Long-term sickness absence in an NHS teaching hospital

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This study was carried out to investigate the incidence and causes of long-term sickness absence in an NHS teaching hospital and to explore the role of the Occupational Health Service (OHS) in the management of long-term absence. Examination of attendance records of non-medical staff revealed an annual loss of 20,772 days due to spells of absence lasting 30 calendar days or more, (incidence 0.0528/WTE employees/year, prevalence 5.53 days long-term absence/WTE employee/year). A self-administered questionnaire was sent to 190 staff who had taken long-term absence during the previous 12 months. The response rate was 75%. Musculoskeletal problems and back pain in particular were the main reasons for absence, accounting for 30% of total days lost. Work-related illness made an important contribution with a third of those with musculoskeletal and a quarter of those with mental illness attributing the reason for their absence to work. Many staff reported non-medical factors such as delays in waiting for treatment and anxiety about return to work which prevented them from returning to work sooner. Only a minority of staff had attended OHS and referral was often delayed. OHS may have an important role to play in both prevention and management of long-term absence by early assessment and intervention such as expediting treatment or arranging rehabilitation programmes. However in order to be effective, a clear policy to encourage early and consistent referral is required.

Key words: Absenteeism; hospital personnel; OHS.

INTRODUCTION

The NHS is one of the largest employers in Europe, with over a million staff, yet there are no national statistics relating to sickness absence, despite the reported size of the problem. As the healthcare industry is very labour-intensive, high sickness absence levels have a negative impact not only on quality and continuity of patient care but also on staff morale. Efficient management of sickness absence is therefore not only important from the economic point of view but also provides an opportunity for the NHS to demonstrate its interest in the health and welfare of its own workforce.

The assessment of employees in relation to sickness absence is one of the most common reasons for referral to the Occupational Health Service (OHS). In the case of long-term absence, where there is usually an underlying medical condition, as well as possibly other non-medical factors delaying the return to work, effective use of OHS might be of considerable benefit not only to employees by facilitating earlier return to fully paid employment but also to the employer by minimizing the disruption and cost of prolonged absence.

A review of the literature reveals few publications on sickness absence in hospital personnel. As might be expected, higher levels of absence have been found in female hospital staff than males, even those working in the same occupation but there is some conflict of opinion regarding full and part time staff.

The negative correlation between staff grade and absence levels, previously described in other occupations has also been reported among hospital staff. Unskilled staff such as laundry workers and domestics have higher levels of both short and long-term absence than nursing and medical staff, and there is even disparity between different grades of nurses. Levels of absence have also been found to vary

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enormously between different hospitals and health authorities. Musculoskeletal disorders are one of the main reasons for absence in hospital employees. Back injury as a result of patient handling is a major occupational hazard for nursing staff and is associated with a high level of work-related ill health and sickness absence.

The local Health Board had provided occupational health services for its staff since 1978 and at the time of this study the service provided to the teaching hospital comprised two full-time occupational health nursing advisers and four sessions of medical time, provided by a consultant and two partially qualified occupational physicians. The service was run by a nurse manager. In the event of long-term absence the hospital policy recommended referral to OHS after 30 days if return to work was not imminent. There was also a well-established rehabilitation policy to assist employees who had been absent, particularly on a long-term basis, to return to full duties sooner than might otherwise have been possible, by offering a phased return to work on restricted hours or duties over a specified time period. Such rehabilitation programmes were normally arranged following joint discussions with employee, line manager, personnel and Occupational Health.

Despite these policies it was apparent to those working in the department that, while some employees were being referred promptly, there were many others who were being referred late or not at all. This study was carried out to investigate the extent and reasons for long-term absence in hospital staff and to explore the role of the OHS.

METHODS

Study design

Permission was obtained from the Director of Personnel, and the study protocol was approved by the local ethics committee and the hospital Joint Staff Consultative Committee. Because of the potentially sensitive nature of the survey, a retrospective study was carried out to prevent staff misinterpreting the questionnaire as an investigation into recent episodes of absence. The time period was 12 months prior to distribution of the questionnaire, so that most individuals would be likely to have recovered from their illness and be back at work. A 12 month study period was also chosen to minimize recall bias and to allow for seasonal variation in sickness absence.

Selection of subjects

The study population consisted of all Health Board employees recorded as employed at the teaching hospital between 1991 and 1992. Medical staff were excluded from the study because of their typically low absence rate and the fact that they are rarely referred to the Occupational Health Service. During the 12 month study period the total number of people employed in the hospital was 3,751 whole time equivalents (WTE). Unfortunately because of subsequent organizational changes occurring during the introduction of NHS Trust status it was impossible to determine the actual number of staff at that time but an estimate based on the Health Board Annual Review suggested that this was the equivalent of approximately 4,800 staff.

From the study population all employees who had had at least one spell of continuous absence lasting 30 calendar days or more, commencing during the study period, were selected for more detailed study. Any additional shorter spells of absence were excluded.

Data collection

The managers of all hospital departments were asked to provide details of all their staff who fulfilled the study criteria, with the dates and certified reasons for long-term absence. The hospital did not have computerized sickness absence records at that time. Two hundred and fourteen subjects were identified who fulfilled the criteria; however complete data were unavailable for 24 who were no longer employed in the hospital. The results were therefore based on the data for 190 subjects.

Questionnaire

A self-administered questionnaire was distributed to the 190 subjects. It was designed to obtain basic personal details and further enquiry was made into reasons for absence and other factors which might have prolonged time off work. Subjects were also asked if they had attended OHS and whether they found it beneficial. In order to maximize the response rate, the questionnaire was sent with an accompanying letter stressing the aims of the survey and assuring complete confidentiality.

Occupational health records

Where subjects indicated they had attended OHS, details such as timing and mode of referral, action taken by OHS and whether there were any avoidable delays in the management of the case were extracted from their records. The eventual outcome in terms of successful return to work or not was noted.

Data analysis

Absence data obtained through managers were used to calculate indices of frequency and severity of long-term absence. Data were entered onto a spreadsheet, Microsoft Excel, and summary statistics calculated for the number of days and spells of absence. Because of the highly skewed nature of the frequency distribution...
of sickness absence, the median was used as a more appropriate measure of central tendency than the mean. The questionnaire data were analyzed descriptively.

RESULTS

During the 12 month period from 1991–92, 190 employees commenced 198 spells of long-term sickness absence, totalling 20,772 days. This gave an incidence of 0.0528 spells/WTE employees/year and a severity rate of 5.53 days of long-term absence/WTE employee/year. The median duration of each spell was 75 days (range 30–713). The certified reasons for absence were classified using ICD 9 and Table 1 shows the number of days and spells attributed to each diagnostic group. Musculoskeletal disorders were by far the most common reason for absence, accounting for 6,299, or 30% of the total number of lost working days. Further analysis of musculoskeletal disorders revealed that back pain was responsible for 42% of the total, affecting mainly those aged 35 years and over who were employed as nurses or ancillary workers. The duration of a spell of back pain ranged from 30–337 days with a mean of nearly 3 months. The category 'other injuries' ranked second, accounting for 2,695, or 13% of lost working days. Ancillary staff were most affected, and a quarter of accidents or injuries were recorded as work-related, ranging from muscular sprain to patient assault and contamination with infective material. Genitourinary problems and pregnancy-related illness were also significant reasons for absence in this predominantly female workforce. Questionnaires were completed by 143 members of staff, giving a response rate of 75%. The response varied with occupational status, higher rates being obtained from nursing, administrative and technical staff than from ancillary workers. Eighty-three per cent of responders were female and 55% worked full time. Table 2 shows the age, sex and occupation of responders. The 143 responders commenced 151 spells of long-term absence totalling 16,185 days. Duration of absence ranged from 30–713 days with a median of 79 days. In general the median duration of absence increased with age, and subjects aged 45 and over were also more likely to have taken more than one spell of absence. One hundred and forty responders elected to disclose the reason for their absence and in all except eight cases there was agreement with the diagnosis on their sickness certificate. Fifty-seven per cent of subjects had required hospital admission, usually for surgery. All of the genitourinary problems had required admission and hysterectomy was particularly common. Varicose vein surgery was the most common reason for admission for circulatory problems. Forty per cent of genitourinary, 30% of mental and 20% of musculoskeletal disorders were recurrences of a previous problem.

Further enquiry was made into the perceived effect of work on subjects' ill-health. Twenty four (17%) felt that work had caused their ill-health. This included 32% of those with musculoskeletal problems and 27% of those suffering from mental illness. Work was thought to have exacerbated the problem in 33%; 64% of musculoskeletal problems and 60% of mental illnesses. Overall, 94% of those with musculoskeletal problems, 89% of those with mental illness and 40% of those injured thought that work had either caused their ill-health or made it worse. Ancillary and maintenance workers were slightly more likely to blame work than other occupational groups. Table 3 shows the perceived effect of work for different diagnostic groups.

The questionnaire also tried to identify factors prolonging absence where intervention by OHS might have facilitated an earlier return to work. These included delays in obtaining hospital appointments,

Table 1. Days and spells of absence by diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of spells</th>
<th>Number of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal</td>
<td>54</td>
<td>6,299</td>
</tr>
<tr>
<td>Other injury</td>
<td>24</td>
<td>2,695</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>28</td>
<td>2,329</td>
</tr>
<tr>
<td>Circulatory</td>
<td>13</td>
<td>1,894</td>
</tr>
<tr>
<td>Ill-defined</td>
<td>14</td>
<td>1,663</td>
</tr>
<tr>
<td>Mental</td>
<td>15</td>
<td>1,538</td>
</tr>
<tr>
<td>Pregnancy-related</td>
<td>12</td>
<td>976</td>
</tr>
<tr>
<td>Other diagnoses</td>
<td>38</td>
<td>3,276</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>20,772</td>
</tr>
</tbody>
</table>

Table 2. Number of responders by age, gender and occupation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>&lt;25</th>
<th>25–34</th>
<th>35–44</th>
<th>45–54</th>
<th>55–64</th>
<th>65–69</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>Admin/clerical</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Ancillary</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Nursing</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>23</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Maintenance</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prof/technical</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>36</td>
<td>32</td>
<td>33</td>
<td>35</td>
<td>1</td>
</tr>
</tbody>
</table>
Of those who attended OHS, 80% of those who had been absent between 1 and 3 months successfully returned to work but this figure dropped to only 50% of those off 6–9 months.

Analysis of employment status of all subjects immediately following the spell of long-term absence showed that overall 85% of staff returned to their previous duties, 8.5% were medically retired or had their employment terminated on health grounds and the remainder left. Occupation and diagnosis did not appear to affect outcome after a spell of long-term absence, but older staff were more likely to be medically retired. Further analysis of employment status 12–24 months later, at the time of the questionnaire, demonstrated that 12 of those who had been successfully rehabilitated were still working in the same post. Of the other four, two had retired, one was working in another post and one was not working by choice.

**Table 3. Diagnosis and perceived effect of work**

<table>
<thead>
<tr>
<th>Diagnosis (ICD 9)</th>
<th>Effect of work</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caused</td>
<td>Worse</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Other injury</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>24 (17%)</td>
<td>47 (33%)</td>
</tr>
</tbody>
</table>

* Eight percent did not answer this question.

waiting for test results, worry about returning to work and family problems. Those with musculoskeletal problems experienced the greatest delays, especially in obtaining initial out-patient appointments, admission to hospital and physiotherapy. In addition, one in six subjects reported anxiety about returning to work and this was particularly the case in those suffering from mental ill-health.

Only 33 of the responders had attended OHS. Attenders and non-attenders were compared with respect to occupation and diagnosis and not found to be notably different, although the median duration of absence was longer in attenders, 81 days (range 31–713), as opposed to 69 days (range 30–581) in non-attenders. The median duration of absence prior to referral, usually by a manager, was 81 days, considerably longer than the 4-week period recommended by hospital policy, and in one case an individual was off work for 343 days before referral.

Actions taken by the OHS included expediting hospital and physiotherapy appointments, workplace visits and joint meetings with managers and personnel to discuss solutions to individual cases including arrangements for rehabilitation. The hospital Rehabilitation Policy allowed individuals to return to work on structured programmes without any financial disadvantage. Programmes were tailored for each case and usually took the form of a gradual increase in hours, duties and responsibilities over a specified time period, during which progress was monitored by both line managers and OHS.

Rehabilitation programmes were arranged for 20 (59%) of those who attended and the majority took place within the first 6 months of absence. Thirty-six per cent were medically retired or had employment terminated on ill-health grounds, while the remainder either returned straight to work or left. Of the 20 rehabilitation programmes which were arranged through OHS 16 members of staff eventually successfully returned to their previous duties. The four rehabilitation programmes which were unsuccessful included two cases of chronic fatigue syndrome, one case of backache and one chronic respiratory problem, all of whom had been off work for between 4 and 10 months. Overall the likelihood of return to previous employment decreased with increasing duration of absence. Of those who attended OHS, 80% of those who had been absent between 1 and 3 months successfully returned to work but this figure dropped to only 50% of those off 6–9 months.

Analysis of employment status of all subjects immediately following the spell of long-term absence showed that overall 85% of staff returned to their previous duties, 8.5% were medically retired or had their employment terminated on health grounds and the remainder left. Occupation and diagnosis did not appear to affect outcome after a spell of long-term absence, but older staff were more likely to be medically retired. Further analysis of employment status 12–24 months later, at the time of the questionnaire, demonstrated that 12 of those who had been successfully rehabilitated were still working in the same post. Of the other four, two had retired, one was working in another post and one was not working by choice.

**DISCUSSION**

This study found that long-term absence alone accounted for the loss of a significant number of days, the equivalent of having 57 full-time staff off for a whole year. Comparison with other studies was difficult because of the recognized problem of lack of collection of standardized absence data by the NHS. Earlier studies were limited in that they relied on indices such as lost-time percentage and average number of spells per employee, which provide information on the extent of the problem but are subject to distortion by periods of long-term sickness. For a full evaluation it is necessary to determine the distribution and duration of absence amongst groups of employees, as has been done in later studies. It was only possible to compare the incidence rate in this study, favourably, with rates calculated from figures for Northallerton and SW Durham Health Authorities (incidence rates 0.085 days/employee/year and 0.137 days/employee/year respectively). However regional disparity in absence levels has been previously described and cannot be solely explained by differences in the underlying morbidity of the general population in each area. Various social and organizational factors including job satisfaction are likely to be involved.

Interpretation of these results must take into account several limitations of the study design. While most other studies consider total sickness absence, this study was confined to long-term absence and did not include any additional spells of short duration which subjects may also have taken during the study period. Further, because of the lack of computerized data, duration of absence was calculated in calendar, rather than working days. It was not possible to determine the actual numbers of staff employed in each grade, so whole time equivalents were used instead. These drawbacks made it impossible to determine absence frequency rates for different categories of staff, and may have led to an overestimate of the true incidence. In contrast, another possible source of bias was missing data for a number...
of long-term absentees, many of whom were reported as having suffered ill-health, and who were no longer in hospital employment. As 'leavers' have been shown to have higher absence levels, it is possible some absence was missed.

The finding that the predominant reason for absence was musculoskeletal problems was consistent with other studies. Back pain was the single most common reason for a spell of long-term absence and accounted for almost 15% of the total number of days lost due to long-term sickness. Nursing staff appear to be particularly at risk of developing backache in the course of their work and this is generally attributed to the manual handling activities their job entails. The incidence of back pain has been reported to be higher among nurses and associated with high levels of sickness absence.

A recent report has suggested that nursing staff have a higher than average incidence of self-reported work-related ill health. The present study found that over one in six of responders attributed their illness to work. Work was subjectively implicated in the causation of a third of musculoskeletal and a quarter of mental disorders, approximately half the level suggested by the Labour Force Survey. In large part this will have been due to the present survey being confined to long-term absence, whereas the LFS did not consider sickness absence, but rather the presence of ill health attributed to work. Interestingly, work was not perceived to be a contributory factor by those suffering from genitourinary disorders, many of whom had undergone surgery for prolapse. An increased risk of prolapse in nursing assistants has been attributed to heavy lifting at work by Jorgenson.

Although the majority of subjects reported no identifiable delays in returning to work, those with musculoskeletal problems, in particular, felt that their absence had been prolonged by unnecessary delays in receiving out-patient appointments, physiotherapy or admission to hospital. This is consistent with previous findings. A formal arrangement with hospital departments such as orthopaedics and physiotherapy, whereby staff could be seen promptly, could potentially considerably reduce sickness absence and prove cost-effective.

Interestingly, a significant number of staff reported anxiety about returning to work. This may have been due to doubts about physical capability of carrying out patient handling and other manual tasks but was especially prevalent in those suffering from mental disorders, perhaps not surprisingly as the majority believed that work had either caused their ill health or made it worse. This anxiety is likely to be an important factor in prolonging sickness absence.

Evaluation of the role of OHS in this study was difficult as the department was clearly under-utilized at the time, and referral often considerably delayed. The reasons for so few referrals are unclear and demonstrate a need for earlier and more consistent referral of long-term absentees. Because of the low attendance rate and perhaps the selection of 'problem cases' for referral it was difficult to evaluate the rehabilitation programmes which were devised for 50% of attenders. Most programmes took place within the first 6 months of absence and were successful in 75% of cases. While the majority of those attending OHS successfully returned to work, this became less likely with increasing duration of absence, as has been found previously, and with increasing age.

The OHS could have a potentially important role to play in the management of long-term absence, in particular where there may be treatment delays or anxiety about returning to work, which might be amenable to intervention. Early referral to OHS allows a full assessment of functional capabilities, the identification of these non-medical factors, and an opportunity to facilitate earlier return to work by expediting treatment, providing support or arranging rehabilitation at an appropriate stage in recovery to ease the transition back to normal work and responsibilities. Inevitably there will be some members of staff who will be unable to return to their previous post because of ongoing health problems and in these cases referral to OHS allows an early decision to be made regarding redeployment or possible ill health retirement. However, in order to provide an efficient and potentially cost-effective service there needs to be a clear policy encouraging earlier and more consistent referral of absentees.

Following this study the Trust established a joint working group with representatives from staff and management to look at the management of sickness absence in general. A new attendance management policy was introduced recommending staff interview after all absences, and early intervention in the case of absences of more than 30 consecutive calendar days, including referral to Occupational Health at this stage. All managers received training on the new policy, including a session on the role of Occupational Health, and practical problem-solving sessions involving the staff representatives. A welfare officer was appointed whose role was to make contact with long-term absentees, visiting them at home if necessary. Other measures instigated related to improved methods of recording absence by line managers using a colour coded card, and by computerized payroll system. Monthly reports of sickness absence are now produced for each department, allowing problem areas to be highlighted and absences managed more effectively. The overall sickness absence rate is now regularly below 5%. Four years after this study the number of days lost due to long-term absence had dropped by 30% to 14,665.

This study has highlighted the shortage of publications on sickness absence in the NHS, despite the reported above average absence levels. The growth of occupational health provision to NHS employees in recent years should provide further opportunities for departments to evaluate the role of OHS in the management of sickness absence. In addition, as hospitals
develop computerized sickness records it should be possible to collect standardized absence data which would allow meaningful comparisons to be made not only between different departments and occupational groups but also between Hospital Trusts nationally, enabling further investigation into discrepancies in absence levels and the influence of social and organizational factors.

REFERENCES