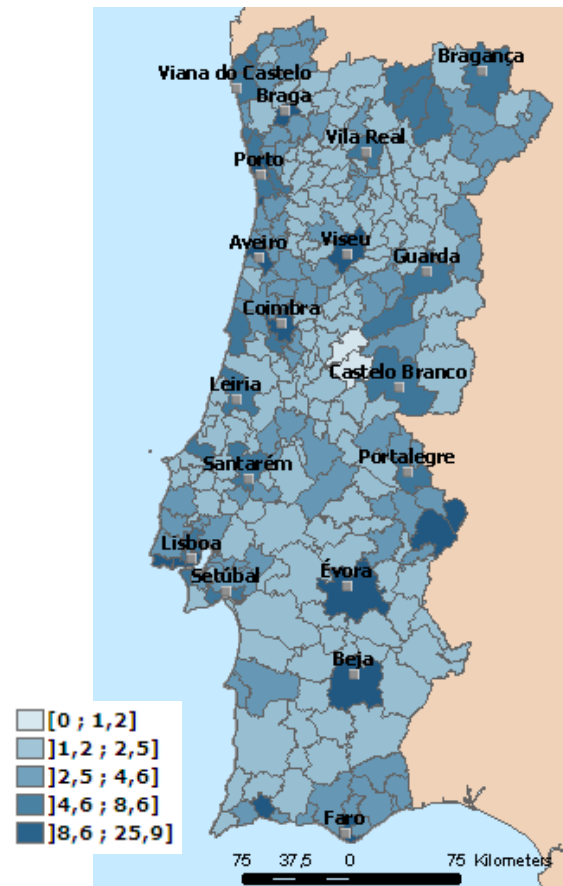


Figure 13: Physicians per 1000 inhabitants (No.) by Municipalities (2009)

Data: Statistics of health facilities (INE)

In the period 2001-2009 there was an increase in the number of specialist physicians per capita in all regions (229,2 in 2001 and 276,7 in 2009), with the analysis of this indicator is demonstrated that the Alentejo is the region with fewer specialists per 100 000 inhabitants (136,2) while Lisbon Tagus Valley is the region with more medical specialists per population (336,2) (Figure 14).

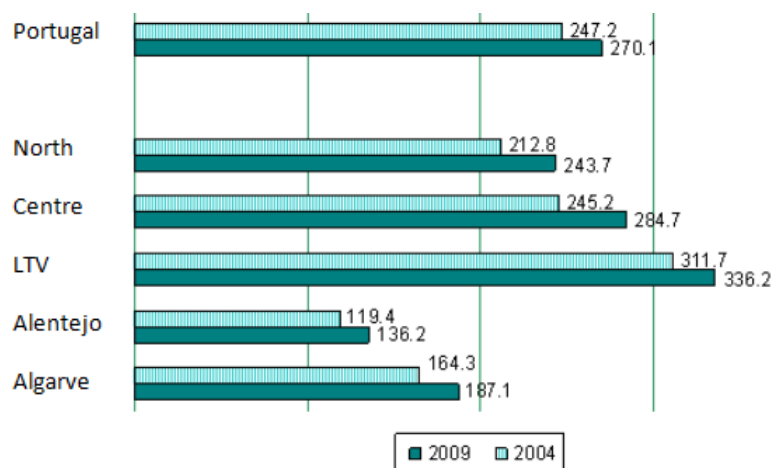


Figure 14: Medical specialists per 100 000 inhabitants

Source: Indicators and Targets NPH. <http://www.acs.min-saude.pt/pns/>

The distribution, of general and family medicine doctors, show large asymmetries in Portugal, the Centre stands out with a value exceeding 70 doctors per 100,000 inhabitants followed by the Algarve. On the other hand, the North and the region of Lisbon and Tagus Valley, although they are the most populous regions of the country, have the lowest ratio of GP per capita (Figure 15).

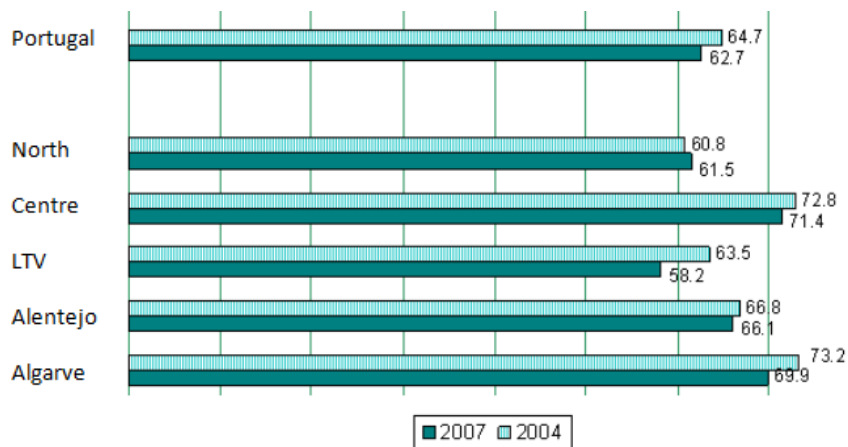


Figure 15: Family Medicine Physicians per 100 000 inhabitants

Source: Indicators and Targets NPH. <http://www.acs.min-saude.pt/pns/>

The number of nurses per 100 000 inhabitants between 2004 and 2009 increased in all regions of the country, being the most significant increase in the North. In 2009 the number of nurses per 100 000 inhabitants continued to be higher in the Centre (619,1 per 100 000) and North (545,8 per 100 000), and the lowest in Algarve (472,1 per 100 000) and Alentejo (515,2 per 100 000).

As regards the use of the services, some variables are useful in demonstrating regional dynamics in the utilization of the equipments by the population. In Portugal, is verified an increasing rate of bed occupancy in health facilities, from 74,6% of occupancy, rose to 77,5%. Regionally the Centre is the only area with an occupancy rate below the national average, in contrast to the Algarve, Lisbon and Tagus Valley, and Alentejo, which enjoys the highest occupancy rate of beds (Figure 16).

Evolution of the occupancy rate of beds in health facilities (practiced allotment, by region (NUTS II))		
	2002	2009
Portugal	74,6	77,5
North	71,1	77,6
Centre	76,1	74,9
Lisbon Tagus Valley	75,8	78,9
Alentejo	72,6	78,4
Algarve	79,3	88

Figure 16: Evolution of the occupancy rate of beds in health facilities (practiced allotment, by region (NUTS II))

Data: Statistics of health facilities (INE)

From 2001 to 2008 there was an increase in the number of medical appointments for Family Medicine / General Practice per capita in all regions, from 2,8 visits per year per inhabitant rose to 3,0, however, in 2009 it was observed a decrease to 2,7 medical appointments per year. In 2009 the value of this indicator declined in the North and Centre, but in contrast the greatest number of medical appointments in 2009 was observed in the Alentejo (3,8 consultations per inhabitant / year) (Figure 17).

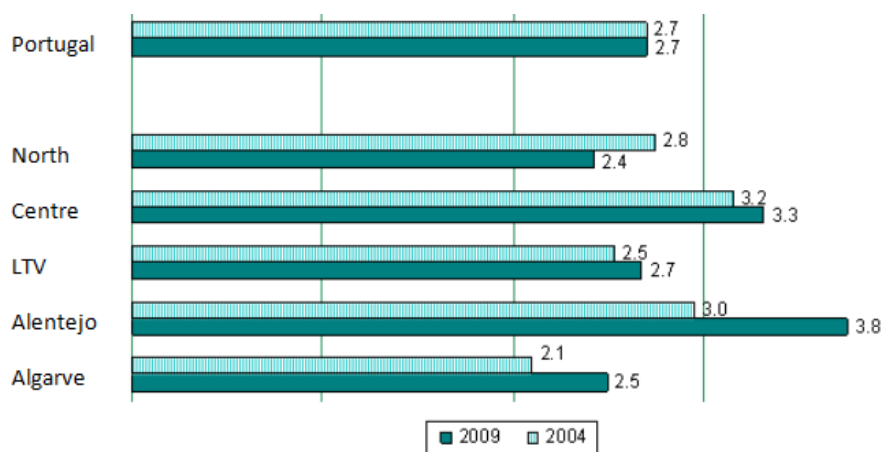


Figure 17: Medical appointments for Family Medicine / General Practice per inhabitant/year

Source: Indicators and Targets NPH. <http://www.acs.min-saude.pt/pns/>

The number of medical consultations in Primary Health Care and Hospitals, per capita increased in all regions between 2001 (3.9) and 2009 (4.5). The increase was more relevant in the Algarve region (from 2.8 in 2004 rose to 3.9 consultations per inhabitant in 2009) and Alentejo (from 3.6 in 2004 rose to 5.0 consultations per inhabitant in 2009) (Figure 18).

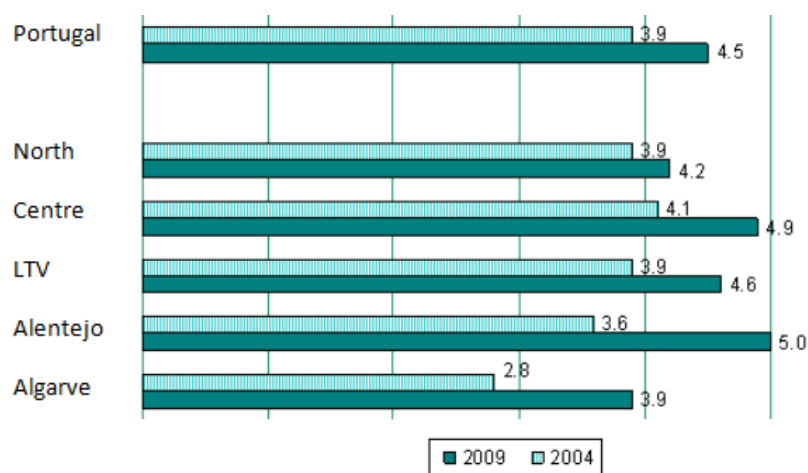


Figure 18: Medical appointments per inhabitant / year: Primary Health Care and Hospitals

Source: Indicators and Targets NPH. <http://www.acs.min-saude.pt/pns/>

From 2001 to 2008, the consumption per capita of medications in Portugal has increased from 270 Euros in 2001 to 331.1 Euros in 2008, and in 2009 was observed a decrease to 327.4 Euros. This latter trend it was observed in all regions with the exception of Alentejo, which remains the region with greater consumption of medications, per capita, understandable by its aged age structure (Figure 19).

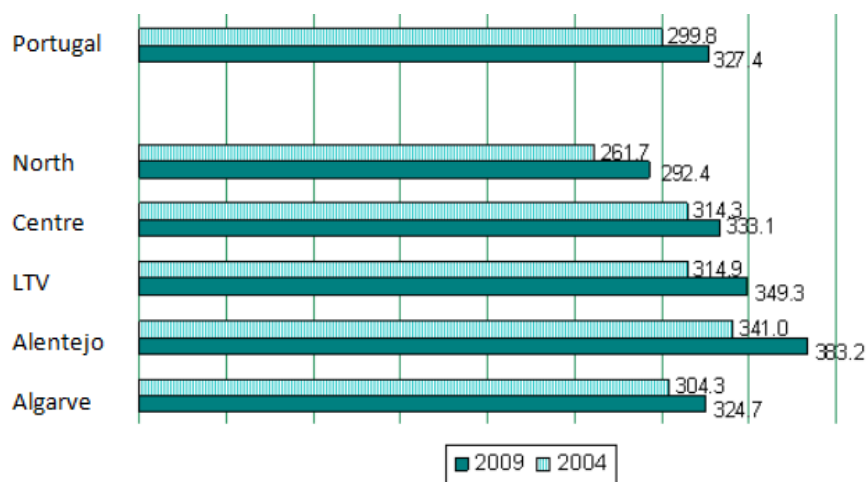


Figure 19: Per capita consumption of medicines in the total market (in Euros)

Source: Indicators and Targets NPH. <http://www.acs.min-saude.pt/pns/>

There is a relationship between the index of aging of a region and its demand for health care, because usually are the people over 65 years that seek more for health care. The expenditure generally increases with increasing age of the person, fact justified, by the increased probability of disability and dependency. Evans & Stoddart defends the inter-relationship between the elements that explain the use of health services, especially the relationship between health and use of health services. They describe the reciprocal relationship between disease and use, in which only the disease, not health, is directly responsible for the consumption of health services. The disease, a factor directly related to use, is one of the elements within others as the degree of prosperity and well-being of a society, that determine health.

It can be seen, thus the case of the Alentejo, which being the area with the largest number of elderly people, is where there is a greater number of medical visits per inhabitant / year, a higher consumption of medications, and even a higher bed occupancy rate when compared with the national average . Also in this region the rate of infant mortality and in active population (along with the Algarve) is among the highest found in the country, being also one of the regions where the population has a worse self assessment of their health status. However when it comes to human resources, is the area with the smaller number of physicians (specialists) and nurses. For Dutton the use of health services is understood as the product of the interaction between users, providers of health care (professionals) and health system. The health system, is addressed in this model through the structural barriers that influence the use, and these can be financial, temporal (waiting time and distance), organizational, and those related to medical practice. In this context, areas like Alentejo, with lower population density, usually associated with aging, suffer the problems of an uneven access to health when compared to the national level, in this region there are often problems of accessibility to the services, since it is in these age groups, where they put many of the problems of mobility. Furthermore in rural areas, the losses of density result in an indirect increase of the distance, because they gradually lose services and equipment due to weak demand.

5. CONCLUSION

In Portugal, the structural changes in health policy, caused changes in the functioning and organization of health services. According to Santana, and as verified through the statistics, there are indications of health gains for the Portuguese people (Santana, 2000) and the improved access to health care over the years (Onsa, 2002; Campos, 2008). However, facing the results of the research, appears that the accessibility although has improved in Portugal, there is still much to be done in this field, the most disadvantaged rural populations not only suffer from more health problems but also suffer the consequences of low geographical access to services in question (Santana, 1995). There are other constraints that affect access to services and health care of economic and socio-organizational nature, as the decrease in supply compared to demand, the "distance" in relation to information sources (institutions health), the knowledge and understanding of a good state of health or the perception of health or disease by the population.

Today the aging process configures one of the major challenges facing societies, and the access to quality health services, has a fundamental role in quality of life improvement of this population. This introductory analysis of the Portuguese health shows that the aging in the country and the new population habits leads the growth of expenditure on medical treatment and hospital. The analysis of the health sector reveals inefficiencies in the provision of services that does not follow the increased demands of population, particularly in the public sector, where the number of equipment has decreased over the years. In the actual context of crisis, health as verified in the statistics, is one of the cohesion vector affected by cuts in public expenditures, and so, the question of inequality and social exclusion will increase associated with unemployment and poverty. In this context, is extremely important diminish the inequalities in the access to health services for people, especially for vulnerable groups, in order to obtain higher quality health care. Good health is essential for people, especially elderly people, to maintain an acceptable quality of life and continue to provide their contributions in society (WHO, 2001). In a situation of aging population, health must be understood in two dimensions, the maintenance of equity in access to services (economical and physical) and in the question of prevention, particularly in younger age groups in order to maintain a healthy workforce.

For understand the reality that people face in obtaining access to care, besides of know the geographical context of the region, it is important to know the population, and accede to their perceptions of the everyday in relation to their health, as well as their experiences and

expectations, in this context the contextual characteristics are important determinants on access to health care.

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