Work-related sickness absences and mandatory occupational health surveillance

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**Background**
To prevent work-related ill-health, selection of workers for mandatory occupational health surveillance should be based on the actual risk of work-related disease.

**Aims**
(i) To determine the proportion of sick-listed workers with self-reported work-related health problems not under mandatory occupational health surveillance. (ii) To determine whether self-reported work-related sickness absences occur more frequently among workers under mandatory occupational health surveillance or among workers not under mandatory surveillance.

**Methods**
Questionnaire-based descriptive study. The setting was the work inability assessment consultation of occupational physicians in Belgium. Patients' inclusion criteria were employee, age 18–50 and 1–12 months of sickness absence. Workers with pregnancy-related sicknesses were excluded. We cross-tabulated the questionnaire results, noting (i) the workers' perception of the work relatedness of their sickness absence and (ii) workers' knowledge of the occupational physician, which was assumed to reflect workers who had undergone mandatory occupational health surveillance.

**Results**
There were 1564 participants. Thirty-seven per cent of workers with self-reported work-related sickness absences were not under mandatory occupational health surveillance. Work-related sickness absences occurred as frequently among workers under mandatory occupational surveillance as among those not under mandatory occupational health surveillance (34 and 35%, respectively; \(P = 0.80\)).

**Conclusion**
To prevent work-related illnesses and sickness absences, a revision of the mandatory occupational health surveillance system is indicated.

**Key words**
Occupational health service; occupational physician; sickness absence; work-related symptoms.

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**Introduction**

In Belgium, workers are divided into two groups depending on the presence or absence of a well-described occupational risk. The law often defines occupational diseases as diseases that entitle patients to occupational disease benefits. Workers' risks for occupational diseases initially determined the mandatory provision of occupational health services. More recently, however, newly identified occupational risks have led to adaptations in occupational health surveillance, broadening the mandatory surveillance of workers. In Belgium, among others, mandatory surveillance is required for students, workers in safety functions, personnel working ≥4 h a day with computers and workers engaged in repetitive movements, shift work and manual handling.

Mandatory surveillance includes contact with an occupational physician who plays a preventive role in the surveillance of health and work ability. Theoretically, all workers can request a consultation with an occupational physician, but only workers with well-described occupational risks routinely undergo regular mandatory occupational health surveillance, which includes pre-employment examination, periodic medical examination and work re-entrance examination after a 4-week sickness absence period. All other workers are not subjected to mandatory occupational health surveillance, and thus rarely, if at all, have contact with an occupational physician.

Occupational risks have changed in the last 50 years. The incidence of traditional occupational diseases such as pneumoconiosis, lead poisoning and hearing loss has decreased in developed countries. Simultaneously, however, the incidence of work-related health problems has increased [1].

Work-related health problems can have various definitions [2]. Work-related health problems usually include the more traditional occupational diseases and work accidents. However, there are other work-related illnesses...
that may not entitle patients to occupational disease or accident benefits. Examples include low back pain among cleaning workers, burn out among managing personnel, psychosocial disorders caused by conflicts at the workplace and musculoskeletal health problems due to inappropriate ergonomic work situations. With increasing incidences of work-related health problems, increases in related sickness absences are noted.

The aim of this study was to address the issue of mandatory occupational health surveillance among employees with sickness absence. Our main research question was: What proportion of sick-listed workers with self-reported work-related health problems is not under mandatory occupational health surveillance? Our second research question was: Do self-reported work-related sickness absences occur more frequently among workers under mandatory occupational health surveillance or among those not under mandatory surveillance?

Methods

Our cross-sectional descriptive study was part of a larger project on improving communication between disability management physicians [3–5]. The study population consisted of patients under work inability surveillance by one of the 15 social insurance physicians from the Christian Sickness Fund in three Belgian regions. Workers’ inclusion criteria were employee, age 18–50 and 1–12 months of sickness absence. The only exclusion criterion was pregnancy-related sickness absence. From 1 October 2001 to 1 July 2002, all workers fulfilling these criteria were selected.

Participants were asked to complete a standardized questionnaire on health problems and sickness absence at the time of study enrolment [6]. Results from this questionnaire provided the basis for the current cross-sectional study.

One question was used to evaluate the work relatedness of the worker’s sickness absence: ‘To what extent is your current health problem caused by work conditions?’ Possible responses were ‘completely’, ‘much’, ‘a little’ and ‘not at all’. The answers ‘completely’ and ‘much’ indicated that ‘the sickness absence related to working conditions’. The answers ‘a little’ and ‘not at all’ indicated the opposite.

Another question was used to evaluate mandatory occupational health surveillance: ‘How do you evaluate your occupational physician?’ Answer possibilities were ‘positive’, ‘negative’ and ‘I don’t know the occupational physician’ [7]. The answers ‘positive’ and ‘negative’ indicated that the worker ‘had contact with an occupational physician’, which implied that the worker had undergone mandatory occupational health surveillance. The answer ‘I don’t know the occupational physician’ indicated that the worker had not undergone mandatory occupational health surveillance.

To address our two research questions, we cross-tabulated the workers’ answers on the work relatedness of their sickness absence and the presence or absence of mandatory occupational health surveillance.

Questionnaire results on gender, age, diagnosis, work hours, education, mental well-being (General Health Questionnaire-12), pain (Chronic Pain Questionnaire) and job characteristics (Job Content Questionnaire) were included as potential confounding variables (n = 56) in regression models. Data were entered into SPSS 10. For all analyses, P < 0.05 was considered statistically significant. We applied chi-square statistics and step-wise regression analysis.

An ethical committee approved the study protocol.

Results

A total of 1883 patients were asked to participate in the larger project on improving communication between disability management physicians. The data of 16 (0.8%) patients were excluded from analysis because they did not meet inclusion and exclusion criteria, resulting in 1867 cases. Furthermore, 303 (16%) of 1867 patients refused to participate [6], leaving the data from 1564 workers on sick leave suitable for analysis. The mean age of the 1564 participants was 38 years (SD = 7.7; median = 39; range: 18–50). Their mean sickness absence duration at study enrolment was 79 days (SD = 25.2; median = 74; range: 27–225). Half of the participants were males. Sixty-one per cent of the participants mainly had an orthopaedic problem, 20% had a mental problem and 19% had another pathology (mainly treated by an internist). Questionnaire results were available for 96% (1495 of 1564) of workers who participated in the above-described larger project: 65 workers did not return the questionnaire and 4 workers returned blank questionnaires. The response rate to the questions of interest was high: 92% (1432 of 1564) of workers answered the question on the work relatedness of their health problem; 87% (1354 of 1564) completed the question regarding the evaluation of the occupational physician and 85% (1331 of 1564) answered both questions.

Raw outcome results of the self-reported work relatedness of the workers’ health problems showed that 30% (428 of 1432) and 36% (521 of 1432), respectively, of workers attributed their sickness absence a little or not at all to their work conditions. Fifteen per cent (209 of 1433) and 19% (274 of 1433), respectively, of workers attributed their sickness absence much or completely to their work conditions. So, 34% (15 + 19%) of workers reported that their work-related health problem resulted in sickness absence exceeding 1 month (Table 1).

Raw outcome results for the occupational physician evaluation revealed that 37% (501 of 1354) of workers did not know the occupational physician. Fifty-five per
These workers (in our study, under mandatory occupational health surveillance, with self-reported work-related health problems) did not benefit from follow-ups or interventions by an occupational physician. Our principal finding is that 37% of sick-listed workers assessed the occupational physician positively, whereas 8% (101) assessed the occupational physician negatively. So, 63% (55 + 8%) had contact with the occupational physician and thus supposedly had undergone mandatory occupational health surveillance (Table 1).

Table 1 presents cross-tabulation data on the work-relatedness of sickness absence and mandatory occupational health surveillance. In our study population, 37% (171 of 456) of workers with self-reported work-related sickness absences were not under mandatory occupational health surveillance. Work-related sickness absence occurred as frequently among workers under mandatory occupational surveillance as those not under mandatory occupational health surveillance (34 and 35%, respectively; \( P = 0.80 \)). The regression analyses showed no statistically significant results.

Discussion

Our principal finding is that 37% of sick-listed workers with self-reported work-related health problems did not undergo mandatory occupational health surveillance. These workers (in our study, \( n = 171 \)) miss the possible benefit from follow-ups or interventions by an occupational physician.

Another finding is that the proportion of these workers under mandatory occupational health surveillance and those not under mandatory occupational health surveillance was not statistically different. This finding illustrates that work-related sickness absences have no boundaries and occur in all types of workers, regardless of whether or not they are subject to mandatory occupational health surveillance.

One weakness of this study is that our data on the incidence of work-related sickness absences were obtained through self-reports from workers. The data may be influenced by worker attitudes and expectations. We cannot expect workers to objectively correlate their working conditions to specific diseases. We cannot exclude the possibility that sick-listed workers are more likely to scrutinize their working conditions than healthy workers. We feel, however, that self-reports from workers are good indicators of work-related health problems for two reasons. First, in our larger parent project, in 74% of cases, workers and insurance physicians agreed that the workers’ health problem was work related (A.K. Mortelmans, unpublished data). A literature search revealed similar agreement percentages in The Netherlands [8] and Norway [9]. Second, our reported incidence of work-related health problems with sickness absence agrees well with those described in international reports [8,10].

Another possible critique point is our assumption that ‘not knowing the identity of the occupational physician’ means ‘no access to mandatory occupational health surveillance’. The official Belgian reports on the mandatory provision of occupational health services showed that 38% of Belgian workers had no mandatory occupational health surveillance in the study period 2000–02 [11]. This observation agrees well with our questionnaire results that 37% of workers surveyed did not know the occupational physician.

Finally, the data cannot be claimed to be widely representative as the study was conducted in a well-described patient population in Belgium.

The main study strengths are the underlying idea that occupational health may benefit workers with work-related diseases and the two pertinent research questions. Furthermore, mandatory occupational health surveillance has received much less attention in the scientific literature than in the political field [12]. The current study contributes to closing this scientific gap.

The implication for policy makers in Belgium is that—regarding the prevention of work-related sickness absence—the current system for categorizing workers for mandatory occupational health surveillance may need revision. Criteria other than correlating sickness absence with work conditions may be used to consider whether a worker is in need of mandatory occupational health surveillance. A number of characteristics make a disease suitable for a surveillance programme, not simply the presence of a disease itself. We feel, however, that the work relatedness of a health problem resulting in sickness absence is a very important reason for occupational health surveillance [13]. Workers’ work-related symptoms can serve as an indicator of potential, but preventable, problems at work [14].

The main implication for occupational health workers is that a large preventive potential is available [15].

<table>
<thead>
<tr>
<th>Mandatory occupational health surveillance, ( n = 171 )</th>
<th>( \text{Yes} )</th>
<th>( \text{No} )</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>285 (34) (63)</td>
<td>553 (66) (63)</td>
<td>838 (100) (63)</td>
</tr>
<tr>
<td>No</td>
<td>171 (35) (37)</td>
<td>322 (65) (37)</td>
<td>493 (100) (37)</td>
</tr>
<tr>
<td>Total</td>
<td>456 (34) (100)</td>
<td>875 (66) (100)</td>
<td>1331 (100) (100)</td>
</tr>
</tbody>
</table>

Chi-square test; \( P = 0.80 \).
occupational physician can address the adaptable occupational component causing work-related sickness absences [16]. As a result, work-related sickness absences can be prevented, shortened or dissolved [17]. Disagreement between the worker and other parties on the relationship between sickness absence and working conditions may be an opportunity for the occupational physician to discuss the perception and its possible underlying occupational problems [18].

In conclusion, a substantial proportion of workers with work-related sickness absences is not covered by mandatory occupational health surveillance.

**Key points**

- To prevent work-related illnesses and sickness absences, it is important that the decision as to which workers should have mandatory occupational health surveillance is based on the actual risk of work-related illness.
- In Belgium, the current system of mandatory occupational health denies one-third of workers with self-reported work-related sickness absences lasting over 1 month.
- Tackling work-related diseases and associated sickness absences may require revision of the methods and contents of occupational health surveillance.

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**Conflicts of interest**

None declared.

**References**