Sick leave and a smoking ban

Stefan Agewall

Department of Cardiology, Oslo University Hospital, Ullevål and Institute of Clinical Medicine, University of Oslo, Norway

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This editorial refers to ‘Influence of high cardiovascular risk in asymptomatic people on the duration and cost of non-cardiovascular sick leave: results of the ICARIA study†, by E. Calvo-Bonacho et al., on page 299

Numerous research projects have been performed during the last decades with the aim to improve the outcome of acute coronary syndrome. Much less effort has been put into optimizing the follow-up procedure after an acute life-threatening event such as myocardial infarction. Short- and long-term sickness absence after an acute myocardial infarction is associated with substantial costs for society. We also know that a long sickness absence makes it more difficult for the patient to return to work. There are no clear guidelines as regards the optimal duration and degree of sick leave with this condition, and scientific data guiding doctors are extremely sparse. Furthermore, sick listing practices for heart patients vary considerably among countries. This may be due to various factors, e.g. different sickness insurance systems, labour market conditions, and sick listing traditions among physicians. In Finland and Sweden, about half of patients were available to the labour market 2 years after a myocardial infarction.1,2

Sick leave is used daily by many practitioners. The measure is very costly for society and for most individuals as well. Sickness absence is a complex phenomenon. The three major disease groups in both long-term sick leave and early retirement are musculoskeletal diseases, psychiatric diseases, and cardiovascular (CV) diseases, and the occurrence and course can be influenced by a range of factors, such as age, gender, demographics, physical and mental health, type of work, and personal and organizational factors. Despite widespread consequences of sickness absence, scientific research in this area is quite scarce, partly theoretical, and conceptually very undeveloped. There is extensive evidence from official statistics and essentially descriptive studies on the relationship between background factors and sick leave. These include age, gender, and social class. However, there are very few studies that have analysed these background factors in a greater depth looking at a causal relationship between these factors and sickness absence. In a meta-analysis identifying predictors of sickness absence, the main results indicated that being unmarried, experiencing psychosomatic complaints, using medication, having a burn-out, suffering from psychological problems, having low job control, having a low decision latitude, and experiencing no fairness at work were significant predictors for the occurrence of sick leave.3

Much of the research on sick leave absence has been conducted without specified theories or models. This applies in particular to medical research, where very descriptive summaries of sick leave in various groups and diagnoses dominate the literature. Theories of how illness affects work and sick leave are often implicit, and often based on poor knowledge about the actual relationship between morbidity, work ability, and the impact of sick leave. There are few longitudinal studies, very few interventional studies, disease aspects of health insurance are rarely considered, the effect of factors at different structural levels are not taken into account, and the consequences of sickness absence have hardly been studied at all. Furthermore, there is virtually no evidence-based background to the sick leave decision and the consequences of the sick leave for the patient. Thus, the research area of ‘consequences of sick leave’ is inadequately studied, but this is also an area that is difficult to investigate since the consequences of the underlying disability or disease leading to absence are difficult to distinguish from the consequences of sick leave itself.

Thus, there is an enormous need for longitudinal studies, international comparative studies, and randomized controlled trials on sick leave and the consequences of sick leave. This may require interdisciplinary research and international cooperation.

Calvo-Bonacho and co-workers now present sick leave data from a large Spanish cohort study on 690 135 asymptomatic subjects with a 1-year follow-up.4 As expected, and previously demonstrated, subjects with a moderate to high CV risk score had a higher risk for long-term CV sick leave, as revealed by follow-up assessment. However, this group of subjects with CV risk factors also had more sick leave episodes due to non-CV causes. We know from previous studies that many CV risk factors, such as hypertension and smoking,5 are positively associated with sick leave duration and costs. A less expected observation in the study, both in the group characterized as moderate to high CV risk and in the low risk subject group, was that subjects prescribed CV drug treatment (blood pressure lowering or lipid lowering) had significantly longer sick leave due to non-CV diseases or work-related accidents compared with subjects without...
drug treatment. However, similar observations have been reported previously. It is well known from prospective observational studies that hypertensive patients receiving treatment have a higher outcome incidence than untreated hypertensive patients. In a large cohort study, the increased cardiovascular mortality in treated hypertensive subjects as compared with untreated subjects was mainly due to high systolic blood pressure levels under treatment. These results suggest that the excess risk found in treated hypertensives may be drastically reduced if the systolic blood pressure were brought under control.6 This would also be expected with the lipid-lowering treatment and is the likely explanation to the longer residual part of the CV risk range in which they had been classified, which obscured beneficial treatment effects and justified longer sick leave periods. Furthermore, as the authors point out, the awareness of the individual need for pharmacological drug treatment may induce anxiousness for severe disease, which in turn increases the risk for sick leave in those subjects.

In this study the individual risk factors predicted sick leave episodes during follow-up, but when the authors adjusted for the different CV risk factors this could not entirely account for the association between global CV risk and non-CV disease sick leave duration. Therefore, the authors suggest that workplace preventive measures aimed at early risk factor control may influence non-CV diseases as well, which in turn may reduce sick leave cost. However, this remains to be proven in other studies.

The authors found that smoking was associated with increased likelihood for sick leave, an observation made in previous studies.5 We also know that tobacco use is the most preventable cause of death, worldwide. The World Health Organization (WHO) states that tobacco kills up to half of its users. Tobacco kills nearly 6 million people each year, of whom 5 million are users and 600,000 are non-smokers exposed to second-hand smoke. Unless urgent action is taken, the annual death toll could rise to 8 million by 2030. Consumption of tobacco products is increasing globally, though it is decreasing in some high-income and upper-middle-income countries.

Thus, the time has come to ban smoking completely. From the study of Calvo-Bonacho and co-workers, we also know that smoking is associated with increased sick leave cost; thus, apart from saving lives, a smoking ban will save money.

Even passive smoking increases the risk of heart attack. The 2006 Spanish partial smoke-free legislation was associated with a decrease in population acute myocardial infarction incidence and mortality, particularly in women, in aged 65–74 years, and in passive smokers.8 Thus, the effectiveness of smoking regulations in preventing chronic heart disease has already been proved.

People may argue that society should not interfere in choice of lifestyle. However, healthcare and sick leave are expensive, and preventing disease means, in addition to a decrease in individual suffering and shortened lives, a significant economic gain. There is need for political action: one can compare this with the fact that in terms of traffic we accept social edicts and some restriction of personal freedoms such as the law on seat belts and speed limits to save lives and prevent injuries. We do not allow people to use narcotics, despite these drugs killing many fewer people than tobacco smoking.

A common European decision to ban smoking from 2030 should be taken. A first step is to increase tobacco tax all over Europe as soon as possible, and the second step is a smoking ban.

How long can we accept that smoking kills 6 million people each year? And how long can we accept that people earn money out of these deaths?

**Conflict of interest:** S.A. has received honoraria from Astra-Zeneca, Sanofi, Siemens, Roche, Pfizer, Boehringer Ingelheim, and GSK.

**References**