THE COST OF ILLNESS IN SPAIN FOR THE PERIOD 1980-2000

EL COSTE DE LA ENFERMEDAD EN ESPAÑA EN EL PERIODO 1980-2000

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Abstract

Objective: To distribute the total health spending in Spain for the years 1980-2000 among the seventeen ICD-9-CM categories. The study aimed to gather data for the years 1980, 1985, 1990, 1993, 1996 and 2000 in order to obtain a baseline from which to analyse the evolution of spending over time.

Methods: The method used was the top-down approach. This involves starting with overall spending figures and, by means of various procedures, breaking them down to the desired level. The method comprised two stages. In the first, health spending was distributed according to the different types of healthcare: hospital care, primary care, drug treatments, and others. In the second stage the spending for each type of care was distributed among the ICD-9-CM categories. The base unit varied according to each level: admissions for hospital care, appointments for primary care, and consumption per therapeutic subgroup for drug treatment.

Results: In the period 1980-2000 health spending was concentrated into three ICD-9 categories: VII, VIII and IX (37.4 % of spending in 1980 and 40.1% of spending in 2000). In terms of their relative rankings, category VII (diseases of the circulatory system) was second in 1980 (10.1%) but had moved into first place by the year 2000 (17.6%), showing one of the highest growth rates for the period. Category VIII (diseases of the respiratory system) was ranked first in 1980 (17.6%) but had fallen to second place by 2000 (13.2%). As regards the third category (IX: diseases of the digestive system) its relative position hardly varied: 9.7% in 1980 and 9.3% in 2000.

The results also show that although the internal composition of each category (percentage of each type of healthcare) may vary widely, few important variations were observed between 1980 and 2000.

Conclusions: Although the present study relies on a number of important assumptions we believe the results obtained justify the approach taken. The information provided may be of use to health managers and planners and it also establishes reference baselines for cost-of-illness studies of specific pathologies.

Key words: Cost-of-illness, top-down approach, health care spending.

Resumen

Objetivo: Distribuir el gasto total sanitario en España del período 1980-2000 entre diecisiete categorías del ICD-9-CM. El estudio recopila datos de los años 1980, 1985, 1990, 1993, 1996 y 2000 con la finalidad de analizar la evolución del gasto en el tiempo.

Métodos: El método empleado en nuestra investigación se basa en el enfoque top-down que a partir de datos globales de gasto, y en base a varios procedimientos, los desglosa hasta los niveles deseados. La metodologia se compone de dos etapas. En la primera, el gasto sanitario se distribuye según las diferentes categorías de provisión asistencial: atención especializada, atención primaria, tratamientos farmacológicos, y otros. En la segunda, el gasto para cada tipo de provisión asistencial se distribuye entre las categorías específicas del ICD-9-CM. Las unidades de medida varían según cada nivel: admisiones hospitalarias, consultas de atención primaria, consumo farmacéutico según subgrupos terapéuticos.

Resultados: En el período 1980-2000 el gasto sanitario se concentró en tres categorías del ICD-9-CM: VII, VIII y IX (37,4% del gasto en 1980 y 40,1% del gasto en el 2000). En términos de posicionamiento en el ránking de gasto, la categoría VII (enfermedades de sistema circulatorio) ocupaba el segundo lugar en en 1980 (10,1%) y el primer lugar en el 2000 (17,6%), mostrando uno de los más altos ratios de creciemiento en el período analizado. La categoría VIII (enfermedades del aparato respiratorio) estaba en primer lugar en 1980 (17,6%) y evolucionó hasta el segundo lugar en el 2000 (13,2%). La posición relativa de la categoría IX (enfermedades del sistema digestivo)no varió: 9.7% en 1980 y 9,3% en el 2000.

Conclusiones: A pesar de que la investigación se basa en un número significativo de suposiciones, creemos que los resultados obtenidos justifican el enfoque empleado. La información que ofrece este estudio puede ser de utilidad para gestores y planificadores sanitarios. Asimismo, puede servir de referencia para el abordaje de estudios posteriores sobre el coste de patologías específicas.

Palabras clave: Coste de la enfermedad, enfoque top-down, gasto sanitario.

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INTRODUCTION

Concern over the economic impact of healthcare provision in developed countries has risen in line with the greater resources being dedicated to this sector. Indeed, the proportion of gross national product (GNP) dedicated to maintaining healthcare systems has grown almost every year, although more recently spending has reached something of a plateau.

The fact that an increasing proportion of GNP is dedicated to healthcare provision should not necessarily be seen as negative, and merely reflects a decision on the part of society regarding the distribution of available resources. The issue which should be of concern is whether the allocation of resources is producing the desired outcomes, and thus it is necessary to determine whether the level of efficiency achieved justifies the investment made by society. In a context of scarce resources everything that is dedicated to healthcare could equally be invested in alternative systems that might improve the welfare of society.

To this end the present study of the evolution of total healthcare spending in Spain aims both to define the reference framework and estimate how overall spending is distributed with respect to the largest groups of pathologies. Therefore, rather than providing an answer to the question of efficiency the objective is to lay the groundwork for determining this aspect through subsequent research.

Cost-of-illness studies have proven and remain a source of great controversy among experts in health economics; indeed, in the literature there are those who defend this type of research[1,2,3,4,5] and those who find good reason to criticise it[6,7,8]. Following a review of several cost-of-illness studies Koopmanshap[9] concluded that the more general research (studies in Holland, United Kingdom, Canada and Australia; spending per ICD-9-CM category) did provide relevant information as it enabled the relative importance of each category to be compared with total healthcare spending.

The present study has been conducted along these lines.

OBJECTIVE

The aim was to distribute the total healthcare spending in Spain for the period 1980-2000 among the seventeen ICD-9-CM categories. This distribution was performed for the years 1980, 1985, 1990, 1993, 1996 and 2000 in order to enable a temporal analysis of the results.

MATERIAL AND METHODS

A prevalence approach was used, in other words, we considered the costs generated during the periods in question. Only direct healthcare costs were included in the analysis.

The method chosen for the study was the top-down approach, whereby large-scale spending figures for both public and private healthcare are broken down, firstly according to the type of healthcare and then by their distribution among the seventeen ICD-9-CM categories. The reason for this intermediate step, in which public and private healthcare spending is broken down according to the type of healthcare (hospital, ambulatory, drug treatment and others), is that different methodologies need to be applied for their subsequent breakdown.

The calculation of public healthcare spending for the period 1980-1987 was based on information provided by Spain's Ministry of Health and Consumer Affairs in its publication entitled Satellite Accounts for Public Healthcare Spending 1991-1996[10]. For the period 1988-2000 the source of information was another document published by the Ministry of Health and Consumer Affairs, Statistics for Public Healthcare Spending[11].

As regards spending on private healthcare the methodology is more complex (we used the method recommended by Barea[12]). Starting from the figures given in Spain's National Accounts under the heading "Private consumption of medical services and healthcare spending", it is necessary to deduct the amount of social provision received (for consumption of medicinal drugs, prostheses and therapeutic apparatus, transportation of patients and the agreements established by MUFACE (the mutual health organisation for civil servants). The figures which must be deducted come from the Satellite Accounts, in the section corresponding to social provision.

In addition to the above, it is also necessary to deduct from private healthcare consumption the amounts corresponding to current transfers to private organisations. The gross capital formation (investment) is included in the total amount of public healthcare spending. This investment increases the amount of private spending and thus it is necessary to deduct the capital transfers to private organisations that feature in public healthcare spending accounts.

This methodology was only used for the period 1980-1994, as the change in the basis of Spain's National Accounts in 1995 meant it was no longer necessary to deduct some of these entries, for example, that corresponding to prescribed drugs.

The distribution according to type of healthcare was carried out on the basis of the first overall result.

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Public healthcare spending

Hospital care includes the cost of hospital services listed in the "Public Consumption" and "Social Provision" accounts (satellite accounts), as well as the cost of transporting patients.

Ambulatory care comprises the cost of ambulatory services and patient appointments listed in the "Public Consumption" and "Social Provision" accounts (satellite accounts), as well as the cost of prostheses and therapeutic apparatus.

Drug treatment includes the entry corresponding to pharmacy in the "Social Provision" account".

Finally, an additional category (Others) was created to cover the remaining healthcare spending corresponding to services in areas such as public health, research and development, administration, capital expenses, etc.

Private healthcare spending

Following the model described above, spending on hospital care includes the cost of "Hospital care" minus the cost of the entry "Transportation of patients" plus 59% of the "Insurance premiums"[a] minus 59% of the agreement established by the mutual health organisation for civil servants (MUFACE).

Ambulatory care comprises the spending on "Doctors, nurses and others" plus 41% of the "Insurance premiums" minus 41% of the agreement established by the mutual health organisation for civil servants (MUFACE).

Drug treatment includes the entries "Drugs" and "Therapeutic apparatus and equipment" from which must be deducted "Pharmacy" and "Prostheses and therapeutic apparatus" (satellite accounts).

The category "Others" comprises "private gross capital formation", from which must be deducted the current transfers and capital transfers.

Once the overall figures for public and private spending have been obtained and broken down according to the type of healthcare, they can then be distributed with respect to the ICD-9-CM categories.

Hospital care

The base element for the distribution is admission to hospital. However, such admissions are not homogeneous and the amount of resources consumed may vary greatly from one hospital stay to another. The problem is therefore how to obtain a weighting index that will enable the distribution by hospital admission to be homogenized.

The first step involves separating psychiatric care from the rest; this is essential given the difference in cost between psychiatric admissions and those in other specialities. This figure is obtained from the information contained in the document "Statistics for healthcare facilities providing in-patient care" (EESRI) which, up until 1995, was published by Spain's National Statistics Institute (INE) and since 1996 has been the responsibility of the Ministry of Health and Consumer Affairs (it lists the cost of short and long stays in psychiatric hospitals).

A weighting index can be developed on the basis of information provided by the Ministry of Health and Consumer Affairs[14] regarding the number of cases, admissions and costs for each of the DRGs produced during 1999. The index can be derived once the different DRGs have been allocated to each one of the seventeen categories[b].

As the information for previous years is not homogenous the same weighting index was applied to all the years covered by the study. Obviously, by using the same weighting factor for all the years under consideration we are introducing an element of bias into the study. Over the twenty-one years of the study period there will have been variations in clinical practice that may imply a different use of resources, but the absence of homogenous information leaves us with only two alternatives: either to use the same weighting index for all years or to work without a weighting factor. It was decided that the former was the best alternative.

The method used involves calculating the cost of psychiatric illness and then distributing the remaining spending among the other categories.

Drug treatment

For the years 1980-1985-1990 the source of information used was that produced by the company International Marketing Services (IMS) for the Spanish pharmaceutical market. For the following years (1993-1996-2000) the baseline information used was that published by Spain's National Institute of Health (INSALUD) with respect to the consumption of medicinal drugs[15,16,17]. In this case the information covers the main therapeutic sub-groups which account for over 80% of total drug spending. The information obtained was complemented by that contained in the annual publication of FARMAINDUSTRIA[18] with respect to the consumption of medicinal drugs without a prescription. The problem with these two sources is how to move from this classifica-

[a] The distribution of insurance premiums among hospital and ambulatory care (59% and 41%, respectively) is based on the estimate made by Rodríguez[13] and has been maintained for the deductions corresponding to the mutual health organisation for civil servants. Obviously, the use of this estimate may cause deviations from the actual situation, although we do not believe that any such changes would be substantial.

[b] In those cases where the diagnoses belonged to more than one category, 50% was allocated to each of the two categories with the highest percentage of cases.

Table 1. TOTAL HEALTH SPENDING (MILLIONS OF CURRENT EUROS)

Year	Hospital	Ambulatory care	Drugs	Other	Total
1980	2,677 (46.7%)	1,600 (27.9%)	1,176 (20.5%)	284 (5.0%)	5,737 (100.0%)
1985	5,133 (48.7%)	2,866 (27.2%)	2,001 (19.0%)	542 (5.1%)	10,542 (100.0%)
1990	9,783 (46.9%)	5,465 (26.2%)	4,084 (19.6%)	1,521 (7.3%)	20,853 (100.0%)
1993	13,485 (46.6%)	7,584 (28.6%)	5,977 (20.7%)	1,876 (6.5%)	28,922 (100.0%)
1996	15,622 (43.6%)	10,258 (28.6%)	7,982 (22.3%)	1,996 (5.6%)	35,858 (100.0%)
2000	19,534 (41.9%)	13,127 (28.2%)	11,211 (24.1%)	2,728 (5.9%)	46,600 (100.0%)

tion to the one required by the present study. This was achieved by a methodology involving the following steps:

1. The therapeutic groups were initially assigned to ICD-9-CM categories in those cases where there was a very clear direct relationship.

2. Next, the therapeutic sub-groups were likewise assigned according to the same criteria. For example, "Anti-diabetic drugs" and "Hypolipemic drugs" would be assigned to categories III (Endocrine, nutritional and metabolic diseases, and immunity disorders) and VII (Diseases of the circulatory system), respectively.

3. An adjustment was then made for the categories to which nothing was allocated on the basis of the percentage of prescriptions observed.

4. The amount of spending corresponding to the sub-groups "Non-narcotic analgesics", "Tonics and Restoratives" and "Vitamins" was then distributed among all the categories in proportion to the expenditure up until this level of distribution.

5. Once an allocation had been made for each category we calculated the percentage that each one represented with respect to the total, this percentage being the one applied to the total amount calculated previously for each of the years under consideration in order to obtain the figure for each category and each year.

Ambulatory care

In this case we combined the information from the literature regarding the percentage attributable to each ICD-9 category with the figures for overall activity in each of the years under consideration. These figures were weighted according to the different types of activity carried out (appointments, home visits, tests, X-rays, etc.).

The method used comprised the following stages:

1. Firstly, we calculated total activity in primary care for each of the years under consideration; primary care activity was taken to mean the number of appointments and tests carried out.

2. We then gathered information from the literature regarding the amount of morbidity treated and its distribution among the various ICD-9-CM categories. The percentage of activity was determined for each category.

3. For each of the years under study we obtained the amount in physical units for each of the elements of which the activity was comprised; these physical units were then distributed among the different categories. Next, we applied a weighting to the different elements in order to obtain a total of weighted resource units (WRU) for each year and category. This distribution of UPR by category enabled us to obtain the percentage which each one represented with respect to the total.

4. Finally, the percentage derived in step 3 was applied to the previously obtained overall figure for spending on ambulatory care, which enabled us to calculate the amount in monetary units that corresponded to each category.

RESULTS

As with the methodology the results are presented on two levels: according to the type of healthcare and by ICD-9-CM category.

Table 1 shows the figures for each one of the study years and the percentages for each category with respect to the total for each year. As we were interested in the percentages rather than the absolute figure, the amounts are given in current euros. In one sense, this internal distribution merely reflects the resource mix for each of the study years. It can be seen that the relative contribution of ambulatory care remains practically constant, that of hospital

Table 2. TOTAL DIRECT COSTS PER ICD-9-CM CATEGORY (MILLIONS OF CURRENT EUROS)

	1980	1985	1990	1993	1996	2000
I	287 (5.3%)	412 (4.1%)	778 (4.0%)	846 (3.1%)	1,067 (3.2%)	1,275 (2.9%)
II	228 (4.2%)	514 (5.1%)	1,187 (6.1%)	1,690 (6.3%)	2,150 (6.4%)	2,832 (6.5%)
III	163 (3.0%)	328 (3.3%)	777 (4.0%)	1,268 (4.7%)	1,526 (4.5%)	2,039 (4.7%)
IV	30 (0.6%)	84 (0.8%)	120 (0.6%)	228 (0.8%)	269 (0.8%)	398 (0.9%)
V	263 (4.8%)	439 (4.4%)	717 (3.7%)	1,125 (4.2%)	1,462 (4.3%)	2,355 (5.4%)
VI	395 (7.3%)	632 (6.3%)	1,109 (5.7%)	1,681 (6.2%)	1,865 (5.5%)	2,420 (5.5%)
VII	550 (10.1%)	1,274 (12.7%)	2,709 (14.0%)	4,147 (15.3%)	5,586 (16.5%)	7,713 (17.6%)
VIII	959 (17.6%)	1,530 (15.3%)	2,649 (13.7%)	3,304 (12.2%)	4,507 (13.3%)	5,783 (13.2%)
IX	530 (9.7%)	983 (9.8%)	1,803 (9.3%)	2,636 (9.8%)	3,327 (9.8%)	4,071 (9.3%)
X	256 (4.7%)	548 (5.5%)	978 (5.1%)	1,402 (5.2%)	1,786 (5.3%)	2,152 (4.9%)
XI	233 (4.3%)	391 (3.9%)	671 (3.5%)	757 (2.8%)	876 (2.6%)	1,189 (2.7%)
XII	172 (3.2%)	309 (3.1%)	566 (2.9%)	707 (2.6%)	908 (2.7%)	1,096 (2.5%)
XIII	334 (6.1%)	664 (6.6%)	1,330 (6.9%)	2,053 (7.6%)	2,546 (7.5%)	3,317 (7.6%)
XIV	46 (0.8%)	86 (0.9%)	133 (0.7%)	155 (0.6%)	185 (0.6%)	192 (0.4%)
XV	23 (0.4%)	45 (0.5%)	88 (0.5%)	123 (0.5%)	165 (0.5%)	230 (0.5%)
XVI	628 (11.5%)	1,129 (11.3%)	2,369 (12.3%)	3,276 (12.1%)	3,521 (10.4%)	3,862 (8.8%)
XVII	356 (6.5%)	633 (6.3%)	1,350 (7.0%)	1,648 (6.1%)	2,112 (6.2%)	2,948 (6.7%)
Total	**5,453 (100%)**	**10,001 (100%)**	**19,332 (100%)**	**27,046 (100%)**	**33,861 (100%)**	**43,872 (100%)**

care decreases and that of drug treatment increases. These trends are further illustrated by the data in Figure I, which shows the growth indices for each of the categories.

As regards the distribution according to ICD-9-CM categories it is interesting to observe the results from two perspectives: firstly, in terms of the relative values corresponding to each category (*table 2*), and secondly, with respect to the growth of each one of these during the study period (Figure II).

As can be seen three categories (VII, VIII and IX) together account for the largest contribution, although their individual evolution over the study period is quite different. The concentration of spending in these categories can be clearly observed: 37.4% in 1980 and 40.1% in 2000. However, their behaviour over time differs notably: the percentage accounted for by category IX varies very little, whereas the other two categories switch their relative position (changing from first to second place and vice-versa).

When considering the growth experienced over the study period the categories showing the highest growth rates are VII, IV, III and II (Figure II). It should be noted that the category "Diseases of the circulatory system" is ranked first, with a growth rate almost twice the total mean value; the growth experienced by category II (Neoplasms) is also noteworthy and the observed trend suggests it

Figure I. VARIATION INDEX OF TOTAL HEALTH SPENDING. TYPE OF PROVISION (BASE YEAR: 1980)

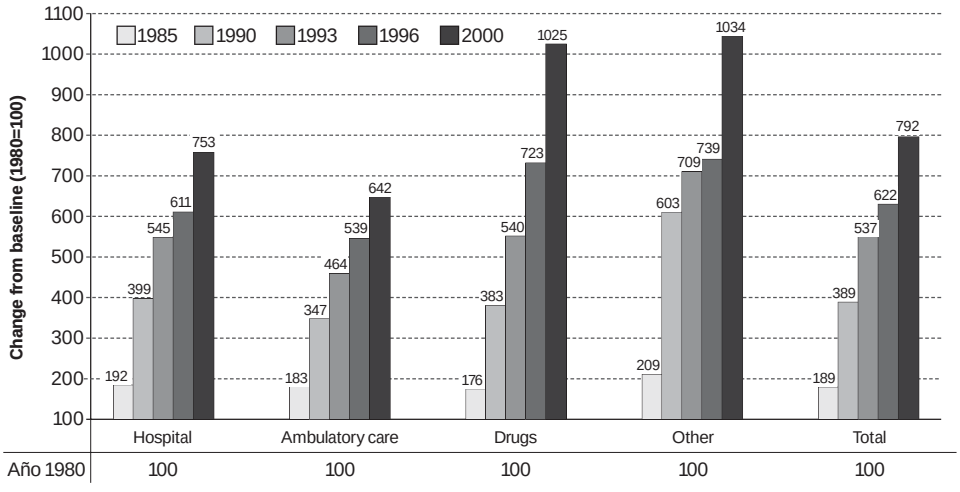
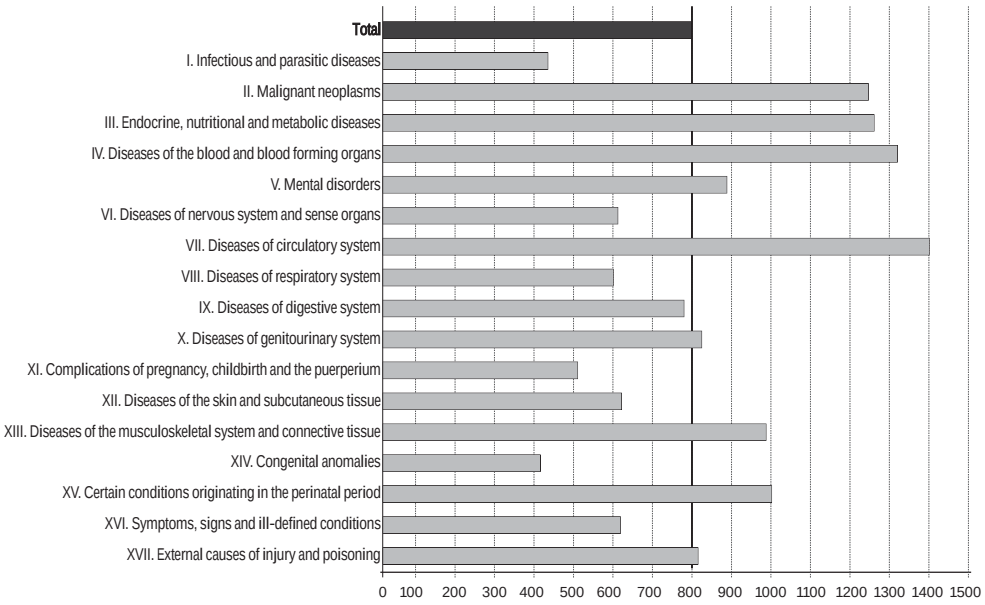


Figure II. VARIATION INDEX OF TOTAL HEALTH SPENDING. ICD-9 CATEGORIES (BASE YEAR: 1980)



will take on increasing importance in years to come.

Finally, tables 3 and 4 combine the two types of information (distribution by categories and according to the type of care) and show the variations produced during the period 1980-2000.

The internal composition of spending (the percentage corresponding to each type of care) varies considerably for most categories. If we focus on the most important ones it can be seen that variations occur in all directions. Category VIII shows a highly notable increase in the proportion of spending dedicated to hospital care and a decrease as regards other types of healthcare. The category accounting for the greatest spending (category VII) is associated with an important rise in the percentage spent on drug treatments, a decrease in that allocated to ambulatory care and a practically equivalent contribution for hospital care. As regards category IX there is decrease with respect

Table 3. SPENDING ACCORDING TO TYPE OF CARE AND ICD-9-CM CATEGORY FOR THE YEAR 1980

ICD-9-CM category	1980 (millions of euros)				Distribution by type of care		
	Hosp.	Amb.	Drugs	Total	% hosp.	% amb.	% drug
I	106.26	124.16	56.98	287.41	37.0	43.2	19.8
II	210.07	12.03	5.68	227.78	92.2	5.3	2.5
III	39.12	50.87	72.63	162.62	24.1	31.3	44.7
IV	12.07	7.13	10.89	30.10	40.1	23.7	36.2
V	149.06	41.56	72.67	263.29	56.6	15.8	27.6
VI	288.24	81.67	25.36	395.26	72.9	20.7	6.4
VII	235.41	156.55	158.12	550.06	42.8	28.5	28.7
VIII	148.01	492.48	318.64	959.14	15.4	51.3	33.2
IX	323.68	95.77	110.59	530.03	61.1	18.1	20.9
X	135.44	85.59	35.22	256.25	52.9	33.4	13.7
XI	193.28	5.37	34.17	232.82	83.0	2.3	14.7
XII	40.56	66.01	65.63	172.20	23.6	38.3	38.1
XIII	134.44	122.08	77.02	333.55	40.3	36.6	23.1
XIV	44.26	0.87	0.94	46.07	96.1	1.9	2.0
XV	21.98	0.86	0.12	22.95	95.8	3.7	0.5
XVI	357.02	169.45	101.17	627.64	56.9	27.0	16.1
XVII	237.80	87.79	30.59	356.18	66.8	24.6	8.6
Total	**2,676.71**	**1,176.42**	**1,176.42**	**5,453.36**	**49.1**	**29.3**	**21.6**

Table 4. SPENDING ACCORDING TO TYPE OF CARE AND ICD-9-CM CATEGORY FOR THE YEAR 2000

ICD-9-CM category	2000 (millions of euros)				Distribution by type of care		
	Hosp.	Amb.	Drugs	Total	% hosp.	% amb.	% drug
I	317.45	697.87	259.20	1,274.52	24.9	54.8	20.3
II	2,286.00	151.88	393.73	2,831.62	80.7	5.4	13.9
III	39.12	50.87	72.63	162.62	24.1	31.3	44.7
IV	159.60	139.51	98.80	397.91	40.1	35.1	24.8
V	551.98	706.16	1,096.74	2,354.88	23.4	30.0	46.6
VI	955.92	764.14	700.16	2,420.22	39.5	31.6	28.9
VII	3,130.34	1,716.49	2,865.94	7,712.77	40.6	22.3	37.2
VIII	1,915.32	2,354.36	1,513.32	5,782.99	33.1	40.7	26.2
IX	2,014.60	791.69	1,265.17	4,071.47	49.5	19.4	31.1
X	1,036.04	667.22	448.60	2,151.86	48.1	31.0	20.8
XI	1,034.24	7.58	147.08	1,188.90	87.0	0.6	12.4
XII	209.87	590.45	295.95	1,096.27	19.1	53.9	27.0
XIII	1,372.66	1,390.87	553.96	3,317.49	41.4	41.9	16.7
XIV	176.71	6.32	9.40	192.42	91.8	3.3	4.9
XV	219.48	6.06	4.18	229.71	95.5	2.6	1.8
XVI	1,939.79	1,368.51	553.50	3,861.80	50.2	35.4	14.31
XVII	1,838.40	743.99	365.52	2,947.91	62.4	25.2	12.4
Total	**19,534.12**	**13,126.81**	**11,210.91**	**43,871.84**	**44.5**	**29.9**	**25.6**

to hospital care, an increase for drug treatments and relatively unchanged levels for ambulatory care. Given both their current and future relevance it is worth noting the important growth associated with categories II (Neoplasms) and V (Mental disorders) in terms of drug treatments.

DISCUSSION

Obviously, studies such as this are required to make assumptions which could cloud the results obtained. In our case the most important assumptions made were: those in the section referring to drug treatments; spending being assigned to a category according to the main symptom; the distribution among ambulatory care categories being based on studies that may not be very representative; and the estimates of private healthcare spending.

However, we believe that maintaining the same methodology across the whole study period means, at the very least, that the comparison of results may provide information of interest. Furthermore, regardless of how useful this information may be for planners and healthcare managers the results obtained serve as reference points for cost-of-illness studies focussed on specific pathologies.

It should be remembered that while the percentage distribution of total spending among the different types of healthcare will be influenced by the consumption of resources corresponding to each one of them, an important role is also played by the relative prices (*)[c] which may arise in each area. In other words, the result cannot only be interpreted in terms of the physical combination of factors, as it will also be influenced by the relative price indices among these factors.

The fact that the relative spending contribution of drug treatments has risen should not necessarily be seen as negative, despite many of the opinions put forward in the media. Indeed, if drugs are used instead of other types of healthcare or to treat pathologies with which a relationship had not previously been established, then there is no reason to be concerned about their increased use. What does seem to be of concern is that the percentage spent on ambulatory care has not risen, as in our view, an efficient healthcare system is one which allocates a significant proportion of its resources to this type of care. In fact, we would argue that a reversal of the percentages spent on hospital as opposed to ambulatory care would be more efficient. Were this the case it would indicate that primary healthcare was fulfilling its role as a filter for entering the system and, therefore, the allocation of resources would prove more efficient.

[c]Although we refer to prices we could have used the term 'relative costs', especially in public sector areas. For example, if a reform of the system means that the nature of a primary care appointment changes from the mere prescription of medication, lasting an average of three minutes, to being a scheduled consultation lasting an average of twelve minutes, the costs would rise notably for the appointment and for primary care in the second case, even without any variations in the remuneration.

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