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Reducing sickness absence in occupational settings

Jussi Vahtera,¹ Mika Kivimäki^{1,2}

Sickness absence is known to be an important cause of lost productivity. In the United States, for example, the total days lost due to sickness absence are estimated to represent 3–7% of all regularly scheduled work days.¹ Sickness absence is also a measure of the use of health services and increasingly is considered a measure of health. Obviously, some sick leave represents voluntary absenteeism not related to physical or mental illness, and some employees work while ill and record no absences. However, this subjective component is an unlikely source of major bias in longer sick leaves requiring physician examination. Records of such absences have been found to be a more powerful predictor of all-cause mortality than established self-reported health measures and various objective measures of specific physical illnesses and medical conditions. They are also a strong predictor of specific causes of death, such as cardiovascular disease, cancer, alcohol-related causes and suicide, and future disability retirement.^{2,3} Furthermore, among employees reporting poor health, low medically certified sickness absences have been found to be associated with subsequent improvement in health status.⁴

Given that sickness absence represents a major public health burden on employees, employers, the health care system and society as a whole, surprisingly little is known concerning the optimal occupational health intervention strategies for employees with a high risk of sickness absence. A number of published studies have focussed on methods of reducing sickness absence, but they are typically based on non-randomised study designs.⁵ Such data may be misleading due to selection bias and confounding. A well-known illustration of these problems relates to antioxidant vitamins. These vitamins have been associated with a

reduced risk of cardiovascular disease, cancer and all-cause mortality in several observational studies but have failed to show any protection against these disorders in well conducted randomised controlled trials (RCTs).⁶

Until now, only two RCTs aimed at reducing sickness absence within a high-risk group have been published. A Norwegian trial examined whether minimal postal intervention had any effect on the length of sick leave.⁷ The authors randomised consecutive newly sick-listed employees with musculoskeletal or mental disorders to intervention and control groups. Within the intervention group, sick-listed persons received a general information letter and a questionnaire when they had been absent for more than 14 days. The intervention did not show efficacy in reducing the mean length of sickness absence in the intervention group compared to controls in general, although a reduction was observed in subgroups with mental disorders, rheumatic disorders and arthritis. A Dutch trial evaluated the effectiveness of an occupational health intervention programme for workers at risk for early retirement.⁸ The participants were over 50 years of age and indicated that they would not be able to work up to their retirement. The intervention programme lasted 6 months, was conducted by an occupational physician, and comprised at least three consultations. Fewer employees retired early in the intervention group than in the control group, and the total average number of sick leave days in 2 years was lower in the intervention group than in the control group. However, 2 years after the randomised intervention, no differences between the two groups were found.

In this issue of *Occupational and Environmental Medicine*, the report by Taimela *et al* (see pages 236 and 242) makes an important contribution to the literature.⁹ This RCT evaluated the effectiveness of an occupational health intervention for employees at risk of sickness absence in 48 occupational health centres in Finland. Subjects with a high or intermediate risk of sickness absence were

detected by a questionnaire survey which distinguished those with self-assessed problems with working ability, pain, impairment due to musculoskeletal problems, sleeping problems, fatigue and depression from all other employees. The intervention in the high-risk group consisted of personal feedback from the health survey and an invitation to a consultation with occupational health services in order to construct an action plan and, if appropriate, referral to a further consultation by a specialist or psychologist. The intervention in the intermediate risk group was an invitation to call a phone advice centre. The employees in the control groups received care as usual. They could consult their occupational nurse or physician on request, but they were not invited for a consultation and did not receive feedback of their results. The primary outcome was sickness absence during a 12-month follow-up.

Taimela *et al* found a marked difference in the number of sickness absence days between the intervention arm and the usual care treatment arm. A combination of personal feedback, invitation to a consultation at occupational health services and possible referral to a further consultation was related to 11 absence days less per employee per year, a figure which is obviously of economic importance.⁹ Although the invitation to call a phone advice centre alone showed no effect, this study is important in at least three ways: first, it adds to the scarce body of RCTs on sickness absence reduction; second, it provides evidence that reduction in sickness absence in a high-risk group is possible in occupational settings and with a pragmatic approach; and third, it shows that a questionnaire survey, a simple and cheap way of collecting information, is feasible for identifying a group of employees at high risk of work disability and sickness absence.

However, many questions remain unanswered as the data came from one Finnish corporation, the majority of employees being male blue-collar workers with a relatively low response rate. Thus, we do not know whether the same intervention would be effective in other branches of industry, in other types of populations or in countries with different health care systems. It has been claimed that randomised intervention studies are not feasible in real-life occupational settings. Hopefully, this study will refute such claims, stimulate more high quality research on employees at high risk of

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sickness absence and also encourage employers and occupational health professionals to move from non-targeted health checks towards targeted preventive measures to sustain work ability.

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This year's seminar will focus on three key topics: (1) How does patient privacy legislation affect an editor's ability to publish? (2) What is publication? — the changing definitions of publication. (3) COPE's new Best Practice Guidelines. There will also be a short demonstration of an anti-plagiarism system as it is working in a publishing house.

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