



# Cost of moderate to severe psoriasis patients in Spain

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## Introduction

- Psoriasis is a chronic and immunological skin disease characterized by inflamed lesions, as plaques on the skin (Langley 2005)
- Prevalence of psoriasis in Spain is between 1.17 and 1.43% (Ferrándiz 2001)
- Psoriasis disease interfere directly with the activities of the daily life of patients presenting more hospitalization and visits to emergency rooms, major loss of work productivity and unemployment that the general population (Finlay 1995, McKenna 1997, Lundberg 1999, Sohn 2006)
- In Spain, psoriasis represents an important cause of economic burden, both to the National Health System and to the patients (Carrascosa 2006)

## Objective

- To evaluate the costs associated of moderate to severe psoriasis patients in Spain, from the societal perspective

## Methods

- **Study design**
  - Observational, prospective and multicenter study in 123 centers in Spain
  - Resources measured at baseline and month 4 and extrapolated to month 12
  - Inclusion criteria were:
    - Patients over 18 years old
    - With moderate to severe psoriasis
    - Ability to understand and answer correctly the questionnaires used in the study.
    - Who have given written informed consent
  - Moderate to severe psoriasis was defined as:
    - Patients with Body Surface Area  $\geq 10\%$  or
    - Psoriasis Area and Severity Index (PASI)  $\geq 10$  or
    - Physician's Global Assessment  $\geq 5$  or
    - Patients receiving systemic treatment
- **Cost inputs**
  - Cost evaluation (€, 2009 values) included direct medical costs, non medical costs and indirect costs
  - Unit cost data were collected from:
    - The Spanish Database of Health Costs e-Salud (Oblikue Consulting 2009)
    - The Spanish Catalogue of Medicinal Products (Consejo General de Colegios de Farmacéuticos 2009)
- **Data collection**
  - Demographical and clinical data
  - Direct medical resources: inpatient hospitalization, emergency room visits, consultations (primary and secondary care, nursery, other healthcare professionals and alternative medicine visits), laboratory and diagnostic tests, medication (prescription drugs and non-prescription drugs paid by patients), phototherapy
  - Direct non medical resources: social assistance, out-of-pocket expenses paid directly by patients (travel costs, formal caregivers), informal caregivers
  - Indirect resources: productivity losses

## Results

- Data available on 1,217 patients with moderate to severe psoriasis
- Average annual cost per patient with moderate to severe psoriasis is € 7,469
- Direct medical costs accounted for € 6,420 (86% of total costs). The key drivers of direct medical costs are:
  - Prescription medication: € 3,667 (49% of total costs)
  - Phototherapy sessions: € 1,405 (19% of total costs)
  - Day-care visits: € 435 (6% of total costs)

- Direct non-medical costs represent € 371 (5% of total costs). The key drivers of direct non-medical costs are:
  - Informal caregivers costs: € 281 (3.7% of total costs)
- Indirect costs accounted for € 677 (9% of total cost). The key drivers of indirect costs are:
  - Days off work: € 337.71 (4.5% of total costs)
  - Loss of working hours per week: € 334.81 (4.4 % of total costs)

Table 1: Demographical and clinical data

<b>Sex, %</b>	
Male	60.8
Female	39.2
<b>Mean age years, (range)</b>	45 (18-84)
<b>Work situation, %</b>	
Employed	68.1
Unemployed	6.5
Housewife	10.2
Retired	15.2
<b>Mean age at diagnosis years, (range)</b>	26 (0.2-82)
<b>Relatives with psoriasis, %</b>	
Yes	50.4
<b>Severity of psoriasis, %</b>	
Moderate psoriasis	60.8
Severe psoriasis	39.2
<b>Body-surface area of psoriasis, n</b>	
All body	57
Head and neck	705
Trunk and back	987
Upper extremities	1,065
Lower extremities	541
<b>Mean number of psoriatic outbreaks, (range)</b>	2.42 (0-16)
<b>Psoriasis comorbidity, %</b>	
Yes	46.3
<b>Prescription therapy in the previous 24 months, %</b>	
Yes	95.6

Figure 1: Percentage of total annual cost of psoriasis per patient with moderate to severe psoriasis

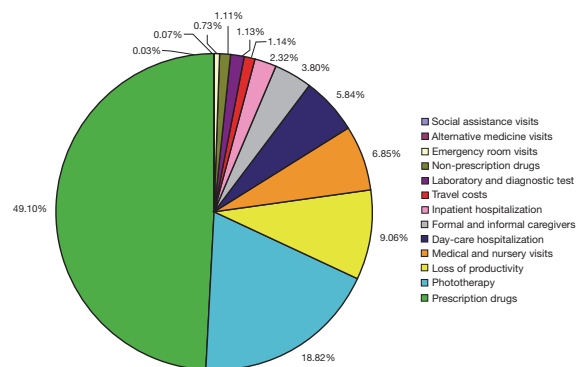


Table 2: Annual consumption of resources per patient with moderate to severe psoriasis. Units, mean values and 95% confidence interval lower limit (CI 95% LL) and upper limit (CI 95% UL)

	Unit	Mean	CI 95% LL	CI 95% UL
<b>Direct medical costs</b>				
Inpatient hospitalization	days	0.6600	0.3000	1.0200
Day-care hospitalization	visits	3.2760	2.2110	4.3410
Medical visits	visits	7.4396	6.5385	8.3876
Emergency room visits	visits	0.4500	0.2100	0.6900
General practitioner visits	visits	4.2300	3.7800	4.6800
Hospital nursery visit	visits	5.5320	4.4700	6.5970
Ambulatory nursery visit	visits	5.9700	2.9700	4.1700
Alternative medicine visits	visits	0.1528	0.0000	0.3419
Laboratory test	number	6.1812	5.7661	6.5963
Diagnostic tests	number	0.9392	0.6023	1.3271
Prescription drugs	days	237.8394	171.7994	304.6329
Non-prescription drugs	€, 2009	82.55	70.52	94.57
Phototherapy	sessions	7.9980	6.5100	9.4830
<b>Direct non medical costs</b>				
Social assistance visits	visits	0.0600	0.0000	0.1200
Formal caregivers costs	€, 2009	2.61	1.02	4.23
Informal caregivers costs	hours	35.5680	14.7160	56.4200
Travel costs	€, 2009	85.15	75.61	94.69
<b>Indirect costs</b>				
Days without working	days	5.3400	3.2400	7.4700
Hours per week without working	hours	42.3280	24.2840	60.3200
Incomes reduction €	€, 2009	4.27	2.63	5.91

Table 3: Total estimated annual cost per patient with moderate to severe psoriasis (€, 2009). Mean values, 95% confidence interval lower limit (CI 95% LL) and upper limit (CI 95% UL)

	Mean cost	CI 95% LL	CI 95% UL
<b>Direct medical costs</b>			
Inpatient hospitalization	173.35	78.80	267.91
Day-care hospitalization	435.97	294.24	577.70
Medical visits	239.84	196.41	284.49
Emergency room visits	54.71	25.53	83.89
General practitioner visits	97.59	87.20	107.97
Hospital nursery visit	83.63	67.57	99.72
Ambulatory nursery visit	90.25	44.90	63.04
Alternative medicine visits	5.36	38.40	11.71
Laboratory test	59.79	55.96	63.61
Diagnostic tests	24.67	9.75	43.01
Prescription drugs	3,667.27	2,953.91	4,381.09
Non-prescription drugs	82.55	70.52	94.57
Phototherapy	1,405.49	1,144.00	1,666.45
<b>Direct medical costs</b>	<b>6,420.45</b>	<b>5,067.19</b>	<b>7,745.16</b>
<b>Direct non medical costs</b>			
Social assistance visits	2.16	0.00	4.31
Formal caregivers costs	2.61	1.02	4.23
Informal caregivers costs	281.34	116.40	446.28
Travel costs	85.15	75.61	94.69
<b>Direct non medical costs</b>	<b>371.26</b>	<b>193.04</b>	<b>549.52</b>
<b>Indirect costs</b>			
Days without working	337.71	204.90	472.41
Hours per week without working	334.81	192.09	477.13
Incomes reduction €	4.27	2.63	5.91
<b>Indirect costs</b>	<b>676.80</b>	<b>399.62</b>	<b>955.46</b>
<b>Total costs</b>	<b>7,468.51</b>	<b>5,659.85</b>	<b>9,250.14</b>

## Conclusions

- Annual cost per patient with moderate to severe psoriasis represents € 7,469 (direct costs: 91%, indirect costs: 9%)
- Prescription medication, phototherapy sessions and loss of productivity are the categories with the higher impact in total cost per patient
- The results illustrate the need for effective therapeutic interventions to treat moderate to severe psoriasis that can decrease the burden of the disease

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