Sickness absence for upper limb disorders in a French company.
Kayigan Wilson D’Almeida, Catherine Godard, Annette Leclerc, Gérard Lahon

To cite this version:

HAL Id: inserm-00309077
http://www.hal.inserm.fr/inserm-00309077
Submitted on 5 Aug 2009

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
**Sickness absence for upper limb disorders in a French company**

D'Almeida Kayigan Wilson 1 2*, Godard Catherine 2, Leclerc Annette 1, Lahon Gérard 2

1 Santé publique et épidémiologie des déterminants professionnels et sociaux de la santé INSERM : U687, IFR69, Université Paris Sud - Paris XI, Université de Versailles-Saint Quentin en Yvelines, Hôpital Paul Brousse 16, av Paul Vaillant Couturier 94807 VILLEJUIF.FR

2 Service Général de Médecine de Contrôle EDF, 22-28 rue de Joubert, 75009 Paris,FR

* Correspondence should be adressed to: Kayigan Wilson D'Almeida <kayialmeida@hotmail.com>

**MESH Keywords** Adult; Female; France; epidemiology; Humans; Male; Middle Aged; Musculoskeletal Diseases; epidemiology; Occupational Diseases; epidemiology; Shoulder Impingement Syndrome; epidemiology; Sick Leave; statistics & numerical data; Socioeconomic Factors; Upper Extremity; Young Adult

**INTRODUCTION**

Musculoskeletal disorders (MSDs) are an important public health issue because of their socio-economic consequences.[1–4]. In recent decades, research have helped to improve epidemiological knowledge and management of MSDs, particularly of the upper limb (MSDUL).

Less is known however about their impact on sick leave in industry. Studies focusing on workers compensation include only a portion of workers [5], because sick leave without claims for compensation for work-related injuries is frequent in countries such as France, where workers are compensated for disability leave regardless of whether the health problem is work-related.

Our objectives were to describe the sickness absence episodes for MSDUL in the French national power and gas company -EDF and Gaz de France (EDF-GDF)- and to study the associations with age, gender, and socio-economic status.

**METHODS**

**Study population**

The study population consisted of about 140 000 workers from EDF-GDF. EDF-GDF has its own medical insurance system handled by a department called Service Général de Médecine de Contrôle (SGMC). A specificity of this medical system is compulsory verification of any sick time off. All employees with sick leave must see a physician of SGMC's medical department, who codes diagnoses according to a simplified version of the International Classification of Diseases of the World Health Organization. The information is then recorded in an epidemiology registry. The items available in that database include absences with diagnosis and duration, and the worker's profile (age, gender, occupation, industrial sector).

**Data collection and methods**

The database of sick leave from January 2000 to December 2004 was reviewed to identify the absences that might be due to MSDUL. Long-term sick leave (one year or more) were excluded as available data suggested that an absence for MSDUL would rarely be so long. We anticipated that MSDULs would be coded as disease of the locomotor system, aponeuroses and tendons; arthroses or diseases of the nervous system not due to alcohol. A preliminary selection of these categories found 21 890 sickness absence episodes possibly due to MSDUL. For each, a questionnaire was sent to the company physician, who checked whether it was a MSDUL and coded the diagnoses according to a list derived from a European consensus [6]. Finally, 5543 sickness absence episodes were classified as MSDUL.

Annual incidence rates for sick leave due to MSDUL were calculated by gender, age, diagnosis, and socio-economic status (SES) coded according to the French classification [7]. The number of workers with at least one absence due to MSDUL was divided by the number of full-time equivalent workers aged 20–59 years in the corresponding category. Incidence rates according to SES were calculated only for 2004 since this information was not available for the other years.

The number of work days lost per diagnosis was calculated.

Differences in rates were tested using a chi square test. P-values below 0.05 were considered statistically significant throughout the analysis.

This study was made in accordance with ethical requirements for epidemiologic research in France.

**RESULTS**

Among the 5543 sickness absence episodes, rotator cuff syndrome was diagnosed most frequently, accounting for 31% of absences (Table 1). Other common diagnoses were carpal tunnel syndrome (16%), epicondylitis (14%), and neck MSD (11%). Less frequent
The most common diagnoses of MSDUL in sick leaves were rotator cuff syndrome, carpal tunnel syndrome, epicondylitis and neck MSD. Sick leave due to MSDUL was associated with socio-economic status, women had a higher risk and the incidence increased with age. Absenteeism could be a useful indicator in the prevention of MSDUL, because it identifies the most disabling diagnoses as shoulder disorders and shows that older workers, especially manual and office workers, are those most at risk.

CONCLUSION

The study’s weaknesses are its retrospective design and the absence of a standardized clinical examination. Moreover, the shortest absence episodes were not always seen by the physicians (in 2006, 28% of episodes ≤ 7 days were not checked). Nonetheless, probably few sick leaves due to MSDUL were missed, since their duration was usually longer (Table 1).

The higher incidence of sickness absence episodes for MSDUL among women, the increase with age and the association with SES are consistent with the literature.[8,9] The annual incidence of sick leave due to MSDUL was about 6 per 1000 person-years. This result cannot be compared to another one since there is no publication reporting incidence of sick leave for MSDUL [10]. Absenteeism cannot be a surrogate for disease burden or incidence as it depends on attitudes to sick leave, which has many determinants; suffering from MSDUL does not necessarily induce sick leave. Nevertheless, absenteeism is one dimension of the severity of the disorders, a useful indicator for the company and an indicator of the societal cost.

DISCUSSION

The study’s weaknesses are its retrospective design and the absence of a standardized clinical examination. Moreover, the shortest absence episodes were not always seen by the physicians (in 2006, 28% of episodes ≤ 7 days were not checked). Nonetheless, probably few sick leaves due to MSDUL were missed, since their duration was usually longer (Table 1).

The higher incidence of sickness absence episodes for MSDUL among women, the increase with age and the association with SES are consistent with the literature.[8,9] The annual incidence of sick leave due to MSDUL was about 6 per 1000 person-years. This result cannot be compared to another one since there is no publication reporting incidence of sick leave for MSDUL [10]. Absenteeism cannot be a surrogate for disease burden or incidence as it depends on attitudes to sick leave, which has many determinants; suffering from MSDUL does not necessarily induce sick leave. Nevertheless, absenteeism is one dimension of the severity of the disorders, a useful indicator for the company and an indicator of the societal cost.

CONCLUSION

The most common diagnoses of MSDUL in sick leaves were rotator cuff syndrome, carpal tunnel syndrome, epicondylitis and neck MSD. Sick leave due to MSDUL was associated with socio-economic status, women had a higher risk and the incidence increased with age. Absenteeism could be a useful indicator in the prevention of MSDUL, because it identifies the most disabling diagnoses as shoulder disorders and shows that older workers, especially manual and office workers, are those most at risk.

References:

Figure 1
Annual incidence of sickness absence episodes due to MSDUL according to the socio-economic status (incidence per 1000 person-years, year 2004)
Table 1

Diagnoses associated with sickness absence for MSDUL\(^1\) and average duration of the sickness absences in the period [2000–2004]

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of sickness absences</th>
<th>Average duration of a sickness absence (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotator cuff syndrome</td>
<td>1722</td>
<td>30.77</td>
</tr>
<tr>
<td>Carpal tunnel syndrome</td>
<td>866</td>
<td>36.74</td>
</tr>
<tr>
<td>Epicondilytis</td>
<td>795</td>
<td>20.83</td>
</tr>
<tr>
<td>Neck musculoskeletal disorders</td>
<td>598</td>
<td>16.37</td>
</tr>
<tr>
<td>Extensor/tensor tendonitis and tenosynovitis</td>
<td>452</td>
<td>23.44</td>
</tr>
<tr>
<td>Elbow, wrist and fingers arthrosis</td>
<td>173</td>
<td>31.86</td>
</tr>
<tr>
<td>Cubital tunnel syndrome</td>
<td>94</td>
<td>42.68</td>
</tr>
<tr>
<td>De Quervain's disease</td>
<td>61</td>
<td>19.82</td>
</tr>
<tr>
<td>Guyon's canal syndrome</td>
<td>31</td>
<td>55.30</td>
</tr>
<tr>
<td>Radial tunnel syndrome</td>
<td>22</td>
<td>27.81</td>
</tr>
<tr>
<td>Neuropathy caused by vibrations</td>
<td>9</td>
<td>39.67</td>
</tr>
</tbody>
</table>

\(^1\) limited to the diagnoses proposed in the questionnaire