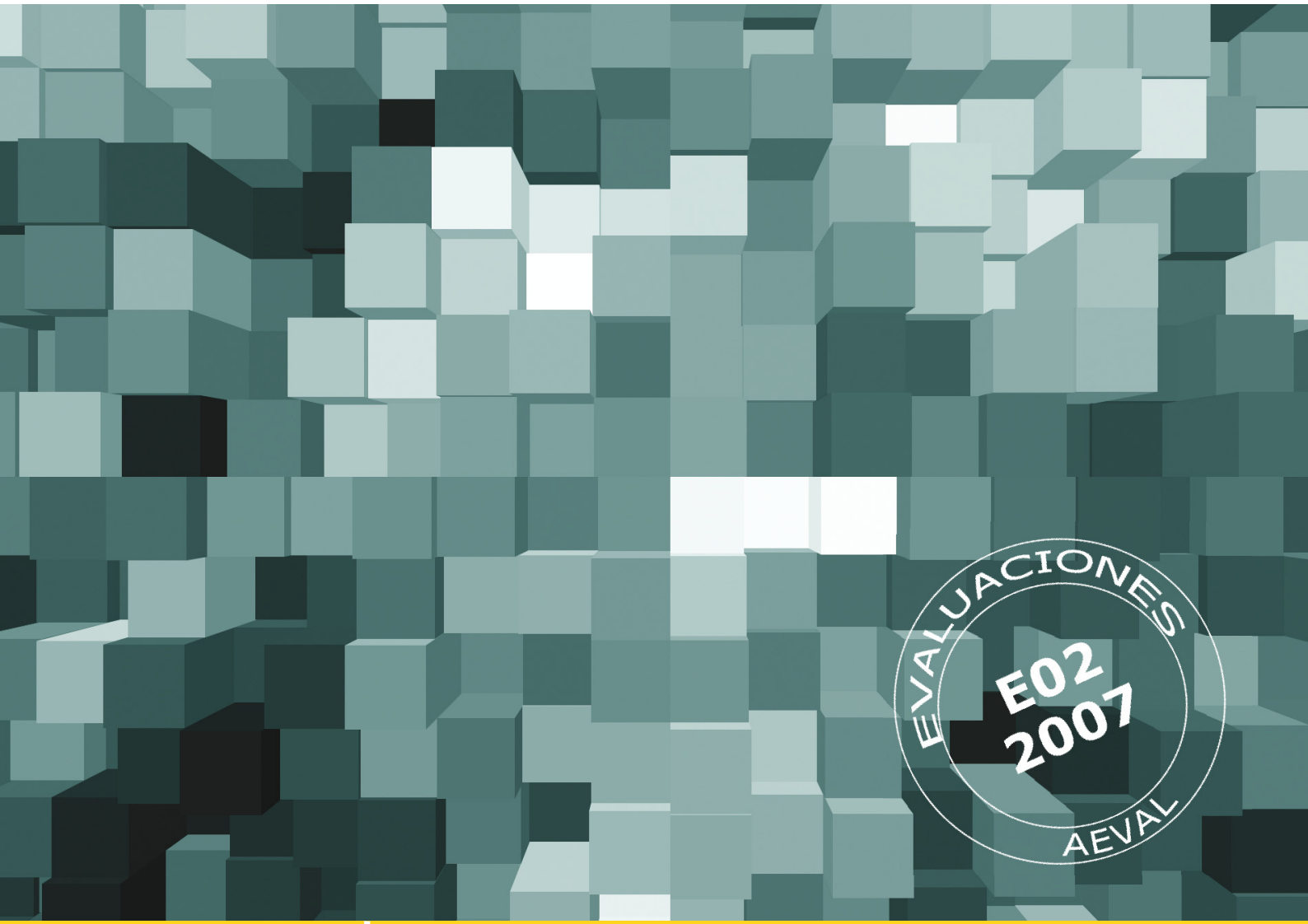
Effect of measures taken to rationalise pharmaceutical spending



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MINISTERIO DE ADMINISTRACIONES PÚBLICAS

agencia de evaluación y calidad

Promoting the evaluation of public programmes and policies, developing transparency and improving the use of resources and quality of services to citizens are government priorities. Every year, the Council of Ministers approves a number of programmes and public policies to be evaluated by the National Agency for the Evaluation of Public Policies and the Quality of Services, within the scope of the functions outlined in its action plan.

On the proposal of the Minister of Public Administrations, the Council of Ministers, in its meeting of 30 March 2007, decided on the public programmes and policies to be evaluated in 2007. These included: The National Reform Programme of Spain; the administrative procedures for the creation of enterprises; the national register of greenhouse gas emission rights and the quality of services in state museums.

The evaluation of The Nationl Reform Programme of Spain was to focus on: the effect of measures adopted for the rationalisation of pharmaceutical expenditure, the effectiveness of energy security policies, programmes to foster research, development and innovation, and the financial facilities to boost entrepreneurial activity.

Please note that the English-language version of this text is a translation of the original Spanish-language document and is for informative purposes only. The Spanish text shall be regarded as official in all cases.

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GLOSSARY OF ACRONYMS

AESEG*: Asociación española de fabricantes de sustancias y especialidades farmacéuticas genéricas*

AGEMED: *Agencia española del medicamento y productos sanitarios*

DDD: Defined daily dose

MSC: Ministry for Health and Consumer Affairs

NRP: National Reform Programme

OECD: Organisation for Economic Cooperation and Development

PAI: Prescription by active ingredient

PEPF: *Plan Estratégico de Política Farmacéutica*

R&D: Research & Development

SNS: *Sistema Nacional de Salud*

TRIPS: WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights

WTO: World Trade Organisation

1. Main conclusions and recommendations

Public health spending plays a key role in total public spending evolution, in particular for Autonomous Regions (*Comunidades Autónomas*) budgets. The Strategic Pharmaceutical Policy Plan (PEPF - *Plan Estratégico de Política Farmacéutica*) has been designed to achieve the objective of containing drug spending growth – one of the main reasons for public health spending growth - set out in the first pillar of the National Reform Programme (NRP).

The PEPF tackles many of the problems related to drug spending trends. It takes on board many of the recommendations made by drug policy experts to improve the quality of the service and is in line with the strategies developed by neighbouring countries to achieve the same objective. There is a new global approach to objectives and measures that focuses on the factors responsible for the growth of prescription drug spending.

The Spanish Ministry of Health and Consumer Affairs (MHCA) has made a significant effort to implement the PEPF measures, above all in terms of providing information, transferring funds to finance training activities, improving authorisation, registration and price-setting procedures, introducing electronic prescriptions and improving transparency. Most of these initiatives are contained in the Medicines (Guarantees and Rational Use) Law 29/2006 (*Ley 29/2006, de garantías y uso racional de los medicamentos*). As a result, there has been a significant increase in the number of generics in the supply of publicly-financed drugs, as well as a notable extension of the reference price system.

Prescription drug spending since the PEPF was implemented shows the effectiveness of the price-reduction and profit-margin measures in the Plan, since the moderation in spending is largely due to price containment. The trend in average spending per prescription since April 2007 also shows the positive effect of the reference price system, although the limited time that has passed since it was introduced makes it impossible to evaluate properly its effectiveness and sustainability.

The PEPF does have some flaws, however. It focuses exclusively on prescription-drug spending and ignores hospital drug spending, which represents a growing proportion of total drug spending. It is worth noting the almost complete absence of projected results and impacts, and the lack of a system to monitor and assess results. In addition, the fact that the measures have been mainly embodied in Law 29/2006 and many of them are pending development in regulations means that they are being implemented gradually. This affects the scope of their evaluation, especially in relation to the criteria of real effectiveness and sustainability. In other words, not enough time has passed to enable the real effectiveness of the measures already implemented to be evaluated, let alone to quantify their contribution to the results obtained.

The main difficulty for the PEPF is caused by the distribution of competences between central and regional government. The limitations on the measures affecting the scope of the Autonomous Regions can even be seen from the way that they are drawn up. Such limitations are also evidenced by the divergent pattern of spending trends, since the measures implemented to date affect all regions equally. These results suggest that rational drug use policy has been unevenly promoted, as does the fact that increased spending in the last two and a half years is mainly due to a rise in the number of prescriptions that does not appear justified by the demographic or care factors claimed to be behind such growth.

The evidence suggests that containing spending through price intervention is only viable in the short term. Further, in Spain there is little margin for controlling spending through price regulation since in Europe there is a move towards price convergence, and medicines in Spain are, on average, cheaper than in other Member States. Containing drug spending growth will depend increasingly on taking actions that affect supply (a central state competence) and prescriptions (Autonomous Regions' competence).

As for supply, measures must be developed to ensure that the selective financing principle is effectively applied. This entails drawing up a regulated procedure based on the scientific classification of the therapeutic value of medicines to be financed on a cost-effectiveness basis. With prescriptions, measures promoting rational drug use should be extended, particularly those that have proved to be effective in certain Autonomous Regions.

Therefore, the key to rationalising drug spending growth continues to be tackling the factors responsible for such growth in a comprehensive manner. The challenge is to do so in a scenario where two administrative tiers with different (although complementary) competences interact. The effectiveness of such policies will improve if the measures applied at different government levels are consistent and there is synergy between them.

In short, the Autonomous Regions need to be more involved in drawing up the PEPF. This would hopefully lead to better-defined objectives and measures. Further, the Autonomous Regions would be more committed to implementing such measures, particularly those coming within their jurisdiction.

The complex nature of pharmaceutical supply requires the policies used to improve the situation to be based on the widest possible consensus, especially among the public authorities, while also taking into account the often decisive role played by different interest groups. Promoting procedures to improve the supply of information, and negotiating with a view to obtaining the agreement of all actors involved not only help the effectiveness of policies in this area, they also make it possible to evaluate better their impact on other areas of public and private activity, thus improving the transparency of public intervention.

Recommendation 1

The PEPF should be reviewed after three years with input from the Autonomous Regions with a view to (i) introducing objectives and measures to rationalise hospital drug spending; (ii) achieving increased participation and commitment from the Autonomous Regions in the plan's implementation; and (iii) introducing mechanisms to monitor and assess its success. The opinions and possible contributions of different interest groups in the sector could also be taken into account in this review.

Recommendation 2

A procedure to assess the therapeutic use of medicines needs to be devised. The Autonomous Regions should be involved in both drawing up and implementing it, under the coordination of the Spanish Drugs and Health Products Agency (AGEMED - *Agencia española del medicamento y productos sanitarios*). There is also a need to design and implement agreed statistical indicators to measure prescription quality, which could be done by the Pharmacy Commission of the Interterritorial Council (*Comisión de Farmacia del Consejo Interterritorial*). Taking further steps to encourage prescription quality is a key instrument in rationalising demand.

Recommendation 3

As with other areas of public intervention where a high degree of decentralisation exists, there is a need to put in place mechanisms to promote an exchange of good practices and information, and to make possible the use of benchmarking as a tool to judge better the results obtained in each context. The MHCA could facilitate these procedures for exchanging good practices between territories. One way forward would be to promote joint evaluations of those well-established initiatives that have been effective in a given territory, so that they can be extended to others.

2. Introduction

Measures to rationalise drug spending growth come within Pillar 1 of the National Reform Programme (NRP), whose objective is to strengthen macro-economic and budget stability.

Spending on health tends to grow faster than income; its share of GDP is increasing in all developed countries. OECD statistics for 2005 show that it reached 15.3% of GDP in the United States, 9% for the whole of the OECD and 8.2% in Spain. This trend of increasing health spending, which also affects public health spending (71.4% of total health spending in Spain), threatens budget stability.

In Spain, the trend in public health spending is a key part of changes in public spending generally, above all for the Autonomous Regions. In 2003, 90.13% of consolidated total public health spending was accounted for by the Autonomous Regions. Health spending represented 13.65% of the total spending of all public authorities, and 33.40% of the total spending of all Autonomous Regions.

On analysing the factors determining public health spending growth in Spain, the most important components are the implied prices and real average price per person. Together they account for almost 79% of spending growth between 1999 and 2003. The demographic component (increase in the protected population and the ageing population) explains the remaining 21%.[1] Measures to rationalise drug spending growth affect the first of the components mentioned.

Moreover, although Spanish health spending as a proportion of GDP is below the OECD average, drug spending (1.88% of GDP in 2005) is above the OECD average of 1.49% for the same year. This same pattern exists with respect to public drug spending.

An initial question that needs to be addressed is the complexity of pharmaceutical provision. Many factors determine supply and demand (growth and ageing of the population; intensification of preventive activities in the health service; the public's attitude to medicines; sufficiency of other health resources to meet the growing demand for health care; nature of the supply and/or promotional activity of the industry *inter alia*). In addition, many different actors are involved (public authorities, the pharmaceutical industry, pharmacies, doctors and so on). On this point, it is worth recalling that the management of social security drug provision is a competence that has been completely transferred to the Autonomous Regions' health

[1] Report of the IGAE Working Party on the Analysis of Health Spending. 2005. The IGAE (*Intervención General de la Administración del Estado*) is the Spanish General State Comptroller.

services (although the national state continues to have exclusive competence on drug authorisations, price setting and public financing decisions).

The following section describes the Drug Policy Strategic Plan (PEPF - *Plan Estratégico de Política Farmacéutica*) which lays down the most important objectives for containing spending growth; thereafter the measures adopted and their possible effect on the stated objectives will be analysed, and finally the report's conclusions and recommendations will be given. Given the complexity of the subject, detailed supplementary information is included in the annexes, as well as an explanation of the methodological approach used in the evaluation (Annex I).

3. Description of the PEPF

The strategic objective of the PEPF, unveiled by the Ministry of Health and Consumer Affairs (MHCA) in November 2004, is "increasing the quality of pharmaceutical provision for all citizens, encouraging the rational use of medicines and improving the efficient use of public financing in this field". This objective, which goes beyond that of reducing the spending growth rate laid down in the NRP, needs further explanation.

From a health policy perspective, controlling spending growth must be the consequence of more rational drug use. This involves favouring the reduction of the unnecessary consumption of drugs, making it possible for professionals to choose the most effective drugs and, from these, promoting the cheapest ones. For this reason, the PEPF's priority is efficiency (optimal cost-benefit relation), not just budget control.

To achieve this end, the PEPF lists 67 measures, which are described in Annex II. In summary, through the implementation of these 67 measures the PEPF aims to achieve the following specific objectives:

1- Strengthen the AGEMED as the regulatory body in the Spanish medicines market.
2- Speed up the procedures for authorising and including drugs within the public finance system, basing such procedures more on scientific evidence.
3- Provide doctors with objective and quality information about medicines. The pharmaceutical industry's promotional activities must take place within a framework which emphasises transparency, quality and social ethics.
4- Develop training activities for health professionals to promote rational drug use and improve prescription quality.
5- Promote forms of medicines that are adjusted to treatment durations.
6- Modify the reference price system so that it is implemented in a gradual, predictable and stable manner.
7- Encourage the use of generic medicines.

The Plan also covers other objectives, such as ensuring the traceability of medicines (to strengthen safety and guarantee supply, while also avoiding parallel exports) and encouraging citizens to use medicines more rationally. Moreover, it includes interim measures: a generalised reduction in the price of medicines that have been in the market for more than one year to be applied in two phases (2005 and 2006) and lower profit margins for distribution warehouses and pharmacies. These short-term measures are justified by the need to contain spending growth until longer-term measures can take effect (new reference price system, encouraging generics, etc.).

The Plan, therefore, aims to tackle the different factors related to drug provision: authorisation and price setting, configuration of supply, criteria for public financing and consumption-prescription.

Neither the NRP nor the PEPF mentions projected results. The objectives are not quantified and no statistical indicators for monitoring and assessment are proposed. However, the financial report of the draft Medicines (Guarantees and Rational Use) Law estimates the savings for the National Health System (SNS – *Sistema Nacional de Salud*) arising from both the continued application of the reference price system set up in 2003 and its amendment contemplated in this legislation.[2]

As regards the possible impact of the measures, the Plan refers to the possible reduction in the incidence of medicine-related problems. The PEPF states that more than 30% of health care demand is caused by the use of medicines that, in their opinion, could be avoided in 70% of cases.

[2] Table 1 Annex II.

4. Analysis and interpretation of data

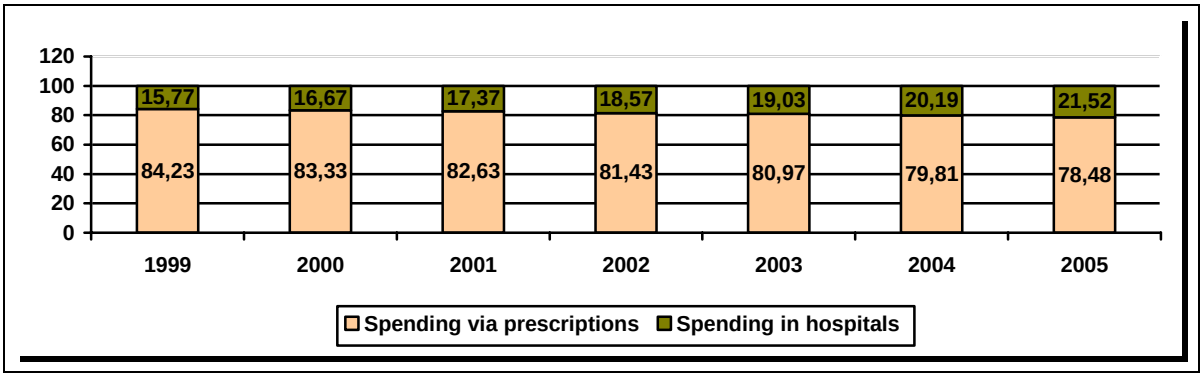
4.1. Relevance of the PEPF

The analysis of the pre-PEPF situation reveals the need for a series of measures to deal with the factors determining pharmaceutical spending in order to reduce its growth.[3] In addition, the need for a plan that insists on the rational use of medicines derives from the fact that pharmaceutical provision is an expense that cannot be controlled directly by budget limitations.

The PEPF identifies and defines measures in relation to external factors and the structural factors that affect the attaining of its strategic objective. However, it focuses exclusively on prescription drug spending, while overlooking hospital drug spending. The latter largely depends on the purchasing policy of each hospital and each Autonomous Region.

The available data[4] shows that hospital drug spending rose from 1,152m euro to 2,808m euro in the 1999-2005 period, when it accounted for 33.55% of intermediate consumption corresponding to specialist care. The average annual growth rate for the period is around 15.8% compared to a figure of 8.67% for prescription drug spending with respect to Autonomous Regions. These changes can be seen in Graph 1 below.

Graph 1: Change in the composition of total public drug spending (1999-2005)



Source: prepared by author on the basis of the report of the IGAE Working Party on Health Spending. 2007

[3] An analysis of the context prior to preparation of the PEPF is included in Annex III.
[4] Report of the IGAE Working Party on Health Spending 2007.

4.2. Design and consistency of the PEPF

Design of the PEPF

The PEPF does not systematically set out any specific objectives, measures and statistical indicators in relation to its overall strategic objective. This has made it necessary to reconstruct the policy's logic so that its internal consistency can be assessed. And this has only been possible in relation to the general objectives and related measures, since the PEPF does not include statistical indicators or projected results or impacts, subject to the exception mentioned above.

Unsurprisingly, many of the initiatives contemplated in the PEPF are the continuation of past initiatives. That said, certain innovative features have been introduced as a result of a prior analysis of the effectiveness of similar previously implemented measures or a dysfunction which needs correcting.[5] These measures are in line with those adopted in other neighbouring countries to control the rate of public drug spending growth.[6]

In addition, the PEPF is a fresh departure in that it takes a comprehensive approach to incorporating objectives and measures affecting the structural factors related to prescription drug spending (as well as in relation to external factors, such as citizens' attitudes towards the consumption of medicines). By contrast, previous initiatives were essentially based solely on price intervention.

Despite the fact that the limitations on pharmaceutical provision caused by the distribution of competences in Spain are not expressly stated, they do appear to have been taken into account judging by the weight, both quantitative and qualitative, of those measures that are the exclusive province of the National State Administration (*Administración General del Estado*), compared to others that come within the province of the Autonomous Regions. As regards the latter, apart from the distribution of funds to boost certain measures, the other measures implemented are encouraging, by setting up working parties, reflection and debate on various issues; and promoting initiatives within their competences.

Possible impact of the PEPF

The PEPF does not consider the possible effects of the measures on other areas of public intervention that are also included in the NRP, such as R&D and innovation policy, where the pharmaceutical sector has a considerable weight. In fact, the joint impact on R&D and innovation of the PEPF measures implemented via Law 29/2006, namely maintaining the transitional medicine protection regime while reducing prices, has been much criticised by the pharmaceutical industry.

[5] Table 1 Annex V.
[6] Table 2 Annex V.

In Spain pharmaceutical products were not patentable until October 1992. At present, for medicines marketed before that date, a transitional regime applies until 2012, at which point the European patents system will apply fully. This transitional regime was adopted before the World Trade Organization agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) came into force in 1995. On the basis of TRIPS, Farmaindustria has called for a "political solution" to bring this transitional regime to an end. While it remains effective, legal actions have been brought to prevent generic medicines being manufactured from molecules that are protected by this regime. This has prevented - and will continue to prevent - generic drugs from becoming more widely available, given the delays in authorising and marketing caused by such court proceedings.

For this reason, although the industry accepts that reference prices are used throughout Europe, it argues that laboratories in Spain feel their effect much more sharply due to the different method of regulating patents here. For instance, the industry puts at more than 1,900m euro the potential losses caused by 14 leading molecules losing patent protection between 2007 and 2012 (allowing generic drugs to be marketed in Spain earlier than in other European countries).

All of the above has led the industry to point out that the measures in the PEPF have a negative impact on R&D and innovation investment in the Spanish pharmaceutical sector. The reality is that R&D and innovation investment growth has fallen throughout Europe, and Spain is no exception to this trend – in fact, it only accounts for 3.52% of total private R&D and innovation investment in the EU, despite the Spanish market accounting for 8.75% of EU sales.

Another effect of the Spanish pricing system, with lower prices than in other EU countries, is that it makes possible parallel exports to other countries. To avoid this, the PEPF advocated the introduction of a traceability system, so that any packet of medicines could be traced throughout the whole distribution chain.

Finally, given that the new system promotes tougher price competition, it is likely that the industry will undergo restructuring in the medium term, when only innovative companies (those that possess patents) and the generics industry (which can reduce costs) will be able to compete. The scale of national industry is not sufficient for it to be able to compete in terms of innovation, and it will find it hard to compete on costs with pharmaceutical companies in emerging economies located principally in South East Asia. In short, it may be seriously affected by the new conditions.

Monitoring and assessment mechanisms

The PEPF is silent on the question of monitoring and assessing the overall results of the Plan or the different measures of which it is made up. In addition, the lack of quantified objectives or statistical indicators means that it is impossible to assess the degree to which the stated objectives have been met.

After the 2006 review, the NRP introduced five indicators. Three of them focus on measuring the changes in drug growth and its main components, while the remaining two assess the degree of generic penetration in pharmaceutical consumption:

1. Annual growth in prescription drug spending.
2. Annual growth in prescription numbers.
3. Annual growth of spending per prescription.
4. Annual growth of consumption of generic drugs.
5. Generic drugs as a proportion of total consumption.

4.3. Degree of implementation of the PEPF

Since the end of 2004, the MHCA has put forward new legislation to implement the PEPF. Of particular importance is the Medicines (Guarantees and Rational Use) Law 29/2006, which largely implemented the PEPF. The details of how the measures are developed are set out in Table 1 of Annex IV.

In should also be noted that a number of the measures stated in the PEPF have been amended during the passage through Parliament of Law 29/2006. These amendments reflect a large number of the demands made by the different sectors affected (the Autonomous Regions, the pharmaceutical industry, the business association pharmacies, the pharmacists' professional association, the medical association etc), which should help the legislation to be more widely accepted.

From the budget point of view, the national budgets for 2005, 2006 and 2007 reflect the Government's desire to extend the PEPF and the NRP reforms. Credits for the "drug supply and rational use" programme and AGEMED's funding have increased notably since 2005. AGEMED, the body responsible for authorising medicines, has seen its budget increased by 77.3% and its staff by 16.7% since 2004[7].

4.4 Effectiveness of the measures implemented

4.4.1 Prescription drug spending growth

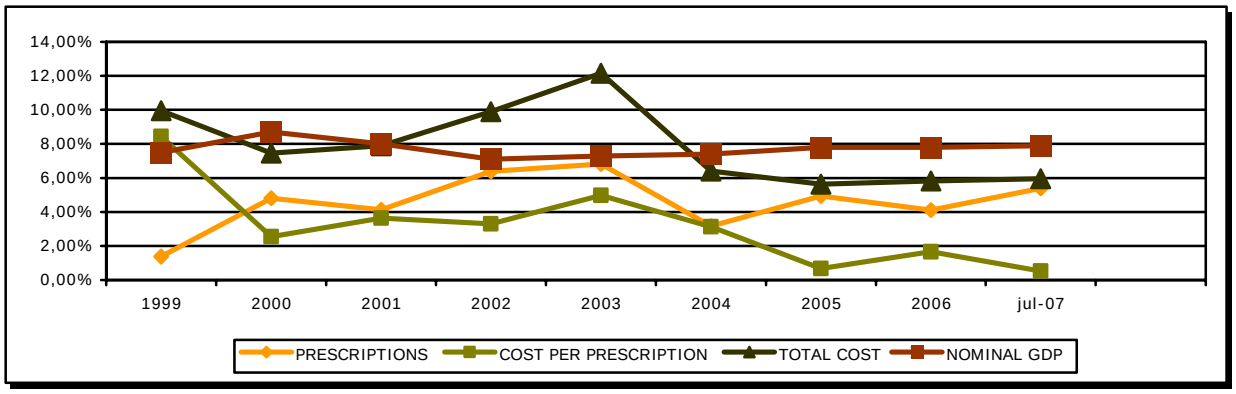
The implementation of the interim measures set out in the PEPF - reductions of pharmacies' and distribution warehouses' prices and profit margins - were responsible for the lowest annual growth in spending since 1999, being 1.85% less than that achieved in 2000, which was also the result of a general reduction in prices in 1999. However, it must be pointed out that in 2004 there was already a decrease in the annual rate growth, which fell from 12.15% in 2003 to 6.40%, largely due to the figures for the second half of the year since in the first six months it stayed close to 2003 levels. Various experts have pointed out that spending in 2003 may be due

[7] Graph 1 Annex IV.

to the sector's reaction to the announcement that the reference price system was to be amended, which occurred when the National Health System (Cohesion and Quality) Law was passed in May 2003 and implemented in January 2004. From May 2004 on, the system for medicines included before and after 2003 was standardised, which would explain the downward spending trend in the second half of the year. In addition, this matches the trend towards lower drug spending growth which, from 2004 on, has been evident practically worldwide.[8]

In 2006, spending growth remained below that for the five-year period prior to the design and implementation of the Plan, although a certain upturn can be observed despite the application of a new 2% price reduction and the 1% decrease in distribution margins. As for the first seven months of 2007, January-March confirm this increase compared to 2005 figures, although a change occurred after April, when the new reference price system took effect. The trend for 2006 and the first few months of 2007 appear to show, once again, that imposing general price reductions on medicines is only effective in the short run.

Graph 2: Annual drug spending growth with reference to prescriptions,* number of prescriptions, average spending per prescription and nominal GDP (1999 – July 2007)



Source: prepared by author based on SNS Pharmaceutical Consumption and Spanish National Accountancy. The data for 1999-2003 come from the same source but were obtained from the IGAE Working Party on Health Spending 2005. The figure for annual GDP growth in 2007 is based on the first quarter.

* Does not include hospital drug spending

As can be seen from the graph, in the last four years prescription drug spending has grown more slowly than GDP. The graph also shows that the pattern of the two spending components remains the same i.e. a reduction in one component appears to be compensated by an increase in the other, except in 2003 (when both increased) and 2004 (when both fell). It would therefore appear that price reductions were offset by increases in prescription numbers, and vice versa.

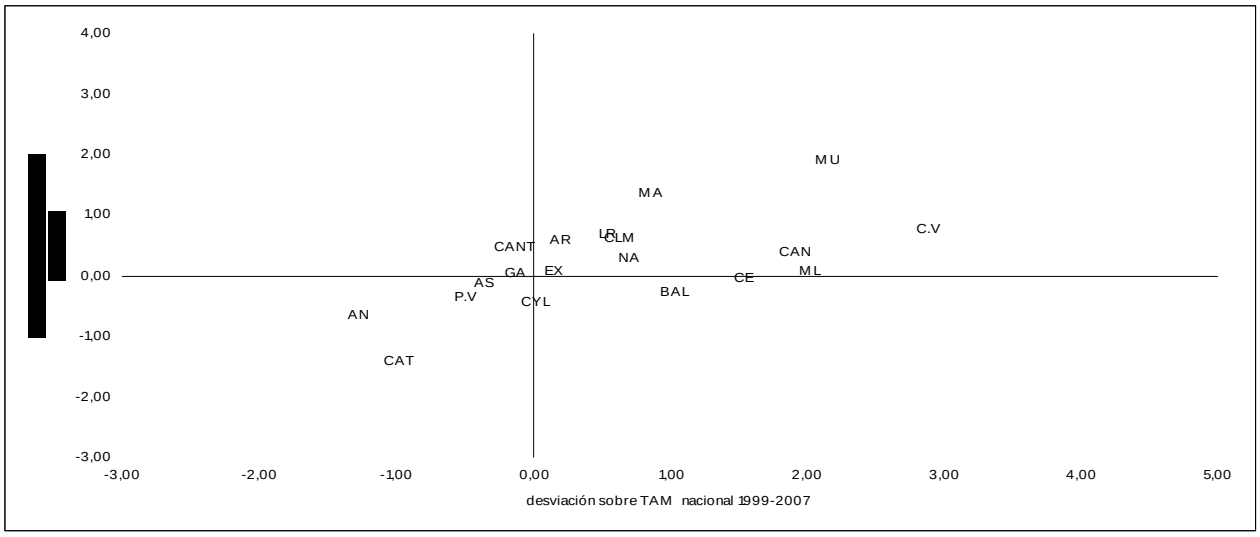
[8] Graph 1 Annex V.

Increased spending is best explained by the growth in prescription numbers, in particular after the measures were implemented. Between August 2006 and July 2007 the growth rate was over 5.39%. If this trend continues throughout the year, 2007 will have the third largest increase in prescription numbers since 1999. However, we must wait until the end of the year before evaluating changes in the indicator properly, since the invoice days for the same month may vary from year to year.

By contrast, average spending per prescription has grown very little in recent years: 0.67% in 2005, 1.65% in 2006 and 0.53% until July 2007. It therefore seems that spending growth has been contained by the low increase in average cost per prescription caused by price intervention. Since April 2007 the effect of the new reference price system must be noted. However, the limited time that has passed since this measure was introduced makes it impossible to assess adequately its effectiveness.

To examine further the possible reasons for the changes in spending and its components over the last two and a half years it is necessary to analyse trends within the Autonomous Regions. These continue to reveal wide disparities. The annual average growth rate 1999-2007 is 7.35%, but this varies between regions from 5.88-10.03%, as the next graph shows.

Graph 3: Changes in prescription drug spending in the Autonomous Regions
(Deviations from the average annual growth rate for the whole SNS)

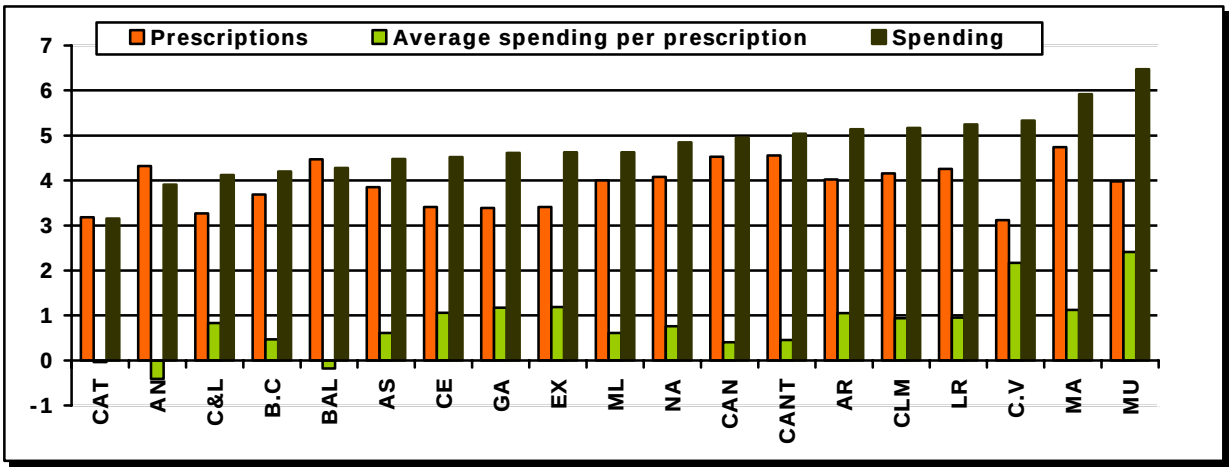


Source: prepared by author based on pharmaceutical consumption of the SNS. The data for 1999-2003 come from the same source but were obtained from the Report of the IGAE Working Party on Health Spending 2005.

This divergence has continued in the 2005-July 2007 period. Spending in the Autonomous Region with the highest average annual growth rate is double that of the region with the lowest spending growth rate. The rate of divergence among

Autonomous Regions is now greater than before the preparation and implementation of the Plan. This pattern is repeated with the component parts of spending growth: prescription numbers and average spending per prescription. The difference in the average annual increase of prescription numbers between the regions at either end of the scale is 1.5%. With average spending per prescription, the difference is much more striking: 2.41% in the Autonomous Region with the biggest increase and -0.41% in that with the smallest increase.

Graph 4: Average annual increase in prescription drug spending, number of prescriptions and spending per prescription in the Autonomous Regions (2005-2007)



Source: Author, based on pharmaceutical consumption of the SNS.

In addition to increased prescription numbers, greater average expense per prescription generally appears to be the factor which best explains the changes in the Autonomous Regions with the highest spending growth rates. Those with lower growth rates typically have by decreases or increases close to zero in average spending per prescription and in prescription numbers per protected person, while their increases in prescription numbers are similar to changes in the protected population and those over 65 years old. As a result, spending patterns within the Autonomous Regions largely reflect the effectiveness of the measures and priorities that each region has implemented in this field.[9] It may be worthwhile studying the measures employed in the most effective Autonomous Regions throughout the period in question, particularly in the years after the measures took effect. As Graph 3 shows, two Autonomous Regions stand out - Andalusia and Catalonia - although in both periods both the Basque Country and Asturias experienced growth below the SNS average, while Castile and Leon and the Balearic Islands are moving in the right direction, with below average growth in the 2005-2007 period.

[9] Graph 2 Annex V.

Since 2001, Andalusia's policy of encouraging rational drug use has been based on the effective promotion of prescription by active ingredient (PAI),[10] involving health professionals (both doctors and pharmacists). As a result, 70% of all prescriptions have been on a PAI basis. The Andalusian Health Ministry (*Consejería de Salud*), the Andalusian Health Service and the Andalusian Council for Professional Associations of Pharmacists (*Consejo Andaluz de Colegios Oficiales de Farmacéuticos*) reached an agreement in 2001 in which they also set maximum prices per active ingredient so that pharmacies could stock the best-priced medicines. In 2005, the resulting saving was estimated as being 83m euro. Andalusia has also pioneered the use of electronic prescriptions, introduced in 2004. Amongst other advantages, using electronic prescriptions means that patients with chronic illnesses do not have to go to the doctor just to obtain prescriptions, and doctors can prescribe the whole treatment. Electronic prescriptions reduce doctors' appointments and facilitate computerised management and, in turn, the control of prescriptions.

Catalonia has also developed a rational drug use plan. The most striking feature of the Catalonian plan is the establishment of the Pharmaceutical Provision Quality Standard indicator (EQPF in its Spanish initials) and the forming of the New Medicines Evaluation Committee (CENM in its Spanish initials). The EQPF aims to set the standard to encourage more efficient drug use and to reduce differences in the way that family doctors treat the main conditions at the primary care level. The indicator gives points for using efficacious cost-effective drugs and reducing the excess prescription numbers, while prioritising the use of a reduced group of active ingredients well supported by scientific evidence. The CENM was created in 2000 and evaluates independently (from the pharmaceutical industry) the therapeutic use of new drugs compared to those already in the market. The success of this initiative has led other Autonomous Regions - the Basque Country, Andalusia, Aragon and Navarra - to follow Catalonia's lead. Finally, the Catalonian Health Ministry has laid down a strategic plan 2007-2010 which includes other measures such as introducing electronic prescriptions, controlling prescriptions in geriatric care homes, supporting rational drug use (advisors, clinical practice guides etc) and providing incentives to health care professionals.

4.4.2 Speeding up authorisation, registration, and price-setting procedures

The data provided by the MSCA point to a clear improvement in the processing of drug evaluation files; pending files have fallen from 1,762 in June 2005 to 616 in June 2007. This improvement in the management of AGEMED is more noticeable with respect to evaluation files that are pending being opened: in June 2005 1,451 medicines came into this category, yet by June 2007 this figure had dropped to 211. Similarly, the average time for processing authorisation files for generics has dropped from 228 days in 2005 to 115 in 2007. As regards the functioning of the

[10] Active ingredient means "any matter, whatever its origin (human, animal, vegetable, chemical or another type) to which is attributed an activity capable of being a medicine". Art. 8c Medicines (Guarantees and Rational Use) Law 29/2006.

Interministerial Price Commission for medicines, the frequency of its meetings has increased which has made it possible to analyse, between 2004 and 2006, 7,827 medicinal products with an annual average of 2,178 pharmaceuticals. Further, 1293 medicinal forms have been revised between 2004 and 2007. This increase in the Commission's activity has meant that the number of pending files has dropped from 790 in May 2004 to 27 in July 2007. The Commission has also improved transparency, since it now publishes the decisions adopted in the MHCA webpage.

4.4.3 The supply of medicines and the application of the selective financing principle

In Spain, there continues to be a very wide supply of publicly-financed prescription drugs: in 2003, the figure was more than 8,000, of which more than half had entered the market in the preceding five years. From 2004 to May 2007 81 new active ingredients were authorised in Spain, of which 26 were to be dispensed as prescription drugs. 6016 medicines were introduced into the total public supply of medicines (including those for hospital use, hospital diagnosis etc), which amounts to 76.8% of all drugs authorised in Spain, of which 69% correspond to the prescription market (after excluding medicines for hospital use, hospital diagnosis etc). In this same period of time, 2,122 products were removed from the market, which means a net increase of 2,022 in the supply of prescription drugs.

In the opinion of doctors, this wide range of supply does not encourage better quality prescriptions and a more rational use of medicines. In fact the reverse is true: it appears to create confusion as to which is the most appropriate drug. Doctors increasingly need clear information about the growing number of medicines with similar efficacy for treating the same problems. At the same time, this situation fosters the intensive promotional activities with which the industry targets doctors.[11] In an attempt to clarify, the Spanish Society of Family & Community Medicine (SEMFYC - *Sociedad Española de Medicina Familiar y Comunitaria*), the largest family doctors' association, has compiled a therapeutic drugs guide which puts forward 405 medicines for the treatment of 402 health problems, which cover practically all of the ailments found at primary care level.

The structure of supply

41% of prescription medicines that became available in the 2005-2007 period were generics, while 48% of generic drugs available in 2007 had entered the market between 2005 and 2007. In March 2007, generics accounted for almost 32% of prescription medicines; in 2003 this figure was only 16.7%. At the end of 2006, more than 68% of new medicines available under the public financing system were generic drugs, compared to 43% in 2004.

[11] Factores que influyen en la prescripción farmacológica del médico de atención primaria. Juan Carlos Abánades and others. SEMFYC Documents. SEMFYC webpage.

The percentage of 'reference price' medicines has risen from 29.26% in 2005 to 35.8% in 2007, after the system came into force. A further 2,489 medicines have dropped their price voluntarily and 252 have taken advantage of the gradual price reduction system.[12] Medicines affected either directly or indirectly by the reference price system thus account for over 69% of the supply of medicines available through dispensing pharmacies. It has been calculated that this measure has reduced the public drug spending by 657.1m euro. To this must be added a further saving of 41.8m euro for the general public.[13]

Medicines with reduced contribution[14]

Within the structure of supply it is important to analyse the trend of reduced-contribution medicines since another aspect that also affects the growth of spending is the progressive reduction of the amount paid by users (under the co-payment system, the active population pays 40% of the medicine's price). Between 1995-2006, the proportion of beneficiaries' contributions has fallen by 2.74%. Although this can be partly explained by the growth of the inactive population, the active population has also been boosted in recent years by increased immigration.[15] An alternative explanation is the large number of 'reduced-contribution' medicines that have entered the supply, particularly since 2003.[16] In 2006, there were 4,383 reduced-contribution medicines in the whole of supply (including those used in hospital diagnosis or treatment), of which almost 70% were for the treatment of illnesses related to the nervous and cardiovascular systems. In addition, these drugs are in therapeutic subgroups with a significant weight in consumption terms both in terms of volume and value, corresponding to 5 of the 10 most important active ingredients in value and 1 of the 10 most important in volume. The average excess cost to the system is 14.89 euro per unit, while the average value is 3.44 euro.

Therapeutic use of medicines forming part of supply

Prescription medicines are typically replaced at a rapid rate, although this does not mean that the new drugs entering the market offer therapeutic improvements. According to studies conducted by various bodies entrusted with evaluating medicines, of the 150 new active ingredients authorised between 1999 and 2003, only 15% showed exceptional or clear therapeutic improvements. These same bodies classified 55% of the new active ingredients in 2003 in group C: little or no therapeutic improvement.[17] Yet these new active ingredients effectively meant a significant increase in cost per treatment per day compared to those already existing

[12] Consumo de medicamentos y de productos sanitarios en el SNS 2006. Consejo General de Colegios de Farmacéuticos.
[13] Id.
[14] The active user pays 10% of the price with a maximum of between 0-2.64 euros.
[15] Graph 3 Annex V.
[16] Graph 4 Annex V.
[17] Graph 4 Annex III.

for the same condition.[18] This situation would appear to have remained unchanged in 2004 and 2005, the last year for which information is available. In 2004, of 25 active ingredients assessed, one provided clear therapeutic improvements, four achieved modest improvements, and with four there were no improvements compared to existing drugs (the remaining four could not be classified due to insufficient information).

A serious failing is that there is no central state procedure – or if there is one, the results are not published – to assess systematically the therapeutic potential of new drugs. The Autonomous Regions have developed their own assessment tools, in some cases working together: a joint committee for assessing new medicines was set up and Andalusia, Aragon, Catalonia, Navarra and the Basque Country have been members since 2003. Amongst other measures, the PEPF included the creation of a committee within the AGEMED to assess the therapeutic use of medicines, whose members were to be, *inter alia*, experts proposed by the Autonomous Regions. However, AGEMED's draft statute makes no reference to this committee.

Applying the selective financing principle correctly depends on there being a regulated system to assess therapeutic use. The situation today is no better than that existing prior to the Plan. Thus, the preamble to the Medicines Law 1990 referred to an assessment system as being an essential part of achieving the "provision of medicines for the national health system at reasonable prices and controlled public spending."

4.4.4 The structure of the consumption of medicines

Nature of the consumption of publicly-financed medicines

The consumption of publicly-financed medicines in Spain is highly concentrated. In recent years, 40 therapeutic subgroups have regularly accounted for practically 84% of total public spending on medicines. Within these subgroups, 37 (of approximately 2,000) active ingredients account for 40% of total spending. In 2005, the last year where complete information on consumption per therapeutic subgroup and active ingredient is available, 50 active ingredients were responsible for 50% of the sales to the SNS, both in terms of volume and value.[19]

In addition, within this most important group in consumption terms are active ingredients belonging to the same therapeutic subgroup yet which show a significant variation in the price of the defined daily dose[20] due to the amount of time they have been in the market and whether or not they come within the reference price system.

[18] Table 4 Annex III.
[19] Table 5 Annex V.
[20] The Defined Daily Dose (DDD) is the ATC technical unit of measurement used by the WHO to assess drug use. It is defined as the "assumed average maintenance dose per day for a drug used for its main indication in adults".

A good example is the trend for cholesterol-lowering drugs (statins); three of the five drugs from this therapeutic subgroup are in the highest consumption group in terms of both volume and value. In 2005, atorvastatin was number one in terms of value, and seventh in terms of volume prescribed. Yet Simvastatin was ninth in value despite its price being 2.31 times lower. Simvastatin is subject to the reference price, but atorvastatin and pravastatin (ninth position in value) are not. This situation, which can also be found in other sub-groups (anti-depressants, anti-inflammatory drugs, sedatives, etc) clearly illustrates one of the main problems in the consumption of medicines: the tendency to prescribe new drugs which are often no better than those already available, and yet are more expensive.

This substitution effect, which largely explains the temporary effect of price intervention in recent years, can also be seen in the evolution of the amount per prescription (retail price of the medicine prescribed in each prescription). In 2005, the average amount per prescription grew 0.8% compared to 2004, while in 2006 it grew 1.8% compared to 2005. This growth occurred despite an average fall in the price of medicines of 4.5% in 2005 and 2.5% in 2006.[21]

Consumption-prescription of generic drugs

Consumption of generic drugs has grown steadily throughout the period in question (according to the MHCA, between 2003 and 2006 it rose from 8.85% to 16.72% of total drugs invoiced). Nevertheless, there is still much room for improvement bearing in mind the proportion of generics to the total supply of drugs.[22] Another feature of the Spanish market is the slow rate of penetration of new generic drugs compared to other neighbouring countries which have made strenuous efforts to move away from brand-name medicines.[23] One factor which may explain the gap between the supply and consumption of generic drugs is the attitude of doctors and consumers towards them. A study[24] carried out in 2005 by AESEG, a generic drug manufacturers' association, showed that most users knew about generic drugs and had a positive opinion of their quality, effectiveness and security. Yet at the same time, more than 57% stated that they had never been prescribed a generic drug. The same study revealed that 20% of doctors never prescribe generic drugs and that 28% of them doubt their effectiveness compared to brand-name drugs. The key point may be that 38% of doctors recognised that they only had a basic idea about generic drugs. A study carried out by the medical association showed that the main source of information on drugs is the pharmaceutical industry itself, which would largely explain the problem.[25]

[21] El mercado de especialidades farmacéuticas del SNS 2006. Consejo General de Colegios de Farmacéuticos.
[22] Graph 5 Annex V.
[23] Graph 6 Annex V.
[24] Percepción de medicamentos genéricos. AESEG-MERKASTAR. Octubre de 2005.
[25] Factores que intervienen en la calidad de la prescripción en España. OMC. 2004.

Consumption-prescription of drugs subject to reference prices

Finally, as regards the consumption of drugs within the reference price system, the only statistics available are for 2005. In that year, such medicines accounted for almost 21% in terms of volume and 12.53% in terms of value. This is explained by the average unit price of 8.49 euro for reference-price medicines compared to 15.50 euro for those outside the system.[26] It is clear that potential consumption of these drugs has yet to be fulfilled since, as noted above, they account for 29% of the total supply.

One question to be analysed is the trend in the consumption of these drugs after the reference price system took effect. Of the 35 most important active ingredients in terms of total consumption in 2001, 24 retained their position, while 11 lost ground. Among the active ingredients that disappeared from the top 35 during the period or lost ground among the most consumed in value (22), 13 had entered the reference price system. This trend could be explained by the price reductions caused by joining the system. Yet at the same time there was a reduction in prescription numbers for 11 of these 13 active ingredients, caused by doctors prescribing medicines which, despite being indicated for the same conditions, fell outside the reference price system. For example, in a study carried out in the Balearic Islands[27] on the consumption of proton pump inhibitors (omeprazole, pantoprazole, lansoprazole etc.), what is called the "collateral effects" of reference prices on consumption patterns are described. These effects, a response to the cheaper price of medicines that have entered the reference price system, are basically two: the industry's strategy of promoting the prescription of drugs outside the reference price system (the substitution effect described above) and the increase of prescriptions for non-indicated use or where there is little clinical evidence to support such use.

[26] El mercado de especialidades farmacéuticas del SNS 2005. Consejo General de Colegios de Farmacéuticos.

[27] Eusebi Castaño Riera, María Vega Martín and María Zaforteza Dezcallar. "Uso racional del medicamento: ¿efectos colaterales de los precios de referencia?". 2004. See webpage of Fundación Gaspar Casal.

5. Conclusions and recommendations

The PEPF deals with many of the problems concerning trends in drug spending, defining objectives and measures that are consistent with the problems to be resolved. Moreover, it contains recommendations from drugs policy experts to improve the quality of pharmaceutical provision. In addition, the plan underlines the importance of the Autonomous Regions and the need for them to be involved in policies in this area, as witnessed by the fact that there are various proposals based on cooperation with them. The general approach is new because it is based on a global analysis of the situation, tackling a series of objectives and measures relating to factors affecting prescription drug spending and which in many cases are the result of previous study.

Since 2005, the Ministry of Health and Consumer Affairs has made a sustained effort to implement the measures, above all regarding information, transferring funds to finance training activities, improving authorisation, registration and price-setting procedures, promoting electronic prescriptions and improving transparency. Most of these measures were included in Law 29/2006. Another result of this effort is the significant increase of generic drugs in the supply of publicly-financed drugs, as well as the notable extension of the reference price system.

In addition, the trend in prescription drug spending, which has remained below the GDP growth rate since 2004, underlines the effectiveness of the price reduction measures included in the PEPF. The moderate increase in spending is largely due to the containment of prices. The data on average spending per prescription since April 2007 also show that the reference price system has had a positive impact, although the short period of time since it was implemented makes it impossible to assess fully its effectiveness and whether its effect will last.

Nevertheless, the PEPF focuses on prescription drug spending without taking any action on hospital drug spending, despite the fact that the latter increasingly accounts for a greater proportion of total drug spending, particularly in the intermediate consumption of hospitals. While some of the measures suggested (selective financing, treatment of therapeutic innovations and protocols) can and undoubtedly will also have positive effects on hospital drug spending, it would have been desirable, given the relevance of the intervention, that specific objectives and measures in this field had been established.

As for its design, we would highlight the general absence of projected results and impacts of the measures being developed. At a more basic level, the PEPF does not include a system to monitor and assess its effectiveness, since it does not set out quantified objectives or indicators that make it possible to assess the extent to which the measures have achieved their stated aim.

Most of the PEPF measures are contained in Law 29/2006 and regulations have to be passed for many of its provisions to take effect. The net result of this is that the measures must be implemented gradually, which affects the real scope of this evaluation, particularly as regards the criteria of effectiveness and sustainability. An additional problem here is that for most of the measures that have been implemented, not enough time has passed to enable their true effectiveness to be evaluated, let alone quantify their contribution to the results obtained.

Further, the Autonomous Regions should be more involved in designing the PEPF, making it possible to include more defined objectives and measures. This would also make the Autonomous Regions more committed to implementing the plan itself, particularly those coming within their jurisdiction. Pharmaceutical provision is the result of the interaction of various actors which in turn have an effect on the different internal and external factors of which it is composed. In the public sector, given the existing distribution of competences in Spain, implementing health policies successfully depends on a general consensus being reached among the different health authorities.

Similarly, without giving up the stated objectives but taking into account the often decisive role played by different interest groups, this process of information-negotiation-consensus must also include these groups. Encouraging these processes among all of the actors involved is not only useful from the point of view of the effectiveness of policies in this field; it would also make it possible to evaluate better their impact on other areas of public and private activity, encouraging the transparency of state intervention.

As for the Autonomous Regions, their contrasting results in controlling drug spending and its components suggests that they are not encouraging rational drug use with equal vigour. The fact that overall spending growth is basically due to growing prescription numbers, without generally being related to variations in demographic or care factors, lends weight to this impression.

As was seen in the phase prior to the PEPF (as well as in 2006 and the first few months of 2007), containing spending by price intervention only works in the short term. Moreover, there is little margin for controlling spending through price regulation, since there is a tendency in the European market to move towards price convergence and in Spain prices are generally lower than in the rest of Europe. For this reason, containing drug spending will increasingly depend on actions affecting supply, which is the competence of central government, and prescription, which is the competence of the Autonomous Regions.

As for supply, the priority should be to prepare measures to make possible the effective application of the selective financing principle. This in turn means developing a regulated and objective procedure, one based on scientific evidence, in order to classify properly the therapeutic value of drugs, which allows the decision to bring or keep them within the public finance system to be based on cost-

effectiveness criteria. The Autonomous Regions' input would be desirable on both the design and implementation of this instrument, not just because in its absence they have developed their own assessment bodies and procedures (some on a joint basis, as noted previously) which have carried out this task in recent years, but also because the decisions taken in this field, in applying an exclusive central government competence, have a major impact on the budget and the management of drug provision at a regional level. The decision regarding the type of contribution (normal or reduced) that the user should pay on incorporating a medicine to public supply is another example of the impact that decisions adopted in one field can have on another.

In the same way, as regards consumption-prescription, it would appear to be necessary to go further with the rational drug use measures stated in the PEPF itself, subject to the limitations indicated previously. The effectiveness of the measures focused on rationalising supply on the basis of the selective financing principle or the progressive development of the reference price system will be limited if the Autonomous Regions do not prepare a global package of measures to rationalise demand at the same time. The policies of the Autonomous Regions where drug spending has been controlled best in recent years show the way forward. As well as these policies, we must add the provision of information and the training of professionals who, while being a key element in ensuring the effectiveness of such measures, continue to depend largely on the pharmaceutical industry for this. Finally, the need to regulate the industry's promotional activities should not be overlooked.

The key to rationalising drug spending growth therefore continues to be tackling the factors causing such growth in a global fashion. The challenge is to do this in a scenario where two levels of administration - with different but complementary competences - interact. The General Health Law (*Ley General de Sanidad*) already stated that coordination in the field of health must make possible, inter alia, "the joint action of the state and Community health authorities in the exercise of their respective competences, in such a way that the integration of partial actions into the whole of the health system is achieved." Developing this joint action through the coordination, cooperation and collaboration mechanisms existing in the national health service seems to be the best way to guarantee the effectiveness of government health policies in rationalising drug spending growth.

Recommendation 1

The MHCA and the Autonomous Regions should jointly assess hospital drug spending, and then draw up a rationalisation policy stating the objectives and measures to achieve this aim. The opinion and possible contributions of different sectoral interest groups could also be taken into account when deciding this policy. Once designed, it

should form part of the PEPF so that the latter tackles the problems of pharmaceutical provision in Spain in a truly global fashion.

Moreover, in keeping with the need for the two health authority levels to develop joint actions, it would be desirable for the participation of the Autonomous Regions to extend to the definition of the objectives and measures required to achieve the PEPF's strategic objective. More input from the Autonomous Regions would improve the Plan's design and would result in their being more involved in and committed to rationalising spending growth.

Recommendation 2

The PEPF should clearly set out the objectives to be achieved, specifying quantified targets and indicators to facilitate their monitoring and assessment.

Recommendation 3

In the future, more emphasis should be placed on the processes of information, negotiation, and search for consensus in the design and form of implementing pharmaceutical provision policies (which can be extended to any health policy), given their complexity. A good opportunity for this to be put into practice could be when the PEPF is reviewed and extended in line with the proposals contained in the previous recommendations. Focusing the design of drug strategies in this way, as well as increasing the degree of commitment and expressly stating each actor's degree of responsibility for the results obtained, would notably improve the policy's effectiveness and transparency.

Recommendation 4

The MHCA should start working towards designing a procedure to assess the therapeutic use of medicines. The Autonomous Regions should be involved both in designing and implementing the procedure, coordinated by AGEMED.

Recommendation 5

The design and implementation of agreed indicators for measuring prescription quality could be examined within the Pharmacy Commission of the Interterritorial Council (*Comisión de Farmacia del Consejo Interterritorial*). Taking further steps to encourage prescription quality is both a useful and necessary tool in rationalising demand.

Recommendation 6

As with other areas of public intervention where a high degree of decentralisation exists, there is a need to put in place mechanisms to promote an exchange of good practices and information, and to make possible the use of benchmarking as a tool to judge better the results obtained in each context. The MHCA could facilitate these procedures for exchanging good practices between territories. One way forward would be to promote joint evaluations of those well-established initiatives that have been effective in a given territory, so that they can be extended to others.

ANNEXES

ANNEX I. EVALUATION STRATEGY

Type of evaluation used

The subject-matter to be assessed is the effect of the measures taken to rationalise drug spending growth. This involves assessing the results to see the effectiveness and possible impact of the measures implemented.

However, public intervention requires continuous evaluation, throughout its different phases: from the design to the results obtained. Results cannot be assessed in isolation from the original reason for intervention, its design and implementation; all of these elements affect its real effectiveness. This evaluation therefore focuses on criteria related to three classical types of assessment defined by when the intervention is evaluated: before, during and after.

Methodology applied

The basis of the evaluation is to compare public drug spending in the five years prior to the PEPF and in the period since the measures were put in place. As a result, the evaluation mainly focuses on analysing changes in prescription drug spending, which in turn involves establishing a causal connection between the measures and the results obtained.

Tools used

Analysis of the documents.

Analysis of data:

1. Descriptive analysis– both cross-cutting and longitudinal - of public drug spending on prescriptions and the factors determining such spending, through compiling, exploiting and analysing data from secondary sources.
2. Interviews: Director General of the Directorate General of Pharmaceutical and Health Products (*Dirección General de Farmacia y Productos Sanitarios*); Director of AGEMED; SEMFYC; Farmaindustria; AESEG.
3. Questionnaires: *Organización Médica Colegial, Organización Farmacéutica Colegial, Sociedad Española de Farmacéuticos de Atención Primaria, Consejo de Consumidores y Usuarios*.
4. Work sessions-discussion groups: experts in pharmaceutical provision management; health economics experts; and particularly drug spending experts.

Questions, evaluation criteria and indicators

Questions	Evaluation Criteria	Indicators	Sources of information
Does the policy design meet all of the problems of pharm provision under the national health system (SNS) before it wa up?	Relevance	Factors determining spending identified in policy Existence of objectives and measures related to the structural determining factors of spending: authorisations, public financing, consumptio prescription. Year-on-year growth of public drug spending components (99-03)	PEPF Law 29/2006 PEPF Law 29/2006 Drug consumption and Therapeutic Information of the SN Report of IGAE Working Party on Health Spending 2005 Nomenclátor Digitalis database Drug evaluation files of various Autonomous Regions ass bodies Analysis and evaluations by various authors
Are the objectives and measures proposed consistent with t intervention situation? Are the defined objectives and the measures planned to achie consistent? Are the limitations and the complementariness or contradicti other policies and other administrations with responsibility for th of drug policy specified?	Internal Consistency Complementariness		PEPF Analysis of context carried out by assessment tea secondary sources
Has intervention taken into account the problems or needs of groups, and their contributions, in the design and implem phases? Has the intervention developed as predicted? Is the degree of current development enough to meet the objecti	Implementation	Positions of the interest groups on the PEPF and of Rational Use Law Total no. of amended measures and reason for amer No. of objectives theoretically achievable at the implementation.	Analysis of submissions and amendments submitted du parliamentary passage of Law 29/2006 Regulations and draft regulations developing the Law. PGE 2005,2006,2007 Press releases of the MHCA Interviews with representatives of groups concerned
Have the measures taken helped reduce the growth of prescript spending? Have the measures taken increased the use of generic dru proportion of supply and demand? Have the measures taken increased the use of reference price n as a proportion of supply and demand? Have the measures taken speeded up the drug authorisation a setting procedures? Have the measures taken led to progress in the applicatio selective financing principle?	Effectiveness	Year-on-year growth of public drug spending via pre and its components (05-07). Changes in amo prescription and per person. Growth of generic drugs as a proportion of total s prescription drugs. Growth of generic drugs as a proportion of total cons of prescription drugs (in volume and value). Growth of number of drugs coming within the R Price System. Growth of number of drugs within the Referen System as a proportion of all prescription drugs (i and value). Average time taken to authorise brand-name and drugs. Number of price-setting files. % of new active ingredients classified as th potential group C % de innovations classified as therapeutic potential	Drug consumption and Therapeutic Information of the health system Studies carried out by Autonomous Regions on spendin the period Therapeutic Information of the SNS Drug evaluation files of various assessment bodies Autonomous Regions Nomenclátor Digitalis database Appearances of senior management from MHCA ar releases Web pages of the MHCA and AGEMED Information on Consumption. Periodical publications on the drug market situa Farmaindustria
Will the effects of the measures implemented will be sustain time?	Sustainability	Change in prescription public drug spending components	

ANNEX II. OBJECTIVES, MEASURES AND PROJECTED RESULTS INCLUDED IN THE PEPF

The PEPF's strategic objective is to increase the quality of pharmaceutical provision for all citizens, to encourage rational drug use and to improve the efficiency of public finance employed in this field.

This general objective can be broken down into a series of specific objectives which are expressly stated at the end of each PEPF section. Those most directly connected with rationalising spending growth were selected, and these in turn were broken down into groups of measures:

I. Ensure that the AGEMED becomes an effective independent body providing rigorous scientific analysis concerning all pharmaceutical provision.

1. Speed up the drug authorisation and registration procedure through actions such as:

1.1. Digitalising the Agency's archive
1.2. Promoting the common electronic procedure for registration requests at national and EU level.
1.3. Developing and improving the RAEFAR database.
1.4. Improving the webpage
1.5. Improving human resources funding
1.6. Drawing up an ethical code for the Agency
1.7. Involving the Autonomous Regions in the Governing Council.

II. Ensure that scientific evidence plays a key role in the procedure for incorporating new medicines into the national finance system and expediting this procedure so that quality information is available to develop rational use policies and to ensure quality and efficiency in pharmaceutical provision.

2. Classification of new drugs according to therapeutic use and pharmaco-economic criteria to decide whether to include them in the public finance system, selective finance based on these same principles and improvement in price-setting mechanisms, giving prime importance to scientific evidence and encouraging the rational use of resources. This will entail:

2.1. Setting up a committee to evaluate therapeutic use within AGEMED. To be created following the reform of the agency's internal regulations.
2.2. Establishing criteria for financing drugs according to their therapeutic use.
2.3. Notifying the Autonomous Regions within 2 days of pricing decisions taken by the Interministerial Commission.

III. Ensure that the SNS offers professionals mechanisms that guarantee access to quality independent information while also laying down criteria for drug promotional activities to ensure they are carried out within a framework of transparency, quality and social ethics.

3. Creation of a technical information committee made up of experts from all Autonomous Regions which will make available information enabling the following to be analysed: new authorisations, changes in therapeutic indications, cancellations and restrictions for safety reasons.
4. Design systems allowing access to RAEFAR database. Modification of the basis for including fields related to therapeutic use.
5. Prepare a handbook in conjunction with the Autonomous Regions.
6. Set up a study group to analyse the advertising and promotion of medicines to ensure their development based on ethical criteria and scientific evidence, and adjusting sales visits to doctors to meet the needs of doctors and the SNS.
7. Make proposals to the Autonomous Regions on training doctors in rational drug use, financed via industry contributions according to their sales volume to the SNS.

IV. Ensure maximum transparency in drug traceability systems and procedures for the benefit of patients' safety.

8. Regulate drug traceability and define sanctions in the event of breach, to avoid parallel exports and possible supply failures.
9. Update fixed margin threshold for certain medicines (from 78.34 to 89.62 euros) and reduce general margin by 1%.

V. Strengthen the central role of the doctor in attending to patients so that when medicine need to be prescribed, he/she has the best possible access to information and training to ensure rational drug use, thus improving the quality of pharmaceutical provision.

10. Promote the use of electronic prescriptions in all Autonomous Regions.
11. Provide a quality information system on drugs to which doctors have access.
12. Via the General Budget Law (LGPE in its Spanish initials), the pharmaceutical industry will make a contribution according to sales volume. 50% of the resources obtained will be used for training and providing professionals with information. Information campaigns aimed at patients will be carried out, as well as other health cohesion measures.
13. Make a proposal to the Autonomous Regions to prepare clinical practice guidebooks and therapeutic protocols agreed on by different health care levels. Encourage communication and coordination of different actors involved in the drugs field.

VI. Ensure that patients have the amount of medicines necessary for the treatments prescribed, thus avoiding unnecessary stockpiling and aiding rational and efficient drug use.

14. Develop a programme to identify those treatments where the dosage and duration of treatment in normal clinical practice can be standardised.
15. Define with the pharmaceutical industry drug forms that meet the established standards and request their gradual adjustment for supplies to the SNS.
16. Set up permanent lines of communication with the scientific community to assess the effects of requests for adjustment as well as the progressive withdrawal of those presented in forms that do not match treatment duration.

VII. Set up a new fairer and more objective reference price system, one that is predictable and stable, with a more gradual impact and that obtains the savings required by the SNS.

17. Amend the current procedure regarding the obligatory nature of its annual application.
18. General reduction of all drugs that have been in the market for more than one year: 4.2% in 2005 and 2% in 2006 (interim measure).
19. Establish a new reference price system through the reform of the Medicines Law.

VIII. Ensure that generic drugs have an important role in the SNS, thus reducing public spending on drugs.

20. Create a procedure to identify patent expiry dates to help plan generic drugs authorisation.
21. Speed up the price authorisation procedure.
22. Encourage the incorporation of newest forms of drugs as generics.
23. Bring pharmacies' profit margins for the sale of generics into line with those of brand-name drugs: a reduction of 5.1% from 33% to 27.9%.
24. Improve training and information about generic drugs for doctors.

Table 1: Predicted effect on public spending of part of the measures set out in the PEPF (in millions of euro).

	2006	2007	2008
Amendment of reference price system	479.8	20	4
Price reduction 2%	277.7		
Effects of current regulation of reference price system	674	16	2
Total	1431.	37	7
% of 2004 spending	15.2	3.9	8

Source: compiled by author based on the economic report of the draft Medicines (Guarantees and Rational Use) Law.

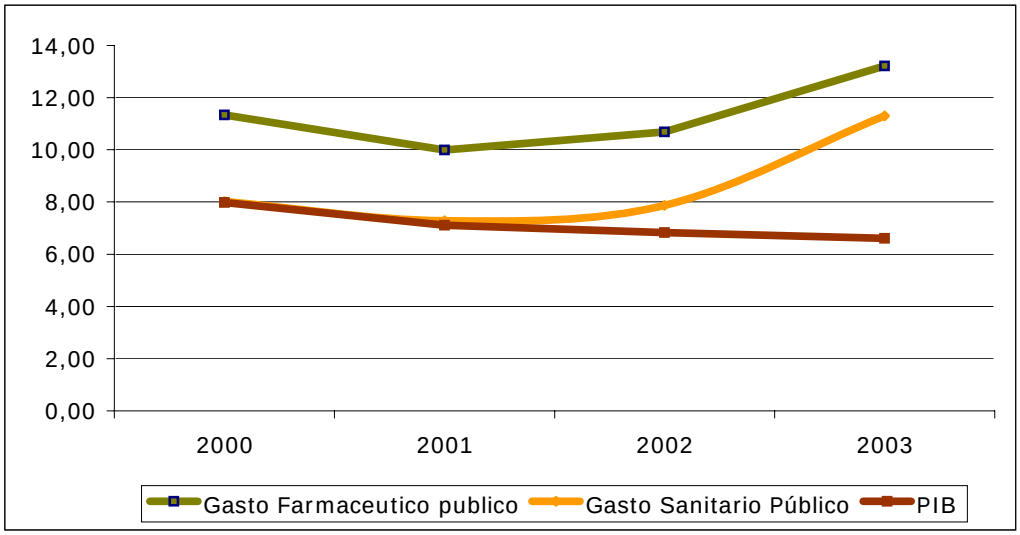
ANNEX III. ANALYSIS OF THE CONTEXT AND STATE OF THE QUESTION

Health spending is a major part of public spending. In 2003 it accounted for 13.65% of total public spending, while in the Autonomous Regions this figure rose to 33.40%. It is even more important In the Autonomous Regions; in the same year it was responsible for 90.13% of consolidated total health spending.

The items with the greatest weight in the growth of public health spending are implicit prices and real average provision per person. Both explain almost 79% of spending growth in the 1999-2003 period. The demographic component (increase of protected population and ageing population) explains the remaining 21%.[28]

Public health spending increased at a steady rate throughout the 1999-2003 period, with average annual increases above rises in GDP. In 2003, the differential between the two indicators was above 4%. The differential between GDP growth and total public drug spending was even higher: 6.6% in the same year. In the 1999-2003 period, public drug spending as a proportion of public health spending increased by 1.02%, accounting for over a quarter of all such spending (27.99%) in 2003.

Graph 1: Year-on-year growth in public health spending, public drug spending and GDP. Spain 2000-2003



Source: compiled by author from the IGAE Working Party on Health Spending 2005. Public drug spending corresponds to spending of the Autonomous Regions in this area.

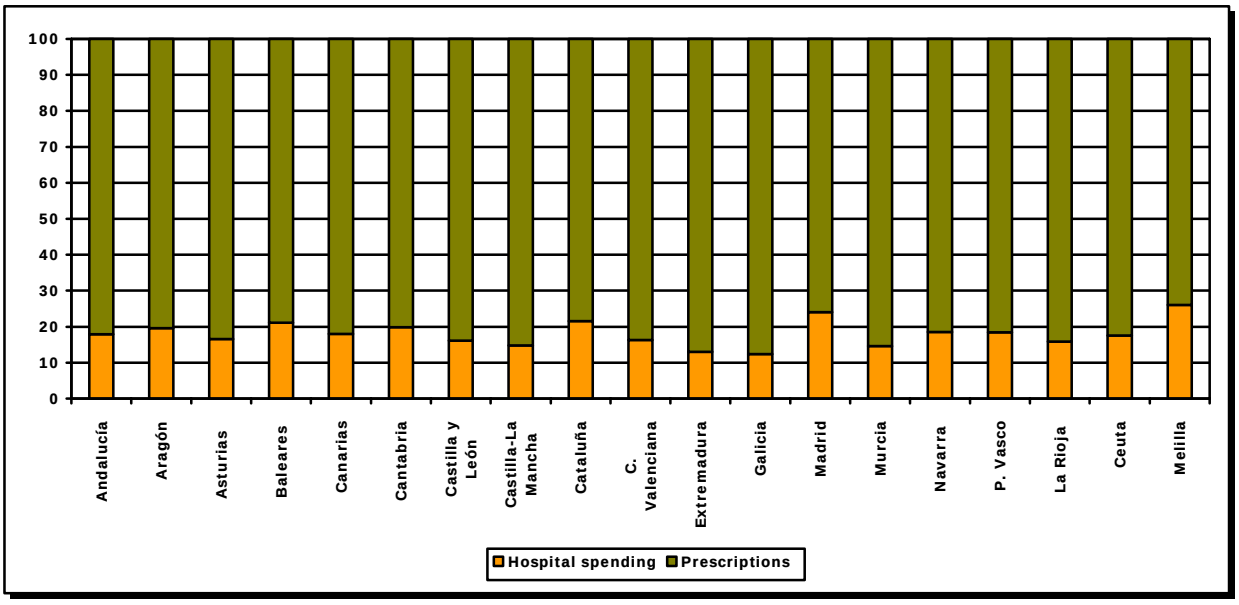
As regards the Autonomous Regions, in 2003 almost 29% of public health spending was on medicines, although the figures varied markedly from region to region. The

[28] Report of the IGAE Working Party on the Analysis of Health Spending 2005.

average annual growth for the five-year period was 9.72%, again with significant inter-regional variation.

Almost 81% of drug spending was generated in this year by prescriptions, with hospitals accounting for 19%. Once again, there is a considerable divergence between the figures for the different Autonomous Regions, from 12.4% in Galicia to 26% in the Autonomous City (*Ciudad Autónoma*) of Melilla.

Graph 2: Composition of public drug spending 2003: distribution by Autonomous Region.



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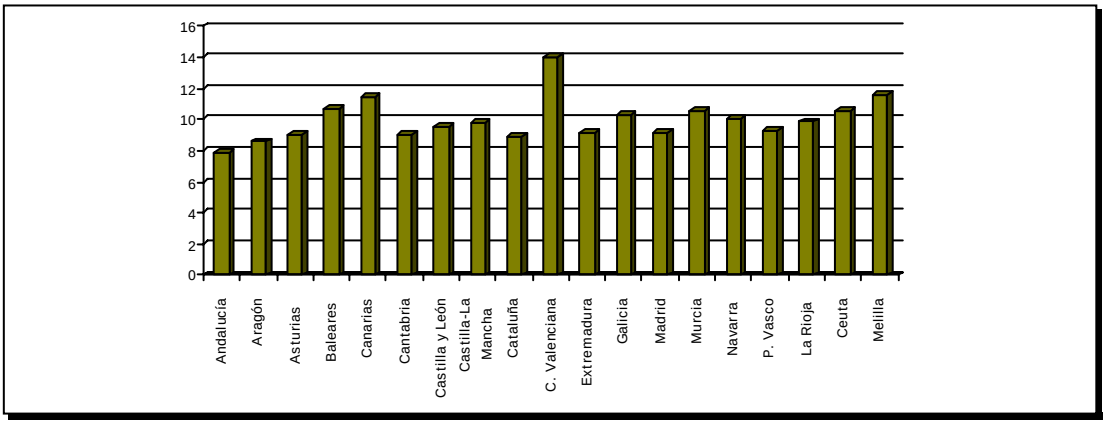
Source: prepared by author based on the Report of the IGAE Working Party on Health Spending 2005.

Prescription drug spending in the 1999-2003 period grew 9.72% overall. As noted in the Report of the IGAE Working Party on Health Spending, this increase occurred despite the introduction of a series of measures: reduced margins of pharmacies and distribution warehouses and wholesale drug prices, establishing discounts for sales volume to pharmacies, establishing the reference price system or promoting generic medicines, amongst other matters. The degree of variation from the annual average growth rate of the Autonomous Regions for the period in question was 6%.

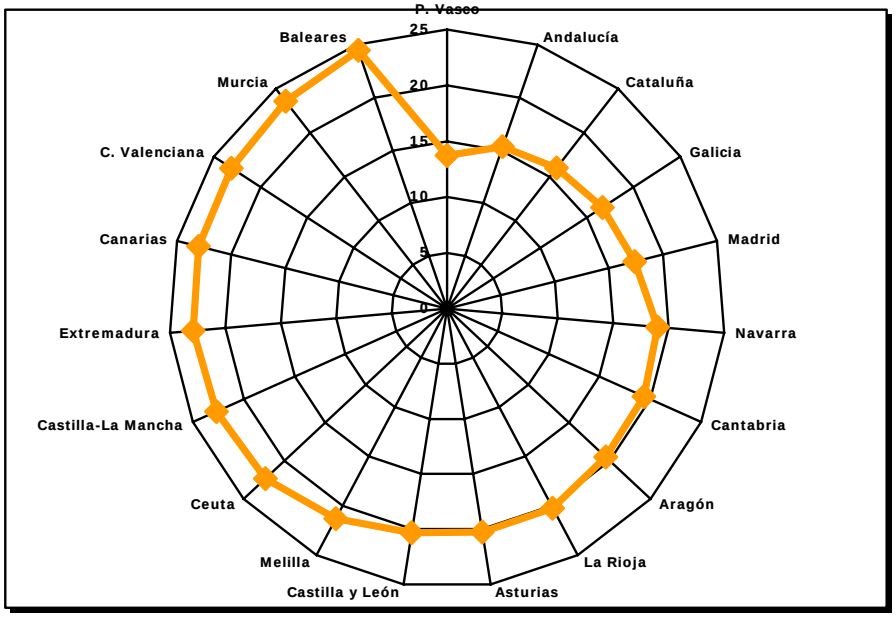
Graph 3: Average annual growth rate of prescription drug spending (1999-2003).



Source: compiled by author on the basis of the Report of the IGAE Working Party on Health Spending 2005.

The growth in prescription numbers - and more specifically the number of prescriptions per person – seems to be the factor that has most influenced spending changes in the period in question. This appears to be more because of the existence of an ageing rather than a growing population, although demographic trends can only partly explain the changes. Moreover, despite the relatively moderate growth in average spending per prescription, an annual average growth of 18.52% in the Autonomous Regions reveals the limited effect that the structural measures taken (reference prices, encouraging generic drugs, rational use measures) have had on spending trends.

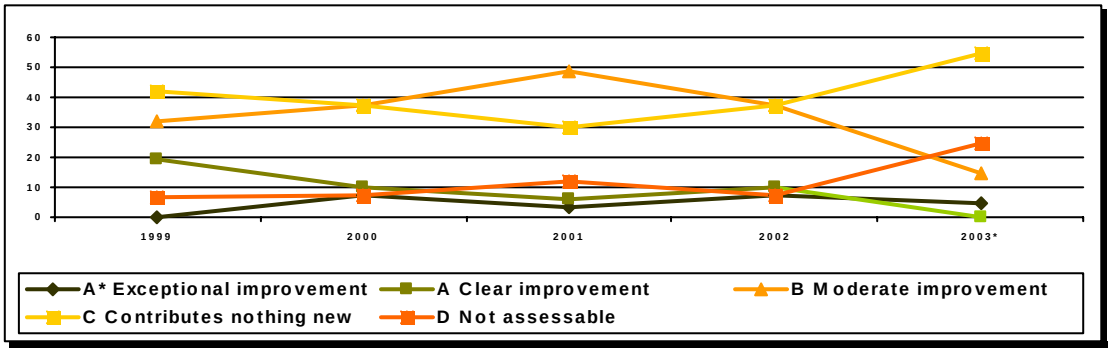
Graph 4: Average annual growth rates of average amount per prescription (1999-2003).



Source: compiled by author on the basis of the Report of the IGAE Working Party on Health Spending 2005.

There continues to be a very wide range of publicly financed prescription drugs available in Spain. This causes confusion, and complicates the choice of the right drug in terms of cost effectiveness. In 2003, there were more than 8,000 different medicines, more than half of which had entered the market in the previous five years. On average, medicines remain in the market for about 5 years, which shows a high rate of renewal. However, this turnover does not seem to be matched by the arrival of new medicines offering therapeutic improvements. Thus, of the 150 new active ingredients authorised between 1999 and 2005, only 15% provided exceptional or clear therapeutic improvements. 55% of the new active ingredients introduced in 2003 were placed by different drug assessment bodies in group C, i.e. little or no therapeutic improvement. But these new active ingredients meant a significant increase in the cost per treatment per day compared to others already available for the same indications.

Graph 5: Distribution by therapeutic potential of new active ingredients (1999-2003).



Source: compiled by author based on Therapeutic Information of the National Health Service. MHCA: 1999-2002. Pharmaco-therapeutic information bulletin of Navarra: 2003.

Despite the fact that since 2001 authorisations and registrations of new medicines have been split practically 50-50 between brand-name and generic drugs, the proportion of generics as a total of supply was low, being highly skewed towards certain therapeutic groups and active ingredients and with a wide variety of prices (cost per treatment per day for the same active ingredient can be as much as three times as high). Apart from the problems related to the length of patent protection for brand-name drugs, the authorisation process for generics has also been responsible for their slow uptake.

The introduction of the reference price system has not achieved the expected results either. In four years, only 25% of total supply has been covered, and many medicines that entered the system are less important in consumption terms. Further, the system's potential to grow was not fully exploited (e.g. generic drug forms did not lead to more homogeneous groups being defined).

Table 1: Main active ingredients with highest consumption level in 1999: defined homogeneous groups and potential for entering the reference price system

ACTIVE INGREDIENT	Generic Drug Forms	Homogeneous groups defined in 2000	Additional homogeneous groups that could have been defined in 2000
Omeprazole	2	1	1
Diclofenac	4	3	1
Amoxicillin	11	6	5
Ranitidine	4	4	
Enalapril	3	3	
Captopril	4	4	
Alprazolam	5	5	
Acetylcystein	3	2	1

Source: compiled by author from Nomenclátor Digitalis database. MHCA 2007

Drug spending is highly concentrated on certain therapeutic subgroups and active ingredients: 40 therapeutic subgroups and 37 active ingredients accounted for 84% and 40% respectively of total drug spending in 2003. There is also a high replacement rate (19 of the 35 most important active ingredients in 2001 have lost ground or disappeared altogether from the group in 2003). The leading group in terms of consumption is also characterised by the co-existence of various ingredients from the same therapeutic subgroup and indications, but with widely contrasting treatment costs. On analysing the trend in the most consumed active ingredients, there is a tendency to prescribe the most recently marketed drugs, yet these do not always offer any therapeutic improvement, and they are more expensive. The majority of those coming within the reference price throughout the period have lost ground in terms of the most consumed active ingredients.

Table 2: Most consumed active ingredients in financial terms 2001: Trend 2001-2004.

			Position among the most important 35 active ingredients in financial terms			
THERAPEUTIC SUBGROUP	**ACTIVE INGREDIENT**	**Year joining Reference P**	**2001**	**2002**	**2003**	**2004**
COXIBS (NSAIDs)	CELECOXIB		19	disappears		
COXIBS (NSAIDs)	ROFECOXIB		20	disappears		
PROPIONIC ACID DERIVATIVES (NSAIDs)	IBUPROFEN	2001	24	22	17	16
ADRENERGICS ASSOCIATED WITH OTHER ANTIASTHMATICS	SALMETEROL		**18**	**31**	disappears	
ANTAGONISTAS RECEPTORES DEL LEUKOTRIENO (ANTIASTHMATICS)	MONTELUKAST					33
ANTICOLINERGICS (ANTIASTHMATICS)	TIOTROPIUM BROMIDE				34	17
GLUCOCORTICOIDS (ANTIASTHMATICS)	BUDESONIDE	2003	**9**	**15**	23	**27**
GLUCOCORTICOIDS (ANTIASTHMATICS)	FLUTICASONE		**29**	disappears		
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (ANTIDEPRESSANTS)	CITALOPRAM	2003	28	24	26	35
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (ANTIDEPRESSANTS)	FLUOXETINAE	2000	**12**	18	**25**	**34**
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (ANTIDEPRESSANTS)	PAROXETINAE	2003	3	4	**4**	**5**
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (ANTIDEPRESSANTS)	SERTRALINE			11	12	13
OTHER ANTIDEPRESSANTS	VENLAFAXINAE		23	20	13	10
ANTAGONISTAS RECEPTORES H2 (ANTI-PEPTIC ULCER)	RANITIDINAE	2000	**8**	**16**	**29**	disappears
PROTON-PUMP INHIBITORS (ANTI-PEPTIC ULCER)	LANSOPRAZOL		22	19	16	14
PROTON-PUMP INHIBITORS (ANTI-PEPTIC ULCER)	OMEPRAZOL	2000	1	1	1	2
PROTON-PUMP INHIBITORS (ANTI-PEPTIC ULCER)	PANTOPRAZOLE		21	14	11	9
ANILINES (ANALGESICS)	PARACETAMOL		32	**23**	20	**19**
ALPHA-ADRENOCEPTORS ANTAGONISTS (PROSTATIC HYPERPLASIA)	TAMSULOSINE		27	26	24	18
ANGIOTENSIN II ANTAGONISTS	IRBESARTAN			**34**	30	26
ANGIOTENSIN II ANTAGONISTS	VALSARTAN		25	**21**	14	12
ANTICHOLINESTERASES (DEMENTIA PREVENTING DRUGS)	DONEZEPIL					31
BISPHOSPHONATES	ALENDRONIC ACID			29	10	8
BISPHOSPHONATES	RISEDRONIC ACID					24
ALFA-ADRENERGIC BLOCKERS (ANTIHYPERTENSIVES)	DOXAZOSINE	2001	30	28	28	**25**
CALCITONINS	CALCITONIN SALMC		**17**	**27**	**31**	disappears
BENZOTIAPIN DERIVATIVES (CARDIO-SELECTIVE CALCIUM BLOCKERS)	DILTIAZEM	2000	**15**	17	21	**22**
DIHYDROPYRIDINE DERIVATIVES (CALCIUM BLOCKERS - VASC EFFECT)	AMLODIPINE		6	8	9	11
DIHYDROPYRIDINE DERIVATIVES (CALCIUM BLOCKERS - VASC EFFECT)	NIMODYPINE	2000	**35**	disappears		
FENYLPIPERIDINE DERIVATIVES (OPIATE ANALGESICS)	FENTANIYL					30
DIAZEPINES, OXAZEPINES & TIAZEPINAS (ANTIPSYCHOTICS)	OLANZAPINE		5	5	6	7
FLUOROQUINOLONES	CYPROFLOXACINE	2002	**34**	disappears		
PLATELET ADP RECEPTORS INHIBITORS	CLOPIDOGREL		14	7	5	3
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS	CAPTOPRIL	2000	**33**	disappears		
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS	ENALAPRIL	2000	**13**	10	15	28
MACROLIDES	CLARITROMICIN	2003	26	**30**	**35**	disappears
LIPID MODIFIERS	ATORVASTATIN		2	2	2	1
LIPID MODIFIERS	PRAVASTATIN		7	6	7	6
LIPID MODIFIERS	SIMVASTATIN	2003	4	3	3	15
SELECTIVE ESTROGEN RECEPTOR MODULATORS	RALOXIFENE		31	25	22	23
ORGANIC NITRATES (CARDIOTHERAPY)	NITROGLYCERINE		11	13	19	**20**
OTHER ANTIEPILEPTICS	GABAPENTIN			32	27	21
OTHER ANTIPSYCHOTICS	RISPERIDONE		10	9	8	4
OTHER ANTIGLAUCOMA DRUGS	LATANOPROST			33	33	32
SULPHONAMIDES (HIGH CEILING DIURETICS)	TORASEMIDE	2003		35	32	29
	ISOPHANICA INSUL		**16**	**12**	**18**	

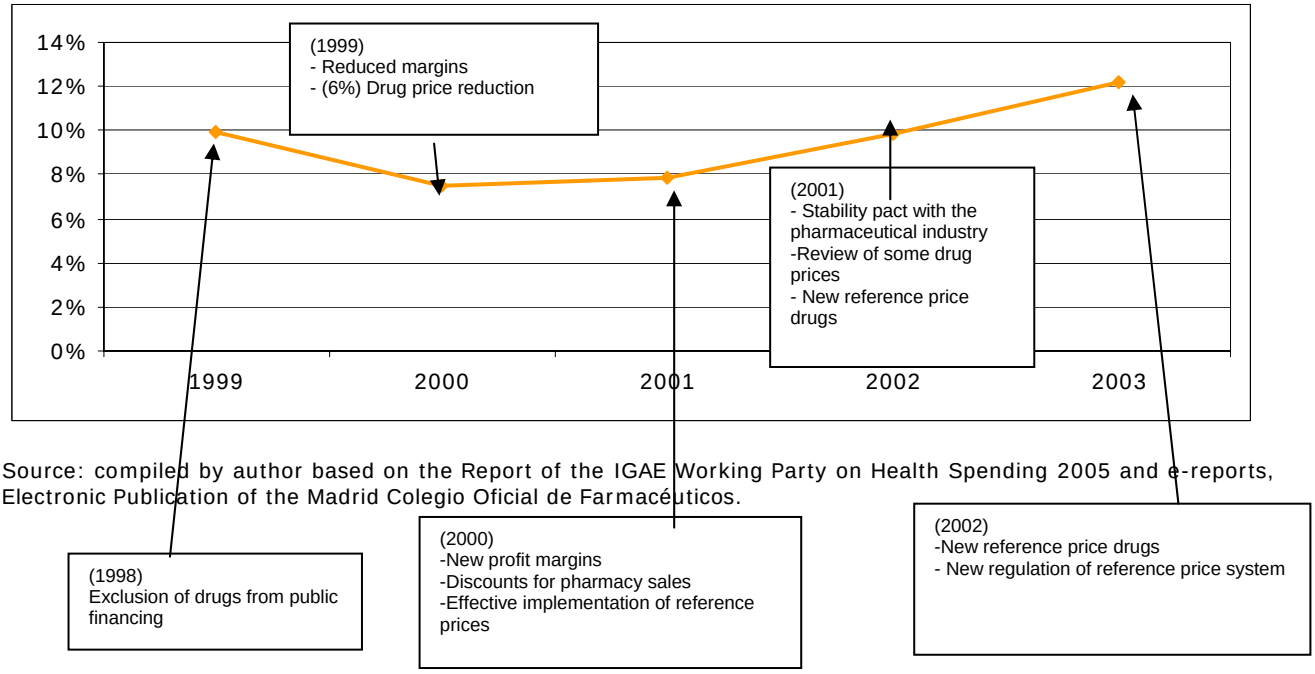
In bold the active ingredients where no. of units prescribed has fallen compared to previous year

Source: compiled by author based on Therapeutic Information of the SNS. MHCA

The measures adopted throughout the 1999-2003 period basically affected drug prices (reduced prices or profit margins, sales volume discounts, setting price references). The most effective measures for controlling year-on-year spending growth were short-term ones (those where direct action was taken to reduce drug prices). This casts doubt on the effectiveness of the structural measures, particularly

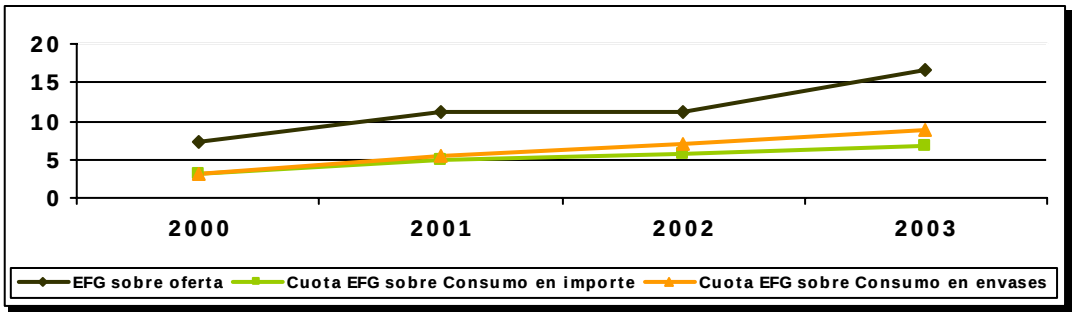
the reference price system, for the reasons noted above. To this must be added the limited presence of generics in both supply and demand terms.

Graph 6: Year-on-year growth of prescription drug spending and rationalisation measures taken in Spain (1999-2003).



Source: compiled by author based on the Report of the IGAE Working Party on Health Spending 2005 and e-reports, Electronic Publication of the Madrid Colegio Oficial de Farmacéuticos.

Graph 7: Change in consumption of generic drugs in quantity and amount.



Source: compiled by author on the basis of the report Medicamentos genéricos en España: una visión actualizada. Organización farmacéutica colegial and Nomenclátor Digitalis database.

In short, both structural and interim measures focused on price control without any intervention to rationalise supply or to speed up authorisation and price-setting

procedures. Nor was anything done about consumption, i.e. prescriptions, as regards their structure and particularly their growth rate.

ANNEX IV. TABLES AND GRAPHS CONCERNING THE IMPLEMENTATION OF THE PEPF

Strengthening of the AGEMED as the body regulating the Spanish pharmaceutical market		
Measure	Instrument	Situation
	State Budget	Sustained budget increase since 20 and 16.7% staff increase

Speeding up of procedures for authorising drugs and including them within the public finance system		
Measure	Instrument	Situation
Authorisation Procedu	Law 29/2006 Art. 9.2: the same authorisation now deals with different modes of dosage, form, and presentati same medicine, in particular for the purpose of applying the exclusivity periods of the data. Art. 17. 3: the obligation to present pre-clinical and clinical results is excluded if it can be shown that the drug is the generic of a reference medicine that is or has been authorised for at least 8 any EU Member State. Art 17.5. Possibility of substituting the pre-clinical and clinical results with adequate bibliography scientific documentation if it can be shown that the drug's active ingredients have had been use medically for 10 years within the EU. Art 17.6.Possibility of using pharmaceutical, pre-clinical and clinical documentation of another authorised and registered drug if it has the same quantitative and qualitative composition in ter active ingredients and the same form.	Draft Royal Decree developing the l currently before Parliament
Price-setting procedu	Art. 90.1. It is for the Council of Ministers, by Royal Decree, to establish the general price-settin for wholesale prices of medicines and health products to be included in the pharmaceutical pr the SNS. Art. 91. The Council of Ministers is also entrusted with carrying out price reviews when t required by changes in economic, technical or health circumstances or in the assessmen therapeutic use. Prohibition on reviewing prices before one year has past since the initial price was set or modifi	

Classification of new drugs according to their therapeutic use and pharmacoeconomic criteria to decide on their inclusion within the public finan selective financing based on the same principles and improving price-setting mechanisms, giving particular weight to the scientific ca encouraging the rational use of resources.		
Setting up of a new committee to assess th therapeutic use of new within the AGEMED	Reform of AGEMED Statute Art. 16.2 of Law 29/2006 provides that in the drug evaluation procedure, the AGEMED, will b rely on assessment committees or bodies that include qualified experts from scien professional circles as regards the issuing of all necessary reports. Art. 90.3 (on setting wholesale prices), provides that for the preparation of reports on the th use of medicines, the AGEMED will have the support of independent experts of recognised standing proposed by the Autonomous Regions, as set out in regulations.	The AGEMED Statute has passed th observations stage and will soon be to the *Consejo de Estado*. Not created. AGEMED has yet to de function of assessing the use of me

Classification of new drugs according to their therapeutic use and pharmacoeconomic criteria to decide on their inclusion within the public finance s financing based on the same principles and improving price-setting mechanisms, giving particular weight to scientific evidence, encouraging the rational u (CONT)		
Measure	Instrument	Situation
Creation of a Technical Committee compo experts from all Autonomous Regions whi analyse information on all new authorisat	Reform of AGEMED Statute	Although this Committee has not been formally create which it should carry out are being done

changes in therapeutic indications, cancel and restrictions on security grounds.		
Reform of Governing Council of AGEMED the Autonomous Regions to participate.	Reform of AGEMED Statute The tenth additional provision of Law 29/2006 regar participation of the Autonomous Regions in decision procedures regarding drugs and health products fore participation of the Autonomous Regions in the G Council of the AGEMED "*on the terms laid d regulations"*. It also states, in identical terms to A that it will have the support of independent ex recognised scientific standing proposed by the Aut Regions.	The AGEMED Statute has passed the public observa will soon be referred to the *Consejo de Estado* .
Laying down criteria for financing medicin according to their therapeutic use: applica the selective and non-indiscriminate finan principle	Recitals to Law 29/2006, SECTION II: "*….strategy of use of medicines and control of pharmaceutical sper this regard, it is necessary that selective ar indiscriminate financing takes place according to the use and that it is needed to improve citizens' h SECTIONIX 2..incorporating, as a criterion for settin the assessment of the therapeutic use of the medi the degree of innovation..".*. ARTICLE 89. L.29/2006. Procedure for public financing Section 1. Inclusion in the SNS financing through and non-indiscriminate financing taking into account and published general criteria, particularly the follo Seriousness, duration and after-effects of the pathologies for which they are indicated, b) Specific certain groups, c) Therapeutic and social use of the n d)Rationalising public drug spending e) Existence of m or other alternatives for the same complaints, f) D innovation of the medicine. Section 2.Possibility of block exclusion from public f (when it is not justified or considered necessary) o medicines. General exclusion of non-prescription m cosmetic products, diet products, mineral mouthwashes, toothpastes and similar products. Possibility of special reservations: Section 3: Identical criteria to decide total or partial e or make subject to special financing conditions drugs included in the pharmaceutical provision of the SNS, more: The treatment price or cost with comparable m already in the market and the guidance of t Interterritorial Council. Section 5: Periodical revision and updating Government of medicines included in the SNS pharm provision in accordance with the above criteria plus rational use, scientific knowledge, the appearance drugs with improved therapeutic use and the appea side effects that affect the benefit/risk ratio. Fifth additional provision Law 29/2006: Via Royal Dec Government shall lay down the form, requireme conditions for applying the criteria of Art. 89 a determine the total or partial exclusions of groups, su categories or classes of medicines from the public system.	Pending development in regulations. RD 1338/2006 la requirements to be classified as a pharmaceutical innov reference price system. RD 618/2007, of 11 May (came into force on 13 May 2007) regulates th criteria for establishing special reservations to the conc prescribing and dispensing drugs.

Classification of new drugs according to their therapeutic use and pharmacoeconomic criteria to decide on their inclusion within the public finance selective financing based on the same principles and improving price-setting mechanisms, giving particular weight to the scientific ca y evidence, enc the rational use of resources. (CONT)		
Measure	Instrument	Situation

Immediate notification (2 days) of price c of the Interministerial Commission Autonomous Regions.	Tenth Additional Provision Law 29/2006, second paragraph provides MHCA shall facilitate a report to all the Autonomous Regions in each me the Interterritorial Council of the SNS, identifying the name of the dr health products that have been authorised by the AGEMED since the las meeting, as well as the price of those drugs and health products covered financing.	Pending information from the M The agreements of the CIPM ar published on the MHCA's webp
Putting in place mechanisms that allow doctors to have access to objective and quality information on medicines, while also establishing a frame transparency, quality and social ethics within which the industry's promotional activities are to take place.		
Measure	Instrument	Situation
Establishing an information system on the of medicines that doctors can access.	Art. 75.3 Law 9/2006: The public authorities shall put in place a fast, effici independent system that ensures health professionals have scientific, up-t and objective information on medicines and health products. Art. 76 Law 29/2006 on "Objectiveness and quality of information and pro addressed to health professionals" National Budget	3.12 m euro of AGEMED's budg to improve the provision of information on drugs to profes Increase of 988,000 euros in th credit for the Farmacovigilancia programme, an increase of 482 euro (95.26%) to boost drug s evaluation and control.
Setting up systems to access the database. Modification of the database to fields related to therapeutic use.	AGEMED webpage	Authorisations and variations a published every month. The information published includes, regards the former, whether th is a generic and, as regards the the reason for the variation an code. This information can be downloaded. The RAEFAR data can be accessed from the webp allowing product searches and to the technical file. Pending information from the M for inclusion of information on therapeutic use.
Production of a guidebook in conjunction w Autonomous Regions.		Implemented The measures taken go further those foreseen in the PEPF: - On the webpage there is a co list of authorised drugs with th technical file and the authorise patient information leaflet. - A Therapeutic Prescription Gu (*Guía de Prescripción Terapéut* adaptation of the British BNF, v published in a handy book size guide includes the drugs marke Spain that are not available in Despite this, they consider tha webpage needs improving and that in 2 months radical chang be in place to make access eas
Regulation of advertising and promotion o medicines to ensure such activities are unc on the basis of ethical criteria and scientific evidence and adjusting sales visits to suit t needs of doctors and the SNS.	Art. 3 Law 29/2006 Art 76 objectivity and quality of information and promotion addressed to professionals Arts 101 & 102 Law 29/2006 Breaches and Sanctions	A working party on the adverti and promotion of medicines an regulation of sales visit to doct set up in March 2005 within th Commission of the CI-SNS. No data available regarding the current situation.
Development of training activities among professionals to promote the rational use of medicines and improve prescription quality, especially through cl practice guides and therapeutic protocols		

Measure	Instrument	Situation
	National Budget Law 29/2006, Sixth additional Provision. Contributions by sales volum SNS. Destination of the contributions: Part (unspecified) of the contribution will be transferred to the Carlos II Institute and will be used to fund research in the field of biomedicine. The remaining funds will be paid into the Treasury and will be spend o cohesion policies, training programmes for doctors and pharmacists an education programmes for the general public to encourage rational drug u Distribution to be determined by the MHCA. Comes into force: seventh transitional provision: after first 4-month immediately after Law 29/2006 of 26 July 8BOE 27 July). (September -D 2006). 1st liquidation: third 4-month period d2006.	Implemented Working party to certify trainin activities, meetings and scienti congresses in March 2005 CF of the CI-SNS Development by the same Commission of a Training Plan. In 2007, funds of 38,293m eur been spent on training in the p areas defined in 2006: new act ingredients covered by public financing and encouraging gen and also orphan medicines, cor use of antibiotics and electroni prescriptions. In 2006 the industry made its first cont of 170 m euro destined to biom research. Reduced by 25m eur result of the classification obta some industries covered by PROFARMA derived from own investment in R+D.
Proposal to the Autonomous Regions to pre clinical practice guides and therapeutic pro agreed by different care levels, encourage communication and coordination of differer involved with medicines	Art. 75.4 Law 29/2006: The public authorities shall promote the publicatio pharmacological and/or pharmacotherapeutic guides to be used by health professionals. Art. 81.2 Law 29/2006 (Primary health care). To help the rational use of medicines, primary care pharmacy units or services shall carry out the foll functions: ...d) Develop pharmacotherapeutic protocols and guides to ensu patients receive the right pharmacotherapeutic care e)Encourage coordina pharmacotherapy between different health authorities and care levels ...h) Promote coordination and team work and cooperation with hospitals and s care centres.	

Promote the tailoring of the form in which medicines are marketed to match treatment durations, through the prior identification of treatments capable being standardised in agreement with the industry and the involvement of the scientific community.		
Measure	Instrument	Situation
Develop a programme to identify those treatm where it is possible to standardise the dosage duration of the treatment in normal clinical pra	Law 29/2006. Art 19.5. AGEMED may authorise, on the terms laid down in regulations, the dispensing of specific units of medicines, for the care of certa patients where the clinical situation and treatment duration require it.	
Determining with the pharmaceutical industry form of medicines according to established sta and request for its gradual adjustment for sup		

the SNS.		
Permanent lines of communication with scienti communities to evaluate the repercussions of requests for adjustment and the progressive r of medicines presented in forms that do not m duration of the treatment.		
Change the reference price system so that it is implemented in a gradual, predictable and stable manner.		
Measure	Instrument	Situation
Amending the Medicines Law to establish a ne reference price system that is objective, gradu predictable.	Law 29/2006, of 29 July, (BOE 27 July), in its single repeal provision, Medicines Law 25/1990. Art 93 of Law 29/2006. Reference price system. **In force: 1 March 2007**. ✓ Sections 1 & 2: Definition of reference prices and formula f calculation. ✓ Definition of groups and determination of the same and their r prices on a periodical basis as per regulations (RD 1338/2006: at least once per year). Section 3: Prohibition on generics exceeding the reference price corresponding group. The same applies to products where there generic versions for substitution purposes. Section 4: Establishment of dispensing criteria for products affected reference price system. a) There is no substitution when a me prescribed that forms part of a group and its price is the same as than the reference price (except in the exceptional event of pharmaci out of stock).b) Medicines forming part of a group with a price ab reference price: substitution for that of a lower price and identical qu and quantitative composition and in the event of the price being the s the generic. c) Prescription by active ingredient:[29] the lowest priced r shall be dispensed, and in the event of products having the same generic. Section. 5. **Gradual impact and predictable nature**: when the wa price is affected by more than 30%, the laboratory can choose to ac total reduction in one year or 30% per annum in successive years (g in accordance with the procedure laid down in regulations. If the second option is chosen, it cannot be included in the referen system until the reduction has been completed. Section 6. **Objectivity**: affects all medicines for which there is no au generic in Spain and which have been in the market for more than 10 from when the decision was taken to use public finance - u 11 i indication has been authorised: reduction of current price by 20%. Se legislation will fix minimum exclusion thresholds which shall never than 2 euros. The same applies for drugs for hospital use (Sectio force: 1 March 2007. ✓ Pharmaceutical innovations (section 2, para 3): regulations s adopted to determine those which can be excluded from the referen system for five years,[30] after which they will become part of the r group. (Annex 2RD 1338/2006) The sixth transitional provision of Law 29/2006 lays down a gradual implem of the reference price system for pharmaceutical innovations : immediate incorporation for these that have been excluded for 7 years w 29/2006 came into force and transitional exclusion periods for those that ha excluded less than 7 years: 6 years for those that have been excluded 1 ye those excluded 2 years, 4 years for 3 year's exclusion 4 and so on, down to exclusion for those excluded 6 years. (Annex 1 RD 1338/2006)	Implemented

[29] Art.85 Law 29/2006. Health authorities shall encourage the prescription of medicines on the basis of their active ingredient. Prescription by active ingredient as per article 85 (already existing in Law 16/2003 of National Health Service Cohesion and Quality).
[30] Agreement on the 5-period exclusion period.

Royal Decree 1338/2006, of 21 November, developing art 93[31].

Procedure and requirements for classification as having the pharmaceutical innovation: therapeutic use criteria to assess and de the AGEMED: request in the 3 months from authorisation of the n form and resolution by the AGEMED within the following 6 month brings an end to the administrative procedure.

5-year exclusion from the reference price system of those drugs innovative forms to run from the coming into force of ministeri determining the group corresponding to its active ingredient and r price or if the declaration is subsequent to the creation of the grou such declaration.

Laboratories with drugs whose wholesale price is affected by more th per application of the new reference price system must be listed in th to the reference prices order corresponding to the identification medicine affected and its respective reference price. The option of the reduction in minimum amounts of 30% per year must be exerc month after the date of the coming into force of the correspondin through formal notification of the decision to the DGFPS, specify annual amount for which the product will be dispensed until the r price is achieved. The date when such amount will take affect determined by the corresponding reference price order.

Time between determination of groups and reference prices: at leas year.

✓ Period for reviewing reference prices for already determined grou take place after one year has elapsed from the date that prices take e

✓ Annex 1: Drug forms declared to be pharmaceutical innovations Law 29/2006 and excluded from the reference price system for a p more than 7 years and to which the Sixth Transitional Provision will ap

✓ Annex 2: Pharmaceutical innovations excluded for 5 years.

Order SCO/3997/2006, dated 28 December determining groups of medic reference prices and regulating certain aspects for the application of the pr of Law 29/2006.

New groups in accordance with Annex I (136 groups compared to the 94 c existing)

Reference prices approved in accordance with Art 93.2 of Annex I Formula: s of 3 forms of medicines in each group with the lowest cost per treatment pe the basis of the DDD - daily defined dose - (related daily dose Annex II; Defi daily does (DDD) in accordance with those assigned officially by the *Colaborador de la OMS en Metodología y Estadísticas sobre Medicamentos* not, calculated by the MHCA, in accordance with the methodology used centre).

Temporarily excluded pharmaceutical innovations and period of exclusion.

Annex 3. 1st Additional Provision. (Art.93.3. From 1/03/2007. Forms of whose price is above the reference price (except 6th Additional Provision where 1 year has not passed since their inclusion) and of medicines that marketed in the same form as generic drugs, and while the non-av continues, will be supplied at a wholesale price that is equal to or lower reference price, without modifying the National Code on medicinal forms.

Voluntary reductions of drugs to adjust them to a level equal to or be reference level_ notification to the MHCA prior to 31-01-2007 and new price 03-2007

Drugs for which there is no authorised generic in Spain that has been in the for more than 10 years or 11 if they have had a new indication: reduction o price by 20% from 1-3-2007. Wholesale price as per Annex 4.(Affects 47 dru

Annex 5. Determination of lower prices for the purposes of drug substitution.

Annex 6. Laboratories that have opted for reductions on a minimum 30% p.

Effective as of 1 March 2007.

[31] Royal Decree 1338/2006 is the subject of judicial review proceedings brought, by various laboratories (JANSSEN-CILAG S.A.,FARDI, LILLY, S.A.,PZIFER, S.A.,NOVARTIS, IPSEN PHARMA S.A., MADAUS, ABBOTT LABORATORIES, S.A., FOURIER and GELOS) and FARMAINDUSTRIA (action no. 1/9/2007)

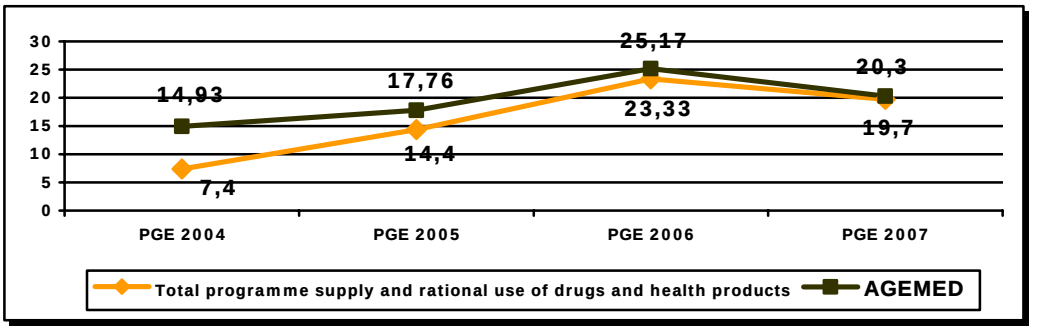
	Resolution 19 February 2007, applying Art 93.5: Publishes the list of lab and medicines that have opted for the gradual reduction of the laboratory p substitution of Art 93.6 Law 29/2006 will not apply to them.	
Amendment of the current procedure of the re price system with respect to the obligatory nat its annual application.	Law 29/2006. Art.93.2 : The time period for determining groups and their re prices shall be established on a regular basis. Developed in: RD 1338/2006, which provides that determining new groups and reference p shall be carried out at least once per year and includes the possibility that th of the reference prices of already-defined groups is possible one year after th came into effect.	

Encourage generic drugs by: speeding up their authorisation procedure, taking action on training and information aimed at doctors or by setting up a procedure that makes it possible to identify when patents expire.		
Measure	Instrument	Situation
Speed up the authorisation procedure	Law 29/2006:"Bolar clause". Possibility of filing request for auth of generics after at least 8 years have passed since the refere was authorised in any EU Member State. RD regulation authorisation and registration procedures	Awaiting legislative approval
Encourage prescription by active ingredient		
Encourage the incorporation of generics into the new drug forms.		
Development of policies concerning training and the provision of information to doctors on generic drugs.	National budgets	See section concerning the implementation of training mea
Procedure to identify when patent protection expires the authorisation of generics can be planned.		As expressly provided for in Me 57, AGEMED has yet to put in systematic identification proce Re: patent expiry, in the mann down in the Law. According to AGEMED, in fact the measure c concern patents, but rather the "expiry of the protection of dat period" of drugs, which means special procedure is needed be the information in this regard i sufficiently transparent.

Measure	Instrument	Situation
	Art.87 Law 29/2006. Establishes a series of obligations regar dissemination of information aimed at wholesale warehou pharmacies to ensure the traceability of drugs thus guaranteein and the safety of citizens. Art. 101 defines as a very serious infringement the breach information obligations contained in art. 87. A supply failure wholesale warehouses and pharmacists' is defined as a very infringement.	There is a reference in a MHCA release of May 2005 to a draft Decree that would develop a n traceability system. This draft i to Law 29/2006 and there is no evidence that it was approved. Computer application SEGUIME developed.

Encourage the public to use medicines rationally		
Measure	Instrument	Situation
	Advertising campaigns	In 2005 & 2006 advertising camp costing XXXXX euro have been implemented aimed at encouragi citizens in the rational use of dru particularly the responsible use o antibiotics, and the promotion of generics.
Other Measures		
Foster the implementation of electronic prescriptions Autonomous Regions.	Cooperation Agreements MHCA-Red.es-Autonomous Regions	Cooperation agreements entered MHCA- RED.es and Autonomous Regions
Interim measures		
Measure	Instrument	Situation
Updating the threshold for drugs with a fixed margin 89.62 euros) and the general margin by reducing it l	RD. 2404/2004 of 30 December. The 1st and 2nd Final Provisi regulating the margins of the distribution warehouses and pha and establishing the threshold of 89.62 euro for medicines with margin.	Implemented
General reduction of all drugs marketed for more tha year: 4.2% in 2005 and 2% in 2006 and updating of margins re: pharmacies and distribution warehouses	Royal Decree 2402/2004, Single Additional Provision	Implemented
Equating pharmacies' margins for sale of generics to applicable to all other medicines.	Royal Decree 2402/2004. 2nd Final Provision Reduction of 27.9%, a 5.1% price reduction.	Implemented

Graph 1: Year-on-year growth of pharmacy credits in national budgets (2004-2007).



Source: compiled by author based on national budgets (PGE) 2004,2005, 2006 & 2007

ANNEX V. TABLES AND GRAPHS RELATED TO THE ANALYSIS AND INTERPRETATION OF DATA SECTION

Table 1: Innovations introduced by measures based on prior analysis or evaluation.

Objective / Measure	*Base*
Therapeutic use criterion in price setting and pul financing. Importance of innovation in public fin system.	Drugs are included in the public finance system if they introduce significant therapeutic improvements or are innovative. Need to apply effectively the selective financing criterion l down in the Medicines Law 1990.
Reform of reference price system	The reform of the 2003 system, in addition to not achieving the objectives of savi encouraging generics, has had a serious impact on small laboratories, with a limite production. A reduction of 30-35% in a product's price may endanger their viability.
	The system in relation to pharmaceutical innovations is reformed, since the previous regula outside of its scope 146 drugs classified as such without sufficient scientific evidence.
Generic drugs	The ineffectiveness of the measures taken in the past is illustrated by the limite consumption of generics (6% in 2003) and a pricing policy that on occasions has led to ge being more expensive than brand-name drugs.
Reforms in the authorisation and price-setting procedures.	Serious inefficiencies in the AGEMED as a result of limited resources: Delays in authorising generics of up to 8 months in cases where the generic appears for time and up to 2 years in all other cases - legal maximum is 90 days. Delays in the other products: files that have not been processed since 2000 (in 2004) maximum is 210 days.
	Discontinuity and lack of transparency in the functioning of the Interministerial Commis drug prices: 790 pending files at the start of the legislature, with delays of up to 60 mor 116 files with requests to modify approved prices deemed approved due to the adminis failure to reply within the prescribed time period - approximate cost: 30m euro.
Transparency in pharmaceutical industry - healtl professionals relations as regards prescriptions c use	The lack of a system to provide doctors with information on medicines promoted by the meant that such information has been almost solely the industry. Such activities are estir increase drug prices by 12-16%.
Ensure maximum transparency in traceability sy and procedures to help the safety of patients.	Distribution warehouses enjoy greater margins than in neighbouring countries. The price of drugs in Spain is lower due to public intervention, which may make the attractive to export. Ultimately this may cause problems re: ensuring national supply.

Source: compiled by author based on PEPF. MHCA 2004

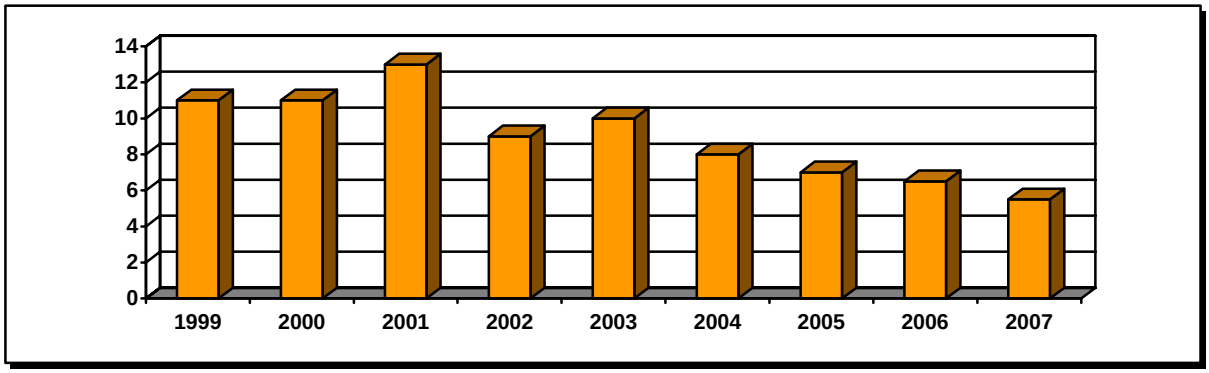
Table 2: Measures to control drug spending in Europe

Most countries	*Co-payment; price control; positive & negative lists of drugs and selective financing*
BE	Spending targets
DK	Spending targets; reference prices

DE	Positive and negative lists, reference prices, budgets for doctors, therapeutic guides; Inclusion in the reference price system of protected drugs for certain active ingredients. Rebate of up to 16% of the invoice for protected drugs not subject to the reference price.
FR	Spending targets fix saving of 10,000m euros; rebate by industry if projected spending exceeded; Taxes on promotional spending; use of generics promoted; Therapeutic guidelines; reform of reference price system
IT	Fixed budget; reference prices, positive lists
NL	Fixed rate prescription charges; reference prices, negative lists
SE	Reference prices; taxes on promotional spending
UK	Fixed rate prescription charges; encouraging use of generics; negative lists; profit margins; Promotional spending ceilings; budgets for doctors.

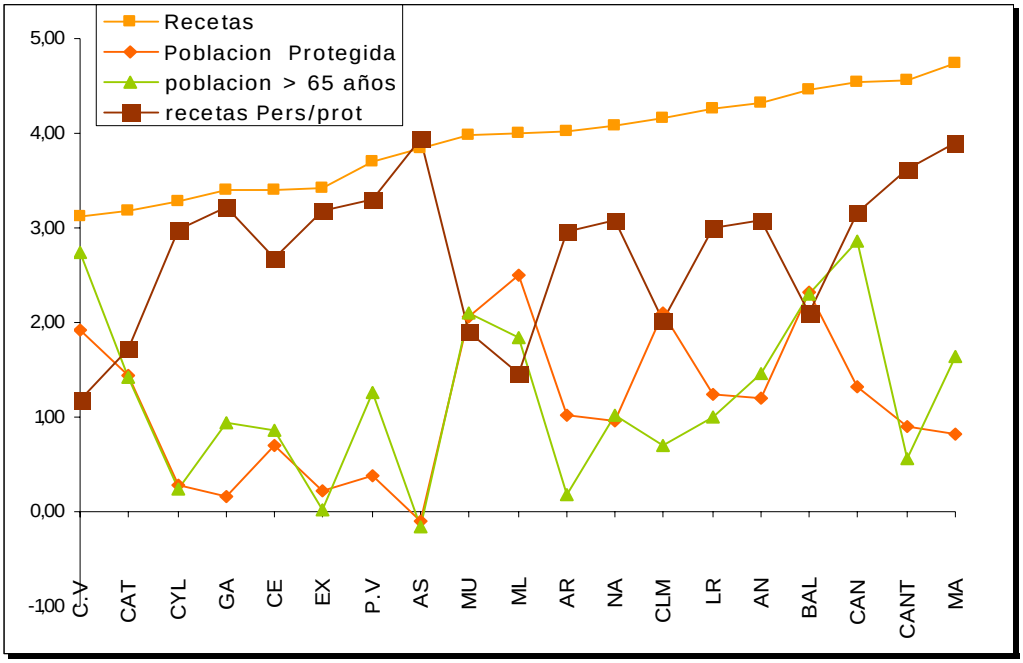
Source: Policies and actions for a healthy Europe. European Foundation for the Improvement of Living and Working Conditions, 2004

Graph 1: Year-on-year growth of world drug market (laboratory sales prices).



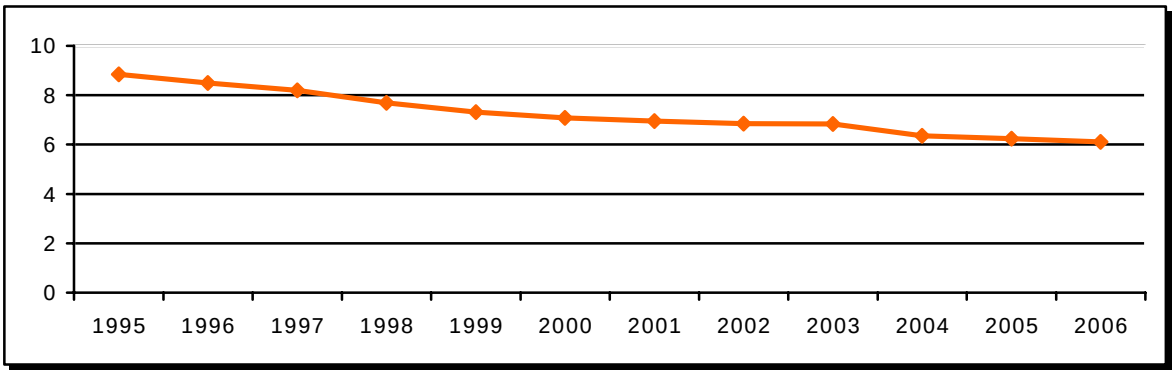
Source: IMS-Health. Taken from
Evolución del gasto por recetas del SNS y Andalucía. July 2007

Graph 2: Average annual growth rates (2005-2007) of prescription numbers, protected population and over-65s and the number of prescriptions per protected person.



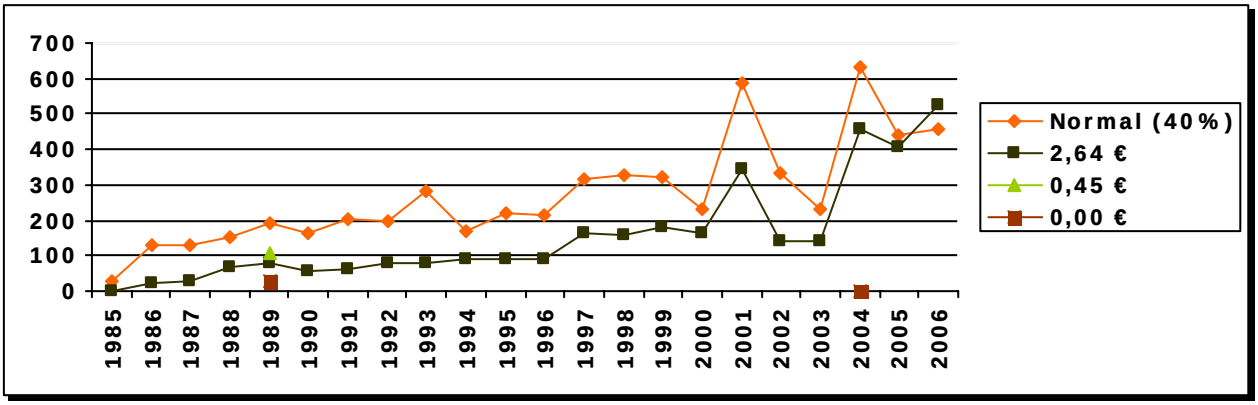
Source: compiled by author from the SNS Drug Consumption and the Municipal Register of Inhabitants. INE Estimated protected population

Graph 3: Trend in the number of active users as a proportion of the whole amount (1995-2007).



Source: compiled by author on the basis of Medicamento y Farmacia en cifras 2006. Organización Farmacéutica Colegial

Graph 4: Trend in the registration of drugs according to type of contribution (maximum price to be paid by the user)*.



Source: compiled by author using information from Nomenclátor Digitalis database. MHCA
*Products whose date of registration is known.

Table 4: New active ingredients authorised in 2005 according to their therapeutic use, treatment costs, cheapest alternative active ingredient and treatment cost ratio for the two active ingredients.

Therapeutic Potential C: Little or no therapeutic improvement				
New Active Ingredient (NAI)	Price	Unit of measurem	Cheapest alternative active ingredient	Difference cost/treatment (Cost NAI/Cost PAI)
Aripiprazole	4.98	Cost/DDD	Haloperidole	55.33
Cefditoren	41.27	Cost/Treat/ 10 da	Cloxacilin	4.66
Delapril	0.47	Cost/Treat/Day	Enalapril	3.62-1.81
Dutasteride	1.15	Cost/DDD	Finasteride	1.20
Eberconazole	0.35	Cost/gramme	Clotrimazole	5.00
Epinastine	0.43	Cost/Treat/Day	Chlorphenamine	2.87
Eplerenone	3.00	Cost/DDD	Espironolactone	12.50
Escitalopram	0.89	Cost/DDD	Fluoxetine	1.89
Esters of Omega 3 fatty acids	1.78-3.5	Cost/day	Simvastatin	9.37-13.69
Etoricoxib	1.74	Cost/Treat/Day	Diclofenac	6.69
Ezetimib	1.91	Cost/Treat/Day	Simvastatin	5.31
Insulin determir	5.23	Cost 100 UI	NPH insulin	3.44-2.02
Olmesartan	0.92	Cost/DDD	Clortalidone	23.00
Oxycodone	4.10	Cost/DDD	Morphine	2.77
Pregabaline	2.85	Cost/DDD	Amitriptyline	15.00
Rasagiline	4.75	Cost/DDD	Selegiline	13.57
Rotigotine 6 mg	4.88	Cost/DDD	Selegiline	12,84
Rotigotine 8 mg	4.25	Cost/DDD	Selegiline	11.18
Solifenacine	1.72	Cost/DDD	Oxybutinine	6.88
Therapeutic Potential D: no evaluation due to insufficient information				
New Active Ingredient	Price	Unit of measurem	Cheapest alternative active ingredient	Difference cost/treatment (Cost NAI/Cost PAI)
PTH 100 mcg	14.25	Cost/day	Alendronic acid 10 mg	14.11
Strontium Ranelate	1.15	Cost/DDD	Etidronate	3.83
Teriparatide	14.4	Cost/DDD	Raloxifene	10.75
Zonisamide	5.58	Cost/DDD	Phenobarbital	55.8

Table 5: Distribution of active ingredients in terms of volume and value.

Order of Active	Order of units		Order of value retail price +VAT	
Ingredients	%	Accumulated %	%	Accumulated %
1-10	21.42	21.42	17.36	17.36
11-20	8.74	30.17	10.19	27.54
21-30	6.07	36.24	7.42	34.96
31-40	4.96	41.19	5.92	40.88
41-50	4.30	45.49	4.85	45.73
51-100	15.91	61.40	16.36	62.09
101-250	19.21	80.60	18.81	80.90
251-500	7.99	88.59	6.82	87.72
501-750	1.39	89.98	0.80	88.52
751-1,087	10.02	100.00	11.48	100.00

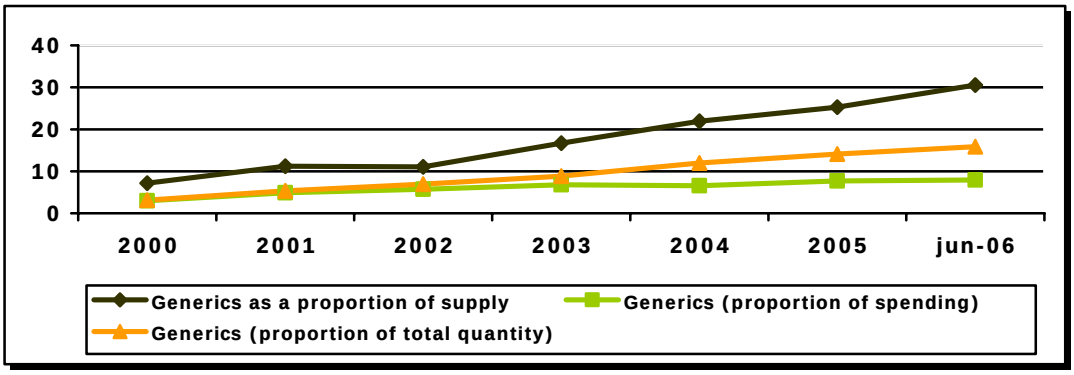
Source: El mercado de especialidades farmacéuticas del Sistema Nacional de Salud 2005. Consejo General de Colegios de Farmacéuticos

Table 6: Trend in prescription of statins.

Active Ingedient	*Position in volume terms*	*Position in value terms*	*Average price per packet*	*Included in Reference Price System*
Atorvastatin	7	1	39.82 euros	NO
Simvastatin	9	Not in the top 10	12.02 euros	YES
Pravastatin	Not in the top 10	9	32.93 euros	NO

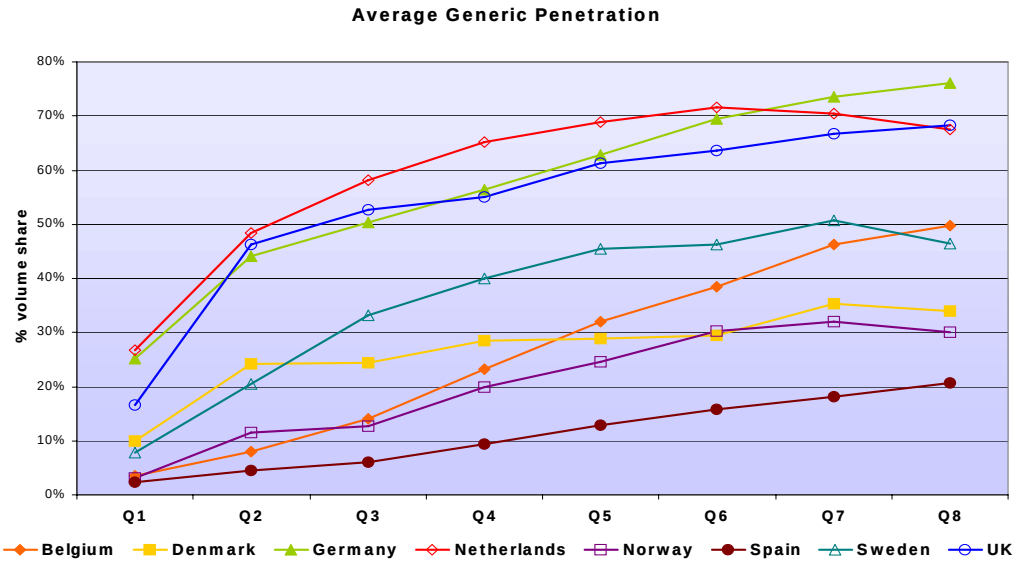
Source: El mercado de especialidades farmacéuticas del Sistema Nacional de Salud 2005. Consejo General de Colegios de Farmacéuticos

Graph 5: Trend in the proportion of generic medicines as a percentage of consumption in quantity and financial terms (medicines available in pharmacies).



Source: compiled by author on the basis of Medicamentos genéricos en España: una visión actualizada. Organización farmacéutica colegial and Nomenclátor Digitalis.

Graph 6: Rate of generic penetration in the two years after they were introduced into the Spanish and other EU markets.



Source: IMS in II Encuentro Ibérico sobre el mercado de genéricos. November 2005.