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**The Economic Burden of Ankylosing Spondylitis in Spain. Results of the Spanish Atlas 2017**

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on behalf of Atlas working group

**Background:**

Ankylosing Spondylitis (AS) is a disease associated with a high number of comorbidities, chronic pain, functional disability, and resource consumption.

**Objectives:**

This study aimed to estimate the burden of disease for patients diagnosed with AS in Spain.

**Methods:**

Data from 578 unselected patients with AS were collected in 2016 for the Spanish Atlas of Axial Spondyloarthritis via an online survey. The estimated costs were: Direct Health Care Costs (borne by the National Health System, NHS) and Direct Non-Health Care Costs (borne by patients) were estimated with the bottom-up method, multiplying the resource consumption by the unit price of each resource. Indirect Costs (labour productivity losses) were estimated using the human capital method. Costs were compared between levels of disease activity using the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score (<4 or low inflammation versus ≥4 or high inflammation) and risk of mental distress using the 12-item General Health Questionnaire (GHQ-12) score (<3 or low risk versus ≥3 or high risk).

**Results:**

The average annual cost per patient with AS in 2015 amounted to €11,462.3 (± 13,745.5) per patient. Direct Health Care Cost meant an annual average of €6,999.8 (± 9,216.8) per patient, to which an annual average of €611.3 (± 1,276.5) per patient associated with Direct Non-Health Care Cost borne by patients must be added. Pharmacological treatment accounted for the largest percentage of the costs borne by the NHS (64.6%), while for patients most of the cost was attributed to rehabilitative therapies and/or physical activity (91%). The average annual Indirect Costs derived from labour productivity losses were €3,851.2 (± 8,484.0) per patient, mainly associated to absenteeism. All categories showed statistically significant differences ( $p < 0.05$ ) between BASDAI groups (<4 vs ≥4) except for the Direct Non-Healthcare Cost, showing a progressive rise in cost from low to high inflammation. Regarding the 12-item General Health Questionnaire (GHQ-12), all categories showed statistically significant differences between GHQ-12 (<3 vs ≥3), with higher costs associated with higher risk of poor mental health (Table 1).

## Conclusion:

Direct Health Care Costs, and those attributed to pharmacological treatment in particular, accounted for the largest component of the cost associated with AS. However, a significant proportion of the overall costs can be further attributed to labour productivity losses.

## References:

**Table 1.** Average annual costs per patient according to BASDAI and GHQ-12 groups (in Euros, 2015)

	<b>N</b>	<b>Direct Health Costs</b>	<b>Direct Non-Health Costs</b>	<b>Indirect Costs</b>	<b>Total Cost</b>
<b>BASDAI</b>					
<b>&lt;4</b>	91	<b>7,592.0*</b>	557.3	<b>2,426.5*</b>	<b>10,575.8*</b>
<b>≥4</b>	376	<b>9,706.9*</b>	768.0	<b>5,104.8*</b>	<b>15,579.7*</b>
<b>Psychological distress (GHQ-12)</b>					
<b>&lt;3</b>	146	<b>8,146.8*</b>	<b>493.6*</b>	<b>3,927.2*</b>	<b>12,567.6*</b>
<b>≥3</b>	260	<b>9,772.9*</b>	<b>807.2*</b>	<b>4,512.3*</b>	<b>15,092.5*</b>
<b>Total</b>	578	6,999.8	611.3	3,851.2	11,462.3

\* p <0.05

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