Management of occupational health risks

Pre-employment assessment; what works, benefits/value, how is value best demonstrated?

Researchable questions

The existing literature contains some descriptive information on the process of pre-employment screening (questionnaire +/- telephone or face-to-face consultations) in various employment settings, and the immediate consequences or conclusions of the screening procedure (fit for work, fit with restrictions/adjustments or exclusion on health grounds). We know that very few applicants are excluded as an immediate result of pre-employment screening. However there is a paucity of information on the predictive value of screening for important long-term adverse employment outcomes, and few studies have undertaken an economic analysis of return (or savings) for investment in pre-employment screening. The questions of interest are therefore

1. What are the potential costs associated with various pre-employment screening methods? e.g combinations of on-line questionnaires, paper-based questionnaires, telephone interviews, clinical consultations
2. What proportion of screened employees go on to develop the various adverse employment outcomes of interest in the medium to long term, and does this enable modelling of potential cost benefits/savings?
3. What is the positive predictive value of specific factors measurable at pre-employment assessment for long-term adverse employment outcomes
4. What are the demonstrable cost benefits based on real data in a screened population (as distinct from modelling)

Outcomes of interest (long-term adverse employment outcomes)

- Poor performance
- Long-term absence (e.g > 28 days)
- Ill health retirement
- Leaving the recruited role or changing job because of health problems
- Occupational diseases or work-related ill health
- Untoward incidents related to health (errors or accidents that are attributable to health issues)

Predictive factors of interest

- Generic markers of ill health
    - Previous long-term absence (e.g. within the past year, more a year ago)
    - Current treatment (e.g major analgesics, antidepressants, antipsychotics, immunosuppressives)
    - Recent use of medical advice (have you seen a doctor in the past year?)
- Specific categories/markers of common illness

- Mild-moderate depression/anxiety - is severity predictive? Is current treatment by a specialist predictive? Is history of or current self-harm predictive?
- Musculoskeletal pain – is severity or functional impairment predictive? Is current treatment by a specialist predictive?
- Eating disorders – is BMI predictive? Is current treatment by a specialist predictive? Is hospital admission predictive?
- Serious psychotic disorders
- Epilepsy
- Diabetes

For all the specific categories of illness thought would need to be given to the definition of severity and chronicity.

Suggested designs

Prospective: Identify a population at the pre-employment screening stage (baseline), follow prospectively to identify specific adverse outcomes of interest.

Retrospective: Identify a population who were screened previously, collecting information from previous screening records, and measuring adverse outcomes from routinely collected data – e.g on sickness absence

Practical difficulties

The best evidence would come from prospective studies of screened populations, but these are likely to be long and expensive. Moreover there may be a problem with sample size, particularly for the less common disorders. Collection of information from screening retrospectively might be limited by the quality and consistency of occupational health records.