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Occupational health services in the UK—challenges and opportunities

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Background	A small minority of the UK workforce currently has access to an occupational physician. Reduction in the size of enterprises, the emergence of atypical work patterns and problems recruiting and training occupational health specialists risk making this minority even smaller.
Aim	This paper considers the challenges currently facing occupational medicine and how we can improve access to occupational health services (OHS). It aims to highlight some of the diverse internal and external factors that restrict the UK's ability to provide all workers access to OHS.
Method	A literature review was carried out and combined with awareness of current trends in business and new legislation together with provision of occupational medicine in other countries.
Results	Potentially controversial solutions that might help to make OHS more widely accessible were identified and are discussed. It is hoped that these will provoke further debate.
Conclusion	Individually and organizationally, we must examine and improve capabilities if we are to improve worker access to OHS and deliver targets to reduce occupational ill-health. It is suggested that this requires a strategic shift to apply resources differently. There is need to explore delegation of tasks traditionally performed by doctors to nurses and other staff together with the outsourcing of non-core work. The increased use of telemedicine and the enhanced use of information technology for training, risk assessments, wellness programmes and questionnaire-based health assessments are other developments that should be explored.
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Introduction

The WHO Collaborating Centres in Occupational Health adopted a Declaration on Occupational Health for All, regarding it a realistic long-term objective to provide all workers access to competent occupational health services (OHS), irrespective of age, sex, nationality, type of employment, or size and location of the workplace [1].

Securing Health Together (SHT) [2], the British government's occupational health strategy aims to reduce the incidence of work-related ill-health by 20% and the number of days lost due to work-related ill-health by 30% by 2010. It could be argued that these targets will be difficult to achieve when only one in seven workers in the UK benefit from comprehensive occupational health support [3].

OHS will remain restricted to the workforces of enlightened employers, for as long as there is either no legislation to mandate provision or clearly visible return on expenditure. In Finland and the Netherlands, legislation obliges employers to provide OHS for all workers. It is difficult to define and measure the benefits of OHS, some benefits being inherently intangible. There have been very few cost-benefit evaluations in the UK [4–6],

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and in Europe, cost benefit analyses are a priority for future research [7,8]. Even if all UK employers were persuaded of the value of OHS, there would be a substantial shortage of competent professionals able to provide a service. One solution is to create more doctors, nurses and other safety and health professionals. The planned increased intake of medical students may do nothing to reduce the shortfall for 10 or more years. Additionally, changes in the world of work relate not to increases in traditional work practices and hazards, but to changes in activity and hazard, e.g. increased employment in small and medium-sized enterprises (SMEs) and remote working [9]. These changes demand innovation in how we provide OHS and what we offer, rather than providing more of the same.

The challenges

Too few occupational health professionals

The ratio of occupational physicians and occupational health nurses to workers in Europe varies between 1 per 500 and 1 per 5000 [10]. There are no readily obtainable comparable data particularly with regard to full-time/part-time status, practising/retired members and level of qualification/training. This makes benchmarking difficult, although some data are represented in Table 1, providing a crude guide to the diversity of access to occupational physicians within Europe.

Around 14% of workers in the UK benefit from comprehensive occupational health support (hazard definition and measurement, risk management, health and safety information and training and monitoring health) [3] and 12% have access to occupational physicians [15]. A random sample of SMEs each employing <250 people revealed that 14.4% employed a part-time occupational health physician, 7.2% employed a health and safety advisor and 10.8% employed a part-time occupational health nurse [16]. There is little cause for optimism, with a continuing problem of recruitment to National Health Service (NHS) specialist registrar training posts in occupational medicine [14].

Too few doctors and nurses in all specialities

The NHS is set to suffer large staffing losses, since one in seven workers are aged 50 years or over and increasing numbers of experienced older workers are retiring early [17]. There are also problems retaining new graduate nurses, 34% of whom do not register to practice [18]. Existing initiatives, e.g. to recruit an additional 20 000 nurses by 2004, may not resolve the crisis. The Royal College of Nursing estimates that 110 000 nurses are needed if retirement and other losses remain the same [19].

Table 1. No. of physicians working in OHS by country

Country	Labour force (millions)	No. of physicians	No. of physicians per 100 000 workers
Finland	2.3	1400 [11]	61
Netherlands	7.2	1900 [12]	26
Norway	2.4	500 [13]	21
UK	28.2	1400 [14]	5

The UK Government has pledged an extra 7500 consultants, 2000 GPs and 1000 medical school places by 2004/2005 [20]. However, the British Medical Association believes medical schools will not deliver targets for increasing student numbers due to a shortage of clinical academics and changed funding allocations for medical schools. Faced with such a shortfall, occupational health will have to compete to attract entrants to the speciality when action is already required to address the lack of training in occupational medicine in UK medical schools [21].

General practice is under-resourced to take on OHS work

It has been recommended that general practitioners (GPs) and practice nurses gain training and experience in occupational health to address issues arising from those with no expertise providing services [22]. This might address training needs, but it is unlikely to extend access to OHS, because of existing pressures on GPs and problems with recruitment and retention.

GPs feel under pressure despite smaller numbers of patients per doctor, longer consultation times (9.36 min/patient) and fewer out of hours demands [23]. They face complex workloads because of the ageing population and more care being delivered outside of hospital. Recent initiatives such as 'NHS Direct' (website and 24 h nurse-run telephone help line) and 'Walk-in Centres' (offering quick access to nurse-delivered minor treatments) have not reduced demand for conventional GP services.

The numbers joining general practice marginally exceed the numbers leaving [24] and applicants per vacancy fell from 6.9 in 2001 to 4.4 in 2002 [25]. In some areas one in four GPs will retire within 5–10 years [17]. Although over half of fully trained doctors are GPs, only a third of medical graduates now enter general practice and two-thirds are females who seek flexible careers [26].

General Medical Council plans for appraisal and revalidation, wherein every doctor's fitness to practice will be assessed every 5 years, will consider each doctor's working environments. GPs who undertake other sessional work will need to revalidate in every field of medicine in which they practice. Whether the additional

time and effort will persuade some GPs to restrict their practice to core family medicine services remains to be seen.

The opportunities

An organizational design for national occupational health

Organizations are structured and coordinated activity systems linked to the external environment [27]. The most effective organizational designs start by assessing the demands and opportunities in the external environment to develop appropriate organizational forms and structures. There is opportunity to design and coordinate a national network of high quality OHS to provide for the entire UK workforce. Exceptionally, OHS are not part of the free UK statutory NHS provision.

NHS Plus was spun in March 2000 in a speech made by a former Secretary of State for Health [28]. The term relates to individual NHS hospital occupational health departments, established to provide OHS to NHS staff, that sell services especially to public sector and SMEs. While individual departments may become organizations within the scope of the definition above, it appears unlikely that NHS Plus will become a single coordinated 'organization' able to meet all the nation's needs.

A Department of Health document recognizes that workforce planning and development is not embedded in the NHS culture [29]. OHS are more complex considering the more diverse mix of providers. The proposals and recommendations in the document are wide-ranging and radical. It promotes expanding the workforce and abolishing barriers, which say only doctors or nurses can provide particular care. Given the huge shortfall in access to OHS, there is particular scope to explore these radical recommendations for our speciality, examining skills and competencies to determine who can do what and to examine the work we do to focus on the most significant tasks.

Defining skills and competencies

We should debate the skills and competencies required to deliver OHS and the numbers and types of staff required. Adequacy of staffing is not just about how many doctors or nurses there are but how they work and what they achieve [30]. One priority area of a Health & Safety Executive Programme Action Group is to address the need for guidance on competence, which may not be formal qualifications.

The shortage of doctors cannot be remedied quickly. There must be new ways of working to enable doctors to use their time more effectively. This includes the delegation of tasks traditionally performed by doctors to others. One option is to create a new group of staff [31]. The UK has the second lowest number of doctors per capita of any European country. Recognizing this, the then president of the Royal College of Physicians called for a new professional, the medical assistant, who could perform tasks undertaken by doctors and nurses, freeing them to perform work for which they are trained [32]. There are a number of experiments altering the skill mix in UK healthcare teams [33], but so far, none are reported within OHS.

Physician assistants (PAs) began working in the USA in 1967 to relieve a shortage of doctors [34–36]. They are 'inter-dependent practitioners' requiring physician supervision, but they may staff satellite clinics without a physician's presence [36]. PAs work effectively in primary care [37] and in hospital medical and surgical specialties [38–40]. Duties include: taking histories, ordering tests, prescribing, suturing, cannulation, ECGs, mammography and screening flexible sigmoidoscopy [41–43]. About 3% of >34 000 PAs work in OHS, where they treat occupational injuries and illness, perform pre-placement and periodic health assessments, perform immunizations, provide health and safety education, etc. [44]. Given the gap in providing OHS to the UK workforce, it seems appropriate to conduct well-designed and properly evaluated pilots to determine whether PAs would be a useful additional resource in UK OHS.

There are opportunities to engage nurses in work traditionally undertaken by doctors [45] by increasing the number of nurse practitioners and nurse consultants. Nurse practitioners are graduate nurses responsible for autonomous clinical decisions who use skills in differential diagnosis, screening for disease and patient referral or discharge [28]. The NHS Plan [20] sets out key roles for nurses, including: ordering investigations, admitting and discharging patients for specified conditions within protocols, running clinics, prescribing, resuscitation, outpatient procedures, etc. [46]. Nurse consultants were introduced into the NHS to enable career development whereby a senior nurse can continue to treat patients for 50% of their time [47]. The first occupational health nurse consultant post was established in 2002. Career development carries organizational advantages. Encouragement to progress and opportunities to learn and grow are linked to employee engagement and business outcome [48].

Task significance

An organization's occupational health programmes are not directed just by economic value or scientific evidence. Less tangible variables such as 'feel good factor' or 'morale' may influence the services provided, leading to compromise between evidence and the culture and values of the enterprise. Specialist occupational health resources conducting non-specialist work does not best serve the

wider public benefit. Offering time consuming or largely valueless services to few people reduces our capability to offer 'needed' services to wider and more deserving populations. For example, executive medicals performed on asymptomatic subjects have limited predictive or preventive value [49,50], but may be offered to satisfy customer 'wants'. When resources are lacking, the work that is performed should have 'task significance', i.e. a substantial effect on the lives of the people affected [51]. OHS should focus efforts on areas where they have distinctive capability or competence, i.e. 'core work'. We should make specific strategic choices about what to do and what not to do and outsource 'non-core work'. This might involve bringing in other health or allied staff, delivering traditional services through new channels or more innovative use of technology.

A growing area of outsourcing is counselling. Counselling for stress and other behavioural or emotional problems is not a core competency of doctors and nurses. If done properly, it is time consuming. Over 4 million UK workers have access to either a comprehensive employee assistance programme (EAP) or to telephone counselling. More widespread use of EAPs, when stress-related problems are so common, would allow occupational health professionals to concentrate on core skills.

Advice on health issues can be delivered face to face, by letter or by telemedicine, i.e. by computer and telecommunications. E-mail counselling appears particularly suited to primary prevention and for psychological health issues [52]. We should determine how much of our practice actually needs to be delivered face to face. To this end, there are pilots of both subscription and free occupational health and safety telephone help lines for confidential advice in England and Scotland.

There is opportunity to break down tasks to determine whether innovative technology can do work better or more cost effectively than human resource, e.g. health and safety training and health promotion. Software health and safety training and risk assessments programmes (e.g. for display screen equipment users) are now readily available, e.g. Cardinus® (http://www.cardinus.com). Computer assisted learning is a valuable supplement to time with health professionals, proving to be both effective and accepted [53,54]. The Internet can deliver sophisticated, self-mediated, interactive health assessment questionnaires, wellness profiles and web-based decision-support [55,56]. Benefits of 'e:health' include enhanced access to information, empowerment of patients to make informed healthcare decisions and improved quality, value and patient satisfaction [57]. Forty-five per cent of UK households have Internet access and the government is trying to narrow the 'digital divide'. This enables employees' access to Internet support at home and at work. There are further benefits of programmes such as Wellness Checkpoint® (http://www.wellnesscheckpoint.com), which not only generate personal health profiles and tailored health guidance for each individual, but also generate corporate reports of the health risks and opportunities for action in the workforce.

In community health, computers can screen patients for diseases such as asthma [58] and can deliver health-screening questionnaires swiftly to large populations [59]. In occupational health, computers can obtain occupational histories with high specificity and consistency without the need for human resource [60]. In the USA, an Internet-based service provides respirator medical evaluation and clearance in compliance with the OSHA Respiratory Protection Standard, i.e. OMI e.valuations (http://www.occupational.com/omirespiratormedical.html). Depending on whether or not there is a health problem, a physician-signed clearance letter is issued or a physician will phone to interview the employee.

One study has shown that spirometry telemonitoring results in asthma patients with no computer background are comparable with tests supervised by a trained medical professional [61]. It is logical to assume that some health surveillance tests might be delivered remotely, although in the case of occupational spirometry, further studies would be required to determine whether the equipment could be properly calibrated, that test results are reproducible and there is maximal effort, etc. Whilst there might be constraints for performing tests, undoubtedly there is scope to develop telemonitoring for SMEs, where it is not practical to have in-house OHS and ineffective to have third party resource driving between clients.

Discussion

While the shape of business has changed, the shape of OHS largely has not. This, together with growing manpower shortages, could widen the gap between the need for and the provision of OHS unless radical measures are taken. In facing this challenge, we must be open to change, committed to innovation and daring enough to abandon the old and create the new. Incremental tinkering or merely reshuffling the deck without changing the game are political exercises that accomplish nothing in terms of substantially improving performance. If we wish to deliver inspirational goals for improving the health of the UK workforce, we should explore the potential for profound change in each and every aspect of the organization and delivery of OHS in the UK. Of course, there are problems inherent in change, including protecting one's own position, personal values and fear of the unknown, but all are surmountable, given good will and the desire to make a difference. Undoubtedly we must drive debate for the future of OHS if we are to close the substantial need supply gap meaningfully.

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