SHORT REPORT

Who contributes to the occupational health evidence base?

R. Preece
Mid Cheshire Hospitals NHS Foundation Trust, Crewe CW1 4QJ, UK.

Correspondence to: R. Preece, Consultant in Occupational Medicine, Mid Cheshire Hospitals NHS Foundation Trust, Crewe CW1 4QJ, UK. Tel: +44 (0)1270 612372; e-mail: richardpreece@nhs.net

Background
Whilst there has been recognition of the need to strengthen the evidence base for occupational health in the UK, it is not clear how much different groups contribute to the emerging research.

Aims
To establish the research contribution from different types of organization and how this has changed.

Methods
All original research papers published in Occupational Medicine in the 5-year periods July 1996 to June 2001 and July 2006 to June 2011 were reviewed. The lead authors’ affiliations were classified in the most relevant sector.

Results
The number of research papers published by authors affiliated to UK organizations was greater in the past 5 years than in a similar period a decade ago. The increase is wholly explained by a large increase in papers from universities. About one-fifth of all papers published in Occupational Medicine from UK sources had a principal affiliation with the National Health Service (NHS). The number of papers affiliated to large private sector companies reduced from 14 to 2. No papers arose from the work of established specialists employed by the large commercial providers of occupational health services.

Conclusions
Services provided in the NHS and other public sector organizations are important contributors of new evidence in occupational health. Commissioners of public sector services should take account of the importance of this to the research and innovation in occupational health.

Key words
Occupational medicine; research; trends.

Introduction

Major reports from Dame Carol Black, the Faculty of Occupational Medicine, and Steve Boorman have each recognized the need to strengthen the evidence base for occupational health [1–3]. However, it has not been clear how much contribution different organization types make to the emerging evidence in the UK. It is important to understand the contribution from different sources and how this has changed over time because this may guide those who commission both future research and occupational health services.

Two journals focused on occupational medicine are published in the UK. Occupational Medicine is the journal where UK occupational health practice research is commonly published. Until recently Occupational and Environmental Medicine has had less focus on practice research [4].

Reviewing the source of publications in Occupational Medicine should provide an indication of the pattern and changes to sources of UK occupational health research. This report aims to describe where the evidence base is being developed and where more may need to be done to improve this.

Methods

All original research papers including short reports published in Occupational Medicine in the 5-year periods July 1996 to June 2001 and July 2006 to June 2011 were reviewed. Case reports were excluded. The lead authors’ affiliations were reviewed and each research paper classified in the most relevant sector.

The sectors were all National Health Service (NHS) organizations, universities, other research-focused organizations [e.g. Medical Research Council (MRC), Health & Safety Laboratory (HSL) and Institute of Naval Medicine (INM)], other public sector organizations (e.g. government departments) and the private sector.

Results

During the periods studied, Occupational Medicine published eight journals in each 12 months except in 1996–97 when only seven journals were published.

In the first 5-year period, 126 research papers published in Occupational Medicine originated in the UK
(Table 1). A decade later this increased to 159 papers. Research papers were most commonly affiliated with universities (Table 2).

In 1996–2001, 18 papers were affiliated with private sector organizations and individuals. Fourteen were affiliated with large private sector organizations (including pharmaceutical companies, food producers and chemical manufacturers). Four papers were prepared by individual authors. No papers were affiliated with major commercial occupational health providers.

In 2006–11, private sector organizations and individuals published 16 papers. Seven of these were research done to meet the training requirements for specialist registrars. Three of the remaining were produced by individual clinicians and one originated with a specialist rehabilitation provider. Two were from an industry body. One paper was from an engineering company and one from a collaboration between a large pharmaceutical company and both the NHS and a university institution. Two papers were affiliated with major commercial occupational health providers. Each of these was a paper from a newly registered consultant based on their dissertation required to complete specialist training.

In the first period, three organizations were affiliated with more than six papers (Health & Safety Executive/Laboratory (HSE/HSL) 12, MRC 7, Army 7). In the second period, five organizations were affiliated with more than six papers (University of Manchester 14, King’s College London 12, University of Aberdeen 11, HSE/HSL 8, INM 7).

**Discussion**

The number of research papers was greater in the past 5 years than in a similar period a decade ago. The increase is explained by a large increase in papers from universities. The change in number of papers from the public sector was largely due to a high number of papers from the Army in the first period. The number of papers from other types of organizations remained about the same.

Universities, research-focused organizations, the NHS and wider public sector produced almost all the recent evidence. The contribution from large private sector companies decreased. There was an even more marked change since 1988–89 when 43% of papers were from private industry [5].

About one-fifth of papers from UK sources had a principal affiliation with the NHS. Papers with a principal affiliation to private sector organizations were uncommon. In a decade, the number of papers affiliated to large private sector companies reduced from 14 to 2. In the most recent 5-year period, private sector research papers almost exclusively arose from dissertations or others publishing alone. In neither period, no papers arose from the work of established specialists employed by the large commercial providers of occupational health services.

UK research in occupational health is published in many journals. This review of a single major journal is an important potential weakness. Academic institutions conducting large research projects may choose to publish in other journals; however, it is unlikely that UK researchers practising outside universities and research-focused organizations would prefer to publish their work in a non-UK-based journal. Overall, the results are likely to be reasonably representative of occupational health research in the UK.

Categorizing the source of papers is not straightforward as many are the result of collaboration between authors affiliated to different organizations. In many cases, authors are affiliated to a number of organizations. This is especially the case for authors in UK research institutions many of whom also have appointments in the NHS (e.g. University of Manchester, University of Aberdeen, HSL and MRC). However, it seems unlikely that placing papers into a single category would markedly distort the overall trends.

The need for evidence to inform occupational health practice has become firmly established. In recent years, the evidence base has been improved by evidence-based guidance from bodies including the Health & Work

**Table 1. Research papers published in each 12 months period (July to June)**

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<tbody>
<tr>
<td>From UK</td>
<td>22</td>
<td>28</td>
<td>28</td>
<td>24</td>
<td>24</td>
<td>126</td>
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<tr>
<td>All</td>
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<td>59</td>
<td>62</td>
<td>61</td>
<td>57</td>
<td>287</td>
</tr>
<tr>
<td>From UK</td>
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<td>31</td>
<td>22</td>
<td>35</td>
<td>41</td>
<td>159</td>
</tr>
<tr>
<td>All</td>
<td>71</td>
<td>79</td>
<td>79</td>
<td>78</td>
<td>85</td>
<td>392</td>
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**Table 2. Research papers published by organization type**

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>1996–2001</th>
<th>2006–11</th>
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<tbody>
<tr>
<td>NHS</td>
<td>35</td>
<td>28%</td>
</tr>
<tr>
<td>University</td>
<td>40</td>
<td>32%</td>
</tr>
<tr>
<td>Other public body</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>Other research body</td>
<td>19</td>
<td>15%</td>
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<tr>
<td>Private sector</td>
<td>18</td>
<td>14%</td>
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Development Unit [6], the National Institute for Health and Clinical Excellence [7] and others. This study has begun to measure the contribution from different types of organization.

Public sector teams in the NHS, academia and elsewhere have been central to strengthening the evidence base for occupational health. The commissioning of research with public funds is under threat and this could have a seriously detrimental impact on occupational health [8].

The evidence base in occupational health needs to be strengthened. Commissioners of occupational health services should take account of the need for the research and innovation that will strengthen the evidence base and improve the efficiency and effectiveness of health support for workers.

Key points
- Universities and research-focused organizations contribute most new UK occupational health evidence.
- The National Health Service contributes about one-fifth of new UK occupational health evidence.
- Commissioners of occupational health should take account of the need for the research and innovation.

Conflicts of interest
None declared.

References