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Brief Report

Cost of Temporary Work Disability Due to Musculoskeletal Diseases in Spain[☆]

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ABSTRACT

Objective: To estimate the annual cost of temporary work disability (TWD) caused by musculoskeletal diseases (MDs) in Spain and its variations between regions (autonomous communities: ACs) and paying institutions.

Method: Descriptive study of the costs of MD-related TWD in ACs in 2007. The Spanish National Institute of Social Security (NISS) provided aggregate data. Extrapolations to the rest of the TWD payers (mutual societies and employers) were used.

Results: MDs were the leading cause of TWD in Spain in 2007, causing 908 781 episodes of TWD (18% of the total), 39 342 857 lost working days (23%), and a cost of 1702 million euros (23%). The annual incidence of TWD episodes per 1000 employed was 45. The cost per TWD process was 1873 €, ranging from $1391 \in (La Rioja)$ to $2429 \in (The Basque Country)$.

Conclusion: MDs produce annually in Spain over 39 million days lost by TWD with a cost of over 1700 million euros. Regions observed wide variations of the TWD cost.

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Coste de la incapacidad temporal debida a enfermedades musculoesqueléticas en España

RESUMEN

Objetivo: Estimar el coste anual de la incapacidad temporal (IT) ocasionada por las enfermedades musculoesqueléticas (EME) en España y su variabilidad entre comunidades autónomas (CC. AA.) y entidades pagadoras.

Método: Estudio descriptivo de costes por IT debida a EME en las CC. AA. en el 2007. Se utilizaron datos agregados del Instituto Nacional de Seguridad Social (INSS) y extrapolaciones a las entidades que realizan el pago de la IT (INSS, mutuas y empresas).

Resultados: Las EME fueron la primera causa de IT en España en 2007, produciendo 908.781 episodios de IT (18% del total), 39.342.857 días de baja (23%) y 1.702 millones de euros de coste (23%). La incidencia anual de procesos de IT por EME por cada 1.000 personas ocupadas fue de 45. El coste por proceso de IT fue de 1.873 oscilando entre un mínimo de 1.391 € (La Rioja) y un máximo de 2.429 € (País Vasco). Conclusión: Las EME producen anualmente en España más de 39 millones de días de baja por IT, con un coste superior a 1.700 millones de euros. El coste de la IT tiene una amplia variabilidad entre CC. AA.

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Introduction

Musculoskeletal diseases (MDs) are the leading cause of disability worldwide¹ and have a high impact on the direct (medical) and indirect (sick leave) costs. Sick leaves in Spain, where they are temporary, are known as temporary disability (TD). The economic benefit of TD is a percentage of the base salary, which mainly depends on the amount. The payment of the benefit, from day 16,

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Table 1Temporal Disability and Costs Caused by MD per CC. AA. (2007).

CC. AA.	Ratio TD processes due to MD/total disease	Time spent by TD process due to MD (days)	TD processes due to MD per 1000 persons employed	Cost of TD due to MD (€)		
				Average cost per TD process	Cost per subject occupied	Cost per \$ 1000 of GDP
Andalucía	0.21	42.16	46.4	1513	70.20	1.56
Aragon	0.17	38.27	47.9	1583	75.85	1.41
Asturias	0.20	53.64	54.7	2374	129.93	2.46
Baleares	0.21	37.10	56.6	1540	87.09	1.69
Canary Islands	0.23	39.87	69.5	1577	109.56	2.40
Cantabria	0.17	46.24	51.1	1838	93.95	1.82
Castilla-La Mancha	0.21	49.62	37.6	1892	71.12	1.69
Castilla y León	0.23	45.39	42.1	1733	72.93	1.39
Catalonia	0.10	40.18	28.3	1937	54.92	0.98
Extremadura	0.23	49.17	41.4	1590	65.83	1.56
Galicia	0.24	50.69	50.3	1886	94.92	2.09
Rioja	0.20	35.45	56.8	1391	78.97	1.49
Madrid	0.15	40.66	49.0	2247	110.17	1.80
Murcia	0.16	47.35	32.7	1655	54.04	1.27
Navarra	0.20	42.75	69.6	2147	149.39	2.44
The Basque Country	0.20	46.76	69.8	2429	169.44	2.58
Valencia	0.18	44.16	34.2	1767	60.39	1.31
Ceuta	0.19	36.56	76.6	1691	138.51	2.05
Melilla	0.22	37.49	77.9	1672	121.09	1.91
Spain	0.18	43.29	44.6	1873	83.62	1.62

CC. AA., autonomous community; MD, musculoskeletal disease; TD, temporary disability; GDP, gross domestic product. In bold the average for Spain is represented.

is responsibility of the National Social Security Institute (INSS), or a mutual agreement, as a partner in the management company² being paid by the employer from payment day 4 to 15. The provision for days 1–3 depends on the type of affiliation and labor agreements. TD process starts and ends at the primary care physician level.

Although there are some studies,^{3,4} no information was found on the cost of TD due to MD or its variability by Region (CC. AA.) or payer. For this reason, we decided to perform this study aimed at estimating the annual cost of TD caused by MD in Spain and its variability between CC. AA. and payers.

Methodology

This was a descriptive study of cost estimation of TD caused by MD in Spain, using secondary data from INSS. The INSS provided a table for each Spanish province which consisted the number of TD processes, the number of total days of TD and the mean duration of the process, by sex and age of TD processes regarding common diseases in 2007. The INSS classifies a process as MD parting from an official evaluation as part of ICD-9-CM coding. In the absence of data on TD due to MD, the number of processes and their duration were estimated as the ratios of affiliation, incidence and duration in each other with respect to INSS⁵. To estimate costs, we considered the amount of the benefit and the days of TD paid by the INSS or mutual.^{2,6,7}

The additional part paid for by the employer varies with the type of collective agreement. Given the variability of the agreements, it was assumed that, on average, companies pay 80% of the employee's salary the first 3 days, completing what is paid for by the INSS or mutual to 80% from day 4 to 20, and even 90% from day 21 onwards. To estimate the costs by type of affiliation, we considered the proportion of workers belonging to each regime: General Regime (RG), Special Scheme for Self-Employed (RETA), Special Agricultural Self-paid Scheme, Special Agricultural Scheme paid by the employer, Home makers regime (REEH), Special Scheme for Coal Mining (REMC) and Special Scheme for Sea workers. The average daily INSS contribution base for the affiliate scheme was

adjusted for changes in salary by gender and CC. AA. Information on employed persons and GDP and for the CC. AA. was obtained from the National Statistics Institute. 9–11

Results

MDs were the leading cause of TD in Spain, producing 908 781 TD processes (18% of all processes), 39 342 857 lost work days (23% of days lost per TD) and a cost of 1702 million euros (23% of the cost of all TD I). TD processes of longer duration were caused by mental illness, which accounted for 11% of TD costs.

The average cost of an episode of TD due to MD was 1873 €. In all, 57% of the processes and 53% of the cost of TD due to MD occurred in women. However, the average cost of TD was lower in women than in men: 1746 € vs 2040 €.

Of the TD processes, 18% is caused by MD, but in Galicia this was 24%, while in Catalonia it was 10%. The average duration of an absence due to MD in Spain is 43 days, but varies between a maximum of 54 days in Asturias and a minimum of 35 days in La Rioja. The annual number of TD processes due to MD per 1000 employed persons was 44.6 in Spain, ranging from a high of 70 in the Basque Country, Navarra and Canarias (except Ceuta and Melilla) to a minimum of 28 in Catalonia. The mean cost of a TD process due to MD in Spain was $1873 \in$, with a maximum value in the Basque Country $(2429 \in)$ and a minimum in La Rioja $(1391 \in)$ (Table 1).

The average cost per TD due to MD per employed person in Spain was 83.6 \in ; the Basque Country had the highest (169 \in), while Murcia (54 \in) had the lowest cost per employee. The cost of TD due to MD in Spain represented 1.62 \in per 1000 \in of GDP. The Basque Country (2.58 \in) had the highest TD costs due to MD per 1000 \in of GDP and Catalonia (0.98 \in), the lowest (Table 1).

Schemes with a higher proportion of unionized workers are the RG (76.87%) and RETA (16.22%), and consequently are schemes in which the higher costs occur in absolute terms: 88% (1 .498 million) of costs occurred in the RG members, followed by those from RETA (8.5% of costs). Members of the REMC had the lowest absolute cost, but a higher cost per member (0.10% of costs and 0.05% of

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