Can sickness absence be predicted at the pre-placement health assessment?

C. J. M. Poole
Consultant Occupational Physician, Dudley Priority Health NHS Trust

Pre-placement health assessments may be used not only to assess fitness for work but also to predict sickness absence. A risk assessment based on available evidence is proposed for making such judgements.

Key words: Pre-placement health assessment; risk assessment; sickness absence.

INTRODUCTION

Pre-placement health assessments are usually undertaken at the request of management although they may be required by statute. Management use them to identify prospective employees who might be vulnerable to occupational hazards, or who might be a health and safety risk to themselves or others and for relevant baseline information. They may also use them to identify employees who are likely to create operational problems by taking large amounts of absence attributed to sickness. The doctor who undertakes these assessments on behalf of management has no legal ‘duty of care’ to the candidate unless that doctor has a more general doctor-patient relationship with the candidate such as would be the case with the candidate’s GP or treating specialist.

Sickness absence is a form of illness behaviour which is influenced by personal, organizational, social and cultural factors. There is a widely-held belief amongst occupational physicians and personnel officers that past attendance is likely to predict future attendance particularly if absence has been attributed to a variety of different diagnoses; however, this hypothesis has not been tested in a longitudinal study. Very few prospective studies of risk factors for sickness absence have been undertaken but evidence is accumulating which can be used to predict morbidity and therefore sickness absence at the pre-placement assessment (Table 1). An additional outcome of the assessment could be ‘fit but at increased risk of above average sickness absence’ in addition to the traditional outcomes of ‘fit’, ‘unfit’ or ‘fit with restrictions’.

For example obesity is associated with an increased morbidity from diabetes, ischaemic heart disease, osteoarthritis of the knees, back pain, gall stones and shortness of breath on exertion. All of these complications may give rise to absence from work particularly in the older employee. A study from Finland has shown a strong linear relationship between body mass index and disability pensions granted for cardiovascular and musculoskeletal diseases but not for mental ill-health. Smoking is associated with increased morbidity and increased sickness absence (relative risk = 1.3–2.0) and some studies have shown a dose–response effect (where dose is the number of cigarettes smoked, and response is the amount of sickness absence).

A previous history of low back pain, particularly if associated with sickness absence of more than a month, or more than two previous episodes, or co-morbidity with depression is associated with increased sickness absence. Recurrent sciatica indicates a poor prognosis, as does previous back surgery, with the exception of single level disc pathology. Cohorts of patients who have undergone lumbar microdiscectomy or a single level posterior fusion have been reported on with over 95% returning to work — the majority to their normal duties within 2 months of surgery. The risk of back pain is greatest in those jobs which involve heavy (> 25 lb.) manual handling, standing or walking for more than two hours but not sitting.

A past history of a recurrent endogenous depression, particularly if associated with psychosis or specialist treatment indicates a poor prognosis, although compliance with pharmacotherapy reduces the likelihood of relapse. Recurrent reactive depression also has a poor prognosis if associated with poor responses to interventions such as counselling or pharmacotherapy. Personality traits such as dependency, an external locus of control or neuroticism may also predict future morbidity but this is normally the domain of occupational psychologists. Mental ill-health is more likely in jobs which the worker perceives to be stressful and over which he or she has little control. Organizations with...
Table 1. Risk assessment for sickness absence at pre-placement assessment

| High Risk | • Currently off work with long-term sickness, chronic illness which is poorly controlled, undergoing a life crisis such as bereavement or divorce, or with a terminal illness
|           | • More than three spells (>1 week each) of sickness absence per year for two or more years
|           | • Three or more episodes of low back pain particularly if one is >1 month in duration or associated with specialist treatment; surgery for multiple level lumbar disc disease
|           | • Three or more episodes of endogenous depression particularly if associated with psychosis or specialist treatment
|           | • Ischaemic heart disease which is symptomatic or associated with an abnormal exercise stress test
|           | • Body mass index > 35 kg/m²
|           | • Three or more interventions for anterior knee pain, osteoarthritis of knee with loss of joint space, osteochondritis dissecans or recurrent effusions of the knee

| Medium Risk | • Two or three spells (>1 week each) of sickness absence per year for two or more years
|            | • Two episodes of low back pain associated with sickness absence or specialist treatment
|            | • Two episodes of endogenous depression or poor response to interventions for reactive depression
|            | • Smoker
|            | • Body mass index > 30 kg/m²
|            | • Two interventions for anterior knee pain

| Low Risk   | • Previous sickness absence less than 10 days per year for two or more years
|            | • No past history of low back pain associated with sickness absence or specialist treatment or successful treatment for single level lumbar disc disease
|            | • No past history of medical treatment for endogenous depression or good response to an intervention for reactive depression
|            | • No symptoms of ischaemic heart disease or ischaemic heart disease with a normal exercise stress test
|            | • Non-smoker
|            | • Body mass index 20–25 kg/m²
|            | • No past history of knee problems or one successful intervention for anterior knee pain

Note: If more than one risk factor present effect on total risk is likely to be additive. Work activity and working conditions may modify degree of risk.

Key Category of evidence: 1 = randomized controlled studies or systematic review; 2 = cohort, cross sectional or case–control studies; 3 = uncontrolled studies, case series or medical consensus.
high rates of sickness absence, turnover, accidents, night work or low morale are not suited to those who are emotionally vulnerable.

A history of ischaemic heart disease predicts increased morbidity and mortality and an exercise stress test may need to be included in the assessment. Recurring knee problems such as effusions, anterior joint pains, loose bodies, loss of joint space on X-ray, previous trauma or osteochondritis dissecans all have a poor prognosis. Manual work and sporting activities increase the risk of future knee problems. Substance abuse, asthma and diabetes may also be associated with increased sickness absence but each case needs to be assessed on its merits.

When making pre-placement health assessments the implications of the Disability Discrimination Act (DDA) needs to be borne in mind. That is when a candidate has a substantial and long-term physical or mental impairment which prevents him or her from carrying out normal day-to-day activities, reasonable and suitable adjustments must be considered by the employer. However most of the risk factors that I have considered may not interfere with normal day-to-day activities for 12 months or more and so would not be covered by the DDA. It could also be argued that discrimination against candidates at high risk of above-average absence is justifiable because the employer has a right to expect employees to attend work regularly.

When undertaking these assessments the doctor is acting as an impartial expert advisor with ethical responsibilities and potential conflicts of interest. Some of the risk factors which I have discussed may not be directly related to the tasks or hazards of the proposed job and occasionally the advice that the doctor gives to manage the candidate. The ethical difficulties that this creates need to be addressed by ethical guidelines.

REFERENCES

2. Kapfunde v Abbey National plc & anor. Court of Appeal, 25.03.98.