Looking back at the Portuguese crisis:
what legacy for the Portuguese NHS?

Um olhar sobre a crise portuguesa: qual o legado para o SNS?

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Abstract

In 2011, Portugal signed a financial rescue plan that included a Memorandum of Understanding to reduce the deficit and the public debt, and contain the growth of public spending.
Health sector policies included changes in the financing of the NHS and public sub-systems, pharmaceutical market and pharmacies, prescription and monitoring of prescription, centralization of purchasing and public hiring, primary health care, hospital services and cross-sectional services. Five years have passed and most of the policies are still in force. However, the majority of them are still waiting for an assessment on their ability and suitability to solve structural problems of the NHS.
Despite the crisis, the different players, stakeholders and interests, it is common to all sectors of the Portuguese society that the constitutional right to health ought to be maintain through the NHS, thus guaranteeing universal health coverage. Nevertheless, the provision of care is to continue to be assured by the public, private and social sector and the challenge is to respond to the health needs while guaranteeing the quality and sustainability of the public provision of care, mainly through the NHS.

Key Words:
Health policy, Portugal, financial rescue, quality of healthcare, economic crisis.

Resumo

Em 2011, Portugal assinou um plano de resgate financeiro, que incluía um Memorando de Entendimento, com o objetivo de reduzir o défice e a dívida pública e conter o crescimento da despesa pública. As políticas para o setor da saúde abrangeram o financiamento do SNS e dos subsistemas, o mercado do medicamento e as farmácias, a prescrição e a monitorização da prescrição, a centralização das compras e da contratação pública, os cuidados de saúde primários, os serviços hospitalares e os serviços transversais. Passados cinco anos, a maioria das políticas continua vigente. Contudo, a maior parte aguarda uma avaliação da sua adequação e capacidade para resolver os problemas estruturais do SNS.
Apesar da crise, dos diferentes interesses e atores, é consensual, em todos os sectores da sociedade portuguesa, que o direito constitucional à saúde deve continuar a ser efetivado através do SNS, garantindo, desta forma, a cobertura universal de cuidados. Contudo, a prestação de cuidados deve continuar a ser garantida pelos sectores público, privado e social sendo que o desafio será responder às necessidades de saúde mantendo a qualidade e sustentabilidade da prestação pública de cuidados essencialmente através do SNS.

Palavras Chave:
Política de saúde, Portugal, resgate financeiro, qualidade de cuidados, crise económica.

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Introduction

In March, May and September 2010, the Portuguese Government implemented several Stability and Growth Programmes to deal with mounting financial constraints resulting from the financial crisis which began in 2008 [1].
In March 2011, after the inability to approve another package of measures and following a political crisis, the Troika (composed by the International Monetary Fund, the European Commission and the European Central Bank) was called to intervene. This led to an economic adjustment programme with an associated Memorandum of Understanding (MoU) that deeply influenced all aspects of the Portuguese economy and the lives of Portuguese citizens, even though, at the time, there was already some evidences that austerity measures might deeper hamper the economy and influence the health of the Portuguese [2].
The policies on the MoU somewhat continued the line initiated by the previous Stability and Growth Programmes and aimed at reducing the deficit, the public debt/ GDP ratio, containing the growth of public spending and increasing competitiveness of the Portuguese economy through neutral budgetary tax revision, for a predicted time horizon of 3 years [3].
During 2011 and 2013, the deterioration of the macroeconomic indicators was worse than expected [1]. There was an aggravation of the living conditions in Portugal: the unemployment rate increased (in 2012 it picked at 16%), GDP real growth and family income decreased, there was a reduction of around 22% in household expenditure in healthcare and the risk of poverty of Portuguese children increased by 16.5% between 2010 and 2012 [1,4].
The rescue plan included actions on budgetary policy, both in terms of public spending and revenues, regulation and supervision of the financial sector, labour market and education, housing market, framework conditions (e.g., judicial system, public contracts, and public procurement) and structural budgetary measures. These last ones included a set 34 specific measures for the health sector (points 3.50 to 3.83 of the MoU) [3].
In general terms, the MoU established that there was to be a reduction in the provision of public services. Furthermore, public services were to be regularly assessed in terms of value for money, and expenditure should be reduced (including the health sector). In fact, the country was able reduce the public deficit to -0.5% of GDP in 2017 (in contrast with -9.8% of GDP in 2010) and the GDP grew 2.8% in 2017 (in contrast with -4.0% during the peak of the economic recession in 2012). However, the public debt is still very high (124.8% of GDP in June 2018), the country remains under tight surveillance from international institutions [5] and impacts of the economic crisis are expected to persist for a long period.

The Portuguese health system

The Portuguese health system is characterized by three co-existing systems: the universal National Health Service (NHS); the health subsystems, health insurance schemes for which membership is based on professional/occupational group or company; and private voluntary health insurance [6]. It draws on a mix of public and private financing: the NHS is predominantly financed through general taxation, the health subsystems are financed mainly through employee and employer contributions and private voluntary health insurance has a supplementary role.
Between 2010 and 2017, there was a decrease in the total health expenditure from 10.4% to 9.0% of the GDP. Also in that period, the public health expenditure remains the same (around 67%) which represents an absolute decrease in available funds. In 2010, 38.2% of total expenditure was with hospitals, 32.9% in ambulatory care and 19.5% in pharmacies. In 2017, the expenditure with hospitals had increased (42.2%), expenditure with ambulatory care and pharmacies had decreased (to 27.3% and 15.0%, respectively) [7,8].

Policy measures for the health sector in the MoU

The policy measures for the health sector in the MoU can be roughly divided in indirect and direct. The first ones refer to general public administration measures, the second ones to those specifically targeting the health sector.
Indirect policy measures intended to increase efficiency, reduce costs, reduce expenditure with personnel and reduce public expenditure in health (Table 1).

Table 1 - Indirect policy measures for the health sector in the MoU (3)

Policy		Scope
Increase efficiency in public administration trough elimination of redundancies, simplification of procedures and reorganization of services	Reduce the number of services while maintaining quality in the provision of public services	efficiency
	Promote shared services	
	Periodically assess the efficiency and efficacy of public services	
	Promote the mobility of workers	
	Review wages and fringe benefits policies	
	Freeze wages in the public sector	
	Limit hiring in the public sector	
	Limit promotions in the public sector	
Introduction of a plafond for families' health expenditure deduction in taxes, including voluntary health insurances		Transfer of financial responsibility from State to the individual

As agreed in the MoU, and for all sectors of public administration, including the health sector, promotions and hiring were limited, wages frozen and mobility of workers promoted. This had a profound effect on workers of the NHS [9]. One of the most controversial measures taken during this period was the increase in the number of weekly working hours from 35 to 40 without any effect in salaries. From the public employers' point of view, this meant an "additional worker" per each seven workers, without any additional costs, which allowed services to continue to provide care at the same level as before the memorandum, despite not being able to hire more workers.
Between 2010 and 2015, the salary variation in the NHS was -9% and the variation of the number of professionals -1%. In 2016, there was a growth in the personnel of the NHS and in the expenses with remunerations (1.98% and 6.44% variation, between 2010 and 2016, respectively) [10].
However, these measures had some deleterious effects that prevail even after their revocation, in 2016. Lack of promotions, less hiring, and the increase in the number of weekly working hours of health workers might have led to less motivated and satisfied workers, increase in turnover rates, early retirements and migration [4,11–14].
In 2011, the current expenditure with health care was around 16.8 billion euros. In 2013, a decrease of 8% was observed in relation to 2011, corresponding to 15.5 billion euros. In 2016, the expenditure raised 8% compared to 2013, to 16.8 billion [7].
Another important measure was the reduction of fiscal benefits for health. In 2012, there was a reduction of the total deductible amount to a maximum of 10% of total personal private expenditure. In 2018, the maximum ceiling increased to 15% [28]. This fiscal benefit is highly regressive with only those with higher income being able to spend in private health care, mainly with medicines and private consultations.

The **specific measures for the health sector** can be categorized in 8 areas: financing, pharmaceuticals, prescription, NHS expenditure with private providers, primary health care (PHC), hospital services and cross-sectional services (Table 2). Some of these policy measures were, in fact, the continuance of others initiated either during the Stability and Growth Programmes or even before.

Financing

The specific measures for the health sector included financing of the NHS and public sub-systems. From 2005 to 2010, the NHS budget increased steadily, both in absolute value and in proportion of GDP. However, during the Economic and Financial Adjustment Programme, the NHS budget reverted to the level recorded 8 years earlier (from €7.5 billion in 2012 to €7.6 billion in 2005). In 2015 and 2016, the budgetary transfers to the NHS were around €8.6 billion in both years and in 2018, 9.3 billion euros [15].
There was also an increase in user charges and its indexation to inflation and exemptions were reviewed during the crisis period. There was a shift from exemptions based on specific groups (e.g., chronic patients) to exemptions based on the economic condition of individuals. In 2010, user charges represented 0.74% of the NHS total revenue and in 2012 they accounted for 1.7% of the NHS total revenue [6]. User charges were reviewed in 2016 and prices reduced. In that year, user charges accounted for 1.9% of the NHS total revenue [16].
The measures for user charges, among others, meant to shape health services utilization, deriving users from hospitals to primary health care, where user charges were less expensive and always bellow those

Table 2 - Analysis of the direct policy measures for the health sector in the MoU (3)

Policy		Type/ Scope
Increase efficiency and efficacy of the national health system, through a more rational use of services and cost containment	Review and increase users fees trough revision of users fee exemption categories	Financing
	Increase users fees for specific services ensuring that user charges in primary health care are lower than those charged for urgent episodes in hospitals and specialist medical appointments	
	Index user charges of the NHS to inflation	
	Gradually reduce global budgetary cost of health subsystems until reach their self-sufficiency, through reduction of the contributions paid by the employer and adjustment of health benefits.	
	Elaborate a strategic plan for the health sector	
Produce additional savings in the operational costs of the hospitals	Definition the maximum price of the generic medicine as 60% of the price of the brand medicine	Definition of the prices and co-payments of medicines
	Review the system of prices of reference according to the international prices, using as countries of reference the three with the lowest prices or those with comparable GDP per capita.	
	Mandatory electronic prescription for medicines and medical exams covered by public reimbursement systems in the public and private sector	Prescription and monitoring of prescription
	Improve the monitoring system for the prescription of medicines and medical exams and evaluate clinicians for volume and value of medicines and medical exams prescribed	
	Encourage medical doctors to prescribe generic medicines and less expensive brand medicines	
	Establish prescription rules for medicines and medical exams (prescription guidelines for medical doctors)	
	Reduce administrative and legal barriers to introduction of generic medicines	
	Implementation of legislation to regulate the activity of the pharmacies	Pharmaceutical sector
	Change the calculus of margin of return to fix a regressive commercial margin and a fixed amount for distribution companies and pharmacies	
	Introduction of 3% reimbursement monthly charged by the State to the pharmacies and distributors over the margin of profit	
Produce additional savings in the operational costs of the hospitals	Establish the legal and administrative framework for a centralized system for purchasing medical equipment and medicines in the NHS to reduce costs and fight waste	Centralization of purchases and provisioning
	Increase competition between private providers of medical exams	
	Implement the centralized provisioning of medical products	
	Introduce a biannual price revision for private providers of medical exams	
	Define a payment scheme for settling health services debts and introduce monitoring mechanisms to avoid new debts	Hospital services
	Present a detailed description of the measures needed to reduce by 200 million euros the operational costs of hospitals (including concentration and rationalization in public hospitals and primary care centres)	
	Continue the publication of clinical guidelines and create an audit system for its implementation	
	Improve the selection criteria for managers and directors in hospitals	
	Create a system for hospital benchmarking based on a wide set of indicators	
	Continue to reorganize and rationalize the network of hospitals trough specialization and concentration of hospital services, emergency departments and joint management and functioning of hospitals	
	Implement a more rigorous system for monitoring of working hours and activities of health professionals in the hospitals	
Reduce the utilization of speciality medical appointments and hospital emergency departments and improve coordination between levels of care	Increase the number of Family Health Units (FHU)	primary health care
	Create a mechanism to guarantee the presence of family physicians in underserved areas, increasing equity in the distribution across the country	
	Transfer some of the ambulatory services in the hospitals to family health units	
	Annually review the inventory of all active medical doctors per speciality, age, region, primary care centre and hospital in the private and public sector to forecast current and future needs in medical doctors	
	Prepare annual reports for deployment of qualified and support human resources in the NHS	
	Introduce rules for mobility of health professionals (including doctors) between and within Health Regions	
	Implement an electronic medical records system	Cross-sector services
	Reduce costs related with the transportation of patients	

in hospitals. At the time, there were controversies since these measures could affect access to health services, especially among the poorer. However, studies failed to demonstrate a clear link between higher user charges and inequities in the access to health care [17], which might result from around 60% of the Portuguese population being exempt from these fees [6]. Actually, there was a decrease in the number of PHC consultations but only among those exempt from user charges [17]. The possible explanations for this are very complex since social disadvantage in disease (e.g. diabetes or COPD) tend to aggregate. So, those exempted from user charges used less the PHC services probably because they were facing other problems that influenced their health and ability to access services. Exemption of user charges for pharmaceuticals are less than those for health services [6] which might partially explain why some studies report failure to purchase medicines due to financial hardship [18].

Pharmaceuticals

In 2011, a set of policies regarding the pharmaceutical sector were implemented, which included new rules for price setting, reduction in the prices of pharmaceuticals and increasing use of generic drugs in order to produce additional savings by reducing the public expenditure with medicines. In 2011, the public expenditure with medicines was 1.35% of the GDP, 1.30% of GDP in 2012, and 1.25% of the GDP in 2013 [6]. In 2016, it was 1.23 % of the GDP [19].
The introduction of generic drugs led to an increase in the pharmaceutical market. In 2010 there was 3,073 generic drugs in the Portuguese market and in 2013, 4103, which roughly represented 2/3 of the Portuguese drug market [20]. In 2015, the share of generic drugs was approximately 47%. In March 2016, the government and the pharmaceutical industry signed an agreement concerning public spending pharmaceuticals in the NHS, benchmarking public expenditure on pharmaceuticals of €2,000 million with a time horizon until 2018 [6].

Prescription

The MoU foresaw the implementation of mandatory electronic prescription for medicines and medical exams covered by public reimbursement systems in the public and private sector. Additionally a set of guidelines concerning prescription were also to be developed [21,22].
Despite initial resistance, mainly by older medical doctors, electronic prescription came into law in 2012 [23]. Also in 2012, it became mandatory for all medical doctors to prescribe using international common denomination (ICD) and for pharmacies to supply patients with the ICD drug at the lowest price. This measure further contributed to the increase in the volume of prescription and use of generic drugs.
Conversely, the electronic prescription of medical exams is yet to be achieved, despite some pilot projects in place. One of the expected impacts of the MoU was to reduce by at least 10% in 2011 and another 10% in 2012 the global expenditure of the NHS with private providers of medical exams. Between 2011 and 2012 there was a reduction of roughly 10% (from 587 to 534 million euros, respectively) and in 2013 this reduction was only of about 5% (to 507 million euros) [7].

Hospital services

The MoU foresaw, for hospital services three major policies aiming at regularizing the debt to the hospital suppliers, reducing operational costs of the hospitals and reorganizing and rationalizing the network of hospitals.
Even before the MoU, debt to suppliers was a problem and several programs were put into place to try to solve the issue [24]. During and after the MoU these programs continued with several "injections" of money in the system to regularize the debt. None was actually effective. In January 2014, the total amount due by hospitals to suppliers was 1006 million euros. In July 2018 it was 1254 million [25]. Alongside these programs, a series of mechanisms were implemented to control a growing debt. For instance, purchase of equipment was limited: with a total cost above 100 000 euros it became necessary to obtain previous authorization from the Ministry of Health [6].
To increase efficiency, there was a reduction in the number of services and sharing of services within the NHS was promoted. Actually, before the crisis, SPMS (Shared Services – Ministry of Health) had been created to provide shared services in purchasing, logistics, financial services, human resources, information and communication systems, and technologies to centralize, optimize and rationalize the acquisition of goods and services in the National Health Service [26–30]. Nevertheless, to our knowledge, the effectiveness of this measure was not assessed.
The reorganization of the network of hospitals started before the period of the MoU with the clustering of several hospitals into Hospital Centres. However, no evidence exists on the effectiveness of this measure [31].
In 2016, after the introduction of freedom of choice for hospital outpatient care [32], a new hospital referencing system was created. The intention was, among others, to promote, implement and streamline the internal organization and hospital management model to facilitate access and better plan hospital human resources within the NHS.
A study on the impact of the economic crisis in hospital care use showed that the crisis was associated with more hospital episodes (i.e., non-elective surgeries, complicated pregnancies and myocardial infarctions). However the length of stay decreased during the crisis [33].
Intra-hospital mortality is considered an indicator of the quality of acute hospital care [34,35] and waiting

times a measure of the access to specialized care. During the crisis period there were important variations in these two indicators.

Overall, in Portugal, 30-day mortality after hospital admission for Acute Myocardial Infarction (AMI), haemorrhagic stroke and ischemic stroke have been steadily decreasing since the beginning of the 2000's, with slight variations between the years. In 2008, the first year of the economic crisis, the age-sex standardized mortality rate per 100 patients for AMI was 15.6, for ischemic stroke 13.8 and for haemorrhagic stroke 25.3. During the crisis period, all mortality rates continued to decrease but at a slower pace than before. However, in 2013, the last year of validity of the MoU, there was an increase in all rates under analysis, when compared to 2010. In the case of 30-day mortality after hospital admission due to AMI, the rate was well above the 2008 values (26.9 per 100 patients) (FIG 1).

In OECD European countries, the same downward trend has been observed, for all three indicators, since 2008. Since this year and up until now, Portugal is among the countries with the highest AMI, haemorrhagic stroke, and ischaemic stroke 30-day mortality after hospital admission [36].

Waiting times for elective surgeries (i.e., cataracts, coronary bypass, prostatectomy, hysterectomy, hip replacement and knee replacement) have also been decreasing since 2006, in Portugal. Between 2006 and 2010, for all types of surgery under analysis (FIG 2), there was a reduction in mean waiting days (-110 days for hysterectomy, -119 days for hip replacement, -131 days for knee replacement, -148 days for cataracts, -164 days for coronary bypass and -180 for prostatectomy).

However, between 2010 and 2013 there was a very small increase in waiting times for cataract surgery (+17 days), coronary bypass (+4 days), and hip

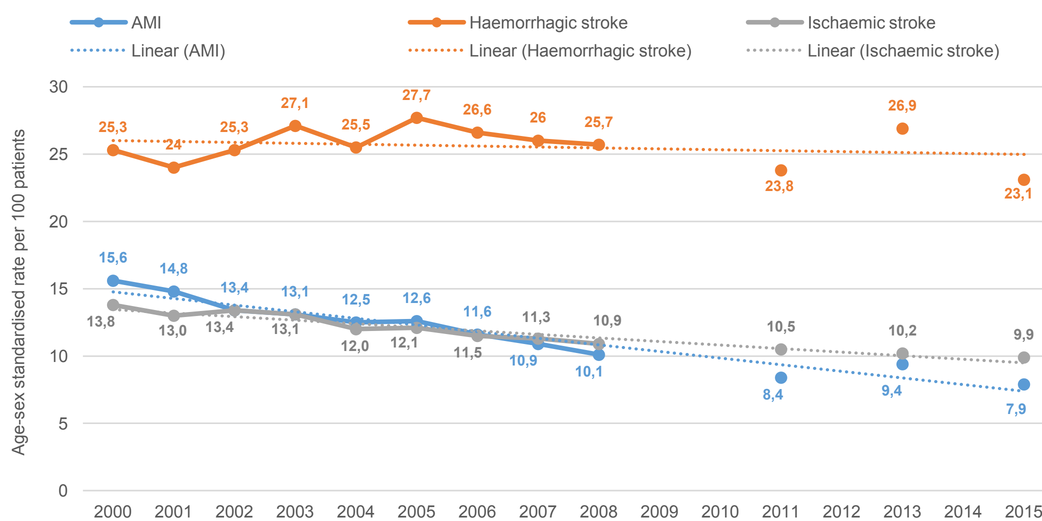
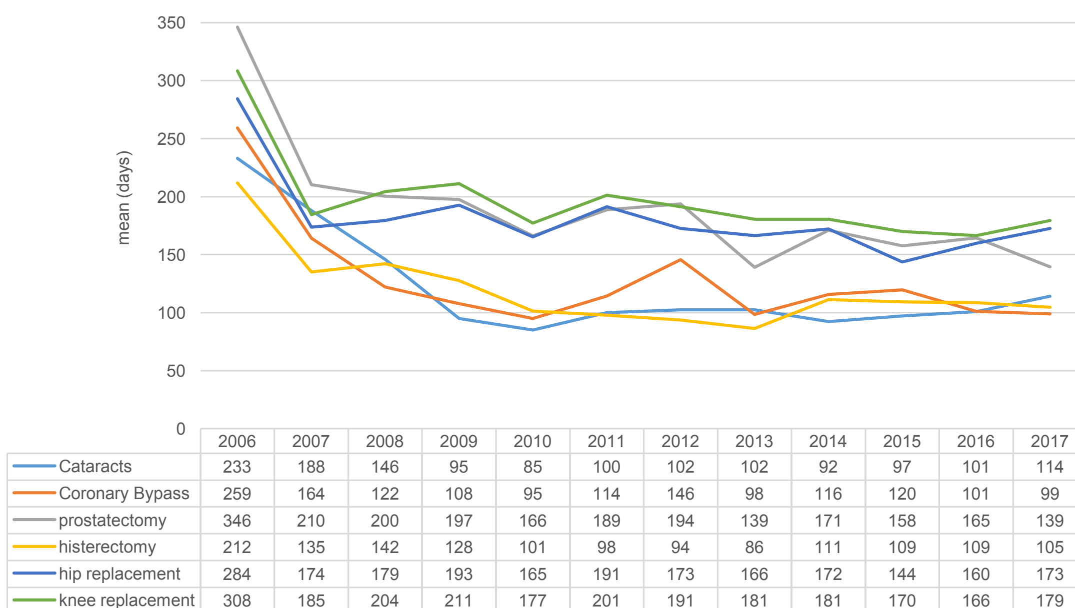


Figure 1 - 30-day mortality after hospital admission for AMI, haemorrhagic and ischemic stroke, Portugal, 2000-2015.
Source: OECD, 2018



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cataracts	233	188	146	95	85	100	102	102	92	97	101	114
Coronary Bypass	259	164	122	108	95	114	146	98	116	120	101	99
prostatectomy	346	210	200	197	166	189	194	139	171	158	165	139
histerectomy	212	135	142	128	101	98	94	86	111	109	109	105
hip replacement	284	174	179	193	165	191	173	166	172	144	160	173
knee replacement	308	185	204	211	177	201	191	181	181	170	166	179

Figure 2 - Waiting times for elective surgeries, Portugal, 2006-2017.
Source: OECD, 2018

and knee replacement surgeries (+1 and +3 days, respectively). All other types of surgeries continued to have a decrease in mean waiting days but much slower. In 2017, all mean days of waiting for all elective surgery, except prostatectomy, were slightly above those registered in 2010. A patient had to wait almost one month more to undergo cataract surgery and patients for prostatectomy could expect to have their surgery one month before that they would have it in 2010.
When compared to other countries, in 2008, Portugal was among those with the highest waiting times for elective surgery for all types considered. After the crisis, the situation remained the same.

Primary health care

Primary health care was elected as a priority in the MoU, although the measures were not too ambitious [1]. There was to be a reinforcement of PHC services with more and better distribution of family doctors throughout the country in order to reduce inequities. Between 2010 and 2012, the number of patients with a family doctor increased from 82.1% to 85.1%, respectively. In 2017 the percentage was 92.7% [37]. However, it is unclear if this increase in coverage resulted in a reduction in mal-distribution.
Additionally, the number of family health units (FHU) created in 2006, increased from 277 in 2010 to 357 in 2012 (18% increase). In 2017 there were 495 FHU and in June 2018, 505 [38]. FHU are small teams of three to eight GPs, the same number of family nurses and a variable number of administrative professionals covering a population between 4000 and 14 000 individuals, that have functional and technical autonomy and a payment system sensitive to performance that rewards productivity, accessibility and quality [6].

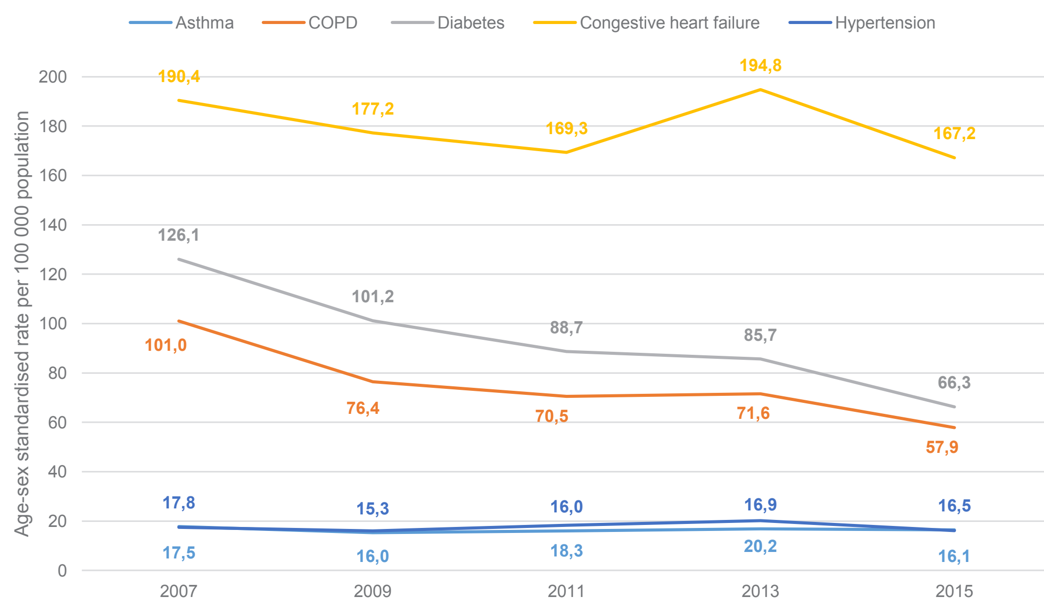


Figure 3 - Avoidable hospital admissions for selected causes (15 years and over), Portugal, 2007-2015.
Source: OECD, 2018

Avoidable hospital admissions for conditions amenable to PHC are considered a quality indicator for PHC. For chronic conditions like asthma, COPD, diabetes, hypertension or congestive heart failure, whenever there is a hospital admission due to the disease, it is considered a failure in the follow-up of the patient. Patients who are well controlled do not need to use hospital services. The follow-up of these patients is done in PHC units and admission to the hospital can have several reasons among which failure to access services or to provide good quality healthcare services.
In Portugal, since 2007, avoidable hospital admissions for diabetes, chronic obstructive pulmonary disease, hypertension and asthma have been decreasing (FIG. 3). Even during the crisis, the downward trend continued and in 2015, the country was among the 25% countries with the lowest incidence of hospital admissions due to the above-mentioned causes (36). Nonetheless, between 2011 and 2013 the number of hospital admissions due to congestive heart failure (CHF) reach 194.8 per 100 000 population, a number above that of 2007. Yet, even during that period, the country was below the median incidence rate when compared to other countries and in 2015 it was again among the 25% countries with lower hospital admissions for CHF [36].

The legacy of the crisis

The implementation of austerity measures to deal with growing financial constrains has been controversial and largely based on political and philosophical beliefs. In 2011, Portugal asked for the intervention of the Troika after failing to approve the fourth Stability and Growth program with a resulting political crisis.

The financial rescue plan included a MoU that aimed at reducing the deficit and the public debt, and contain the growth of public spending. At the time, the macroeconomic indicators worsen with increasing unemployment rates, loss of wealth of family and serious impacts in the health of Portuguese (e.g., rise in suicides rates) [4,39]. However, the full impact of the financial hardship faced by the country is yet to be entirely understood and quantified and some of its effects might only become evident in the coming years.

Overall, the impact of the rescue plan and of the MoU in the health sector resulted from policies and measures specifically for the sector and broader, general public sector measures.

Health sector policies included changes in the financing of the NHS and public sub-systems, pharmaceutical market and pharmacies, prescription and monitoring of prescription, centralization of purchasing and public hiring, primary health care, hospital services and cross-sectional services.

Most of the measures had already started before the MoU and there was a general agreement in society and among political parties that they were needed, which somehow led to a "greening" of the political arena for further implement the policies. Policies concerning prescription are a good example. The volume of prescription in the NHS had been identified has a problem to tackle. During the crisis and as agreed upon in the MoU a series of measures were implemented to reduce the volume of prescription. These measures were generally accepted by medical doctors, patients and other stakeholders and gains were obtained.

The rational use of pharmaceuticals and a more rational prescription became evident with the implementation of the electronic prescription, the use of ICD and promotion of use of generic drugs but further investment is needed to extend electronic prescription to medical exams and develop guidelines to promote a more efficient use of medical exams.

Five years have passed over the MoU. Most of the policies are still in force while others were revoked. In both cases, an assessment of their impact and efficiency is practically inexistent. The vast majority of the 34 measures concerning the health sector are still waiting an effectiveness and efficiency assessment on their ability and suitability to solve structural problems of the NHS.

For instance, despite all efforts to control the debt to suppliers, even after several payment programs have been developed by quite a few Governments, and by the MoU, this problem still prevails and no evidence exists on the effectiveness of implementing payment schemes to prevent a fire instead of ending it. Meanwhile the NHS budget has increased again. However, this increase is mostly due to revocation of salary cuts than to an increase in investment in the NHS. The lack of investment in the NHS might hampered the ability of the system to continue to address and respond to health needs of the Portuguese in an effective and timely manner and with high quality standards. The increase in the waiting times observed during the crisis is a clear example of this. During the crisis, direct and indirect reduction in the level of health care workers' salaries, budgetary cuts and aggravation of working conditions for health professionals which might have led to a poorer performance of the system.

During the crisis, 30-day mortality indicators as well as waiting times for elective surgery suffered an aggravation and some of them were performing worse after the crisis. The changes that occurred during the crisis period in Portugal could have resulted not only from the reduction in NHS budget and in hospital funding but also from indirect effects of the crisis (e.g., unemployment, larger inequities, and impoverishment) [40]. A study conducted in Portugal showed that during the crisis self-reported unmet medical need grew between 2010 and 2012, being financial barriers, waiting times and inability to take time off work or family responsibilities the more frequent explanations [40].

In 2017, in Portugal, the waiting times for all elective surgery, except prostatectomy, were slightly above those registered in 2010. Between 2010 and 2015, there was a decrease in the number of health professionals in the Portuguese NHS, a decrease in salaries expenditure in the NHS, a reduction in the NHS budget and a decrease in the NHS expenditure with public hospitals [7]. The reduced investment in

hospitals in terms of either financing or allocation of human resources might explain higher values for 30-day mortality for the selected conditions, as well as for mean waiting times for elective surgery. In May 2016, a new law was put into force that facilitates the referral of NHS users from primary healthcare units to outpatient consultations in NHS hospitals outside of the referral area. However, the percentage of outpatient referrals from NHS primary health care units made to an NHS hospital out of the referral area was still low in 2017 (approximately 11%) [32].
Conversely, during the crisis period, the private sector grew, filling the gaps left by the NHS, sometimes competing with it, contracting the provision of care with the subsystems, as it is the example of elective surgeries, and "using" demotivated health professionals that abandoned the public sector. One of the major winners, if there is to be a winner, of the economic crisis was the private for-profit sector.
One of the main policies of the MoU concerning the health sector was to strengthen the provision of PHC, deriving patients from hospitals to PHC centres. The incentives for extending the number of FHU (18% increase between 2010 and 2012) and the increase of coverage of family doctors might have contributed to the good performance of the country in terms of quality indicators for PHC [41]. Nevertheless, iniquities in access to PHC might subsist, especially at regional level and should be carefully analysed in further studies.

What does the future holds for the health sector?

Since its inception, the Portuguese Health system has known three important institutional players: the State, the social sector and the private sector. These players have different responsibilities, typologies and interventions.
Despite the crisis, the different players, stakeholders and interests, it is common to all sectors of the Portuguese society that the constitutional right to health ought to be maintain through the NHS, thus guaranteeing universal health coverage, tendentiously free at the delivery point and funded through general taxation. Nevertheless, the provision of care is to continue to be assured by the public, private and social sector and the challenge is to respond the health needs guaranteeing the quality and sustainability of the public provision of care, mainly though the NHS. During the past 40 years, the relationship of the NHS with the private and social sectors has gone through several changes related with the political, economic and social context that have affected the provision of care. During the crisis, this was particularly evident with the private sector contracting with the NHS in areas where public provision was not possible or desirable.
Some characteristics of the Portuguese health system have been determinant for the growth of private delivery of care and, in some cases, for the weakening of the public response to health needs. Relevant examples are the mobility of health professionals between public and private sectors or contracts celebrated between the NHS and private providers. The impaired access and coverage of several public services, the modernization of the inpatient services in private hospitals and a new pattern of private health care delivery (shift from small doctor cabinets to aggregation in larger clinics or hospitals), the growing role of some health subsystems as funding agents of the private sector, the development of the public private partnerships as well as fiscal deduction for out-of-pocket expenditure in health have also contributed to the growth of the private sector.
In recent years, including the period of economic crisis, the social sector also saw its role in the health system reinforced, namely with the creation of the national network for integrated care.
The regulatory role of the State concerning health care delivery, pharmaceuticals and medical devices, and professions has evolved in order to respond to a progressive representativeness of the private sector.
Despite the existence of good examples of the relationship between the three sectors, in a near future the role of the public sector in the provision of care is ought to be discussed as well as the solution for problems for which no sustainable and long-term solution has been found. The proposals presented in the new Basic Law on Health are a good example of this.

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