Peer review within small groups is also capable of considering the qualitative aspects of general practice which could be overlooked in the pursuit of measurable indicators of performance. Thus the creation of effective small groups will be an important part of continuing medical education in general practice and crucial in transforming the proposals for better health contained in the white paper into a reality.

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# Hours of work and fatigue in doctors

ONE contentious aspect of many discussions about the criteria for good practice is the suggestion that 24-hour availability of general practitioners, without recourse to the employment of deputizing services, implies a better standard of care. The emotive divide between practices that use such services and those that do not is particularly noticeable in the urban areas where usage is concentrated and widespread. In 1985–86, in England and Wales, nearly 50% of general practitioners had consent to use deputizing services, and nearly 50% of night visits were carried out by deputizing doctors.[1]

This use of deputizing services may be related to several factors, including out-of-hours workload, the age and sex of the doctor, doctors choosing to live outside their practice areas for social reasons and fear of physical violence, rather than the doctors' perceived impairment of performance through fatigue. A range of night visiting rates of 1.2 to 46.1 visits per 1000 patients per year have been described,[2] and although they represent a small proportion of doctor–patient contacts, the physical and emotional burden that stems from this work is significantly high. Records[2] refer to night visits carried out, rather than telephone calls where advice alone is given but the disturbance of sleep may be equivalent.

Little research has been carried out into performance impairment through lack of sleep. A literature search showed that the information available refers largely to junior hospital doctors and young American interns. The position of general practitioners who may be older and in poorer health does not appear to have been studied at all.

A study of young American interns demonstrated psychological problems occurring with sleep deprivation that included difficulty in thinking, depression, irritability, referentiality, depersonalization, inappropriate affect, and recent memory deficit.[3] Impaired performance, assessed by the doctor's interpretation of electrocardiograms, was also shown.[4] The authors concluded that the internship functions as an initiation rite into an elite society, and that doctors, by accepting such regimes without question, are acting out an unconscious wish to possess abilities and powers that transcend what is ordinarily thought of as human.

A study of junior hospital doctors, using tests of grammatical reasoning, showed that a sleep debt of three hours of more consistently reduced efficiency. Interpreting laboratory tests under similar circumstances did not show any rise in errors, but there was a greater range of variability in the rate of work.[5] Focussing on such specific tasks appears to be less affected by tiredness. It has been shown that when radiology residents were tested in their ability to identify a nodule on a chest X-ray, no significant difference was demonstrated between rested doctors and those who had worked for a minimum of 15 hours.[6] In a review of the literature on doctor performance, the authors suggested that as research demonstrates negative effects with sleep deprivation, night call duties as part of residency training should be re-evaluated.[7]

Other groups of workers have statutory limitations on hours of duty. Current legislation limiting pilots' flight times have evolved over a series of reviews by the Civil Aviation Authority.[8] While the document has some scientific background, it has basically come about by pressure from the British Airline Pilots Association (personal communication). An opinion from the Medical Defence Union (personal communication) states that no case is known in which fatigue has been put forward in a doctor's defence in a negligence claim, but that a judge may not look favourably on a doctor who performed 'non-essential' tasks when his judgement was impaired through fatigue. The Automobile Association (personal communication) states that a driver who allows himself to be overcome by sleep can be guilty of careless driving. If evidence were found that the defendant continued to drive when there was a risk of falling asleep then a charge of reckless driving could be brought.

The effects of a variety of stresses on doctors' attitudes and performance are currently being studied,[9] and recent research has looked at workloads, job performance and quality of care.[10,11] Most of these stresses are well-defined, but new sources of stress described in a group of American physicians include fear of malpractice suits, having to practise 'defensive' medicine, fear of violence and pressure of peer review.[12] These categories may well be appearing in the UK. It has been pointed out that the USA loses annually the equivalent of graduates from seven entire medical schools (approximately 700 physicians) from suicide, drug addiction and alcoholism,[13] and the mortality and morbidity statistics from British doctors show similarly disturbing figures.

A nationwide workload study carried out by the British Medical Association and the Department of Health and Social Security demonstrated that the 'average' general practitioner is on duty for 73 hours a week.[14] The effects of such hours on a doctor's delivery of high quality, cost sensitive care surely merits further study. If deleterious effects are shown, what then should be changed? Should an out-of-hours cover system take into account the age, sex and physical health of the doctor, or the demography/demands of the population? How do we take into account the great range of night work when my personal experience varies between having an occasional undisturbed night and a night with five night visits and two additional telephone calls? Over 10 years ago, the nettle of out-of-hours work was grasped in an editorial which looked at the advantages and disadvantages of the shift system, the extended cover system and the alternative of commercial deputizing services.[15] To these we can add the use of local casualty departments — the 'emergency room' system. Would this system discourage the unnecessary

call? Or would it delay the diagnosis of a serious condition? Who would staff the emergency rooms?

With calls for contractual renegotiation of the 24-hour commitment from a section of the general practitioner population, together with widespread usage of deputizing services, where available, this subject merits a broad and open discussion if a political split within the profession is to be averted.

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# Research and the *Journal:* 30 years on

THIS year we celebrate 30 years of the *Journal of the Royal College of General Practitioners,* volume one of which was published in 1958. Under the editorship of Dr R.M.S. McConaghey it evolved from the *Research Newsletter* which started in 1953 as cyclostyled sheets circulated to members of the research register and later to all members of the College. The *Research Newsletter* set out to comply with object 3(f) of the Memorandum of Association 'to encourage the publication by general medical practitioners of original work on medical or scientific subjects connected with general practice'. In 1988 the *Journal* still pursues the same objective of giving the highest priority to the publication of original papers.

In the *Newsletter* and the early issues of the *Journal* we can see the origins of general practice research as we know it and of projects which have grown and flowered into some of the classic studies of general practice. The recording of morbidity patterns in an individual's practice, in the tradition of William Pickles, developed into small groups of researchers and then to the national morbidity surveys which continue to be coordinated by the Birmingham Research Unit of the College.

Looking back through the volumes of the *Journal,* many themes recur. The first editorial in the *Journal,* entitled 'No heart to poke poor Billy', dealt with accidents in the home and how nurses, health visitors and general practitioners could help to prevent them. Now these personnel are labelled the 'primary care team'. The jargon has changed but the challenge of providing effective preventive care in general practice remains the same. Developmental assessment of children, the care of the elderly, cervical smears and screening for hypertension are other aspects of preventive care which general practitioners have studied and described in papers in the *Journal* during the past 30 years. Another example is how the role of the College and methods of entry to it continue to generate controversy in the pages of the *Journal.* In 1958 Dr Ruth Cammock discussed whether the College should be an elite organization or open to all general practitioners and recommended continuous performance review rather than the introduction of a single 'academic hurdle' as a criterion for membership. Thirty years later the debate whether the College should be academic or political, elite or representative, continues in this issue of the *Journal.* It is a sign of vitality of the young and expanding College that these issues are argued with such vigour.

Thirty years is a whole generation. Few of the pioneers who founded the College are still in active practice. They have seen the renaissance of general practice in the United Kingdom from a position of low status and low morale 30 years ago to what is now the most popular choice of career for most medical graduates. The academic base of general practice has also developed in a remarkable way. In 1956 the first independent university department of general practice was created in Edinburgh and although other medical schools were slow to follow there are now over 20 university departments of general practice and at least one general practitioner with a responsibility for teaching the discipline in every medical school in the United Kingdom. The Mackenzie report of 1986 argued that there is still a considerable way to go in terms of personnel and resources before the departments can be fully productive in research and education and the Government has recently recognized the need for more resources for these departments. Nevertheless, judging by the number of papers they submit to the *Journal,* the academic departments of general practice manage to be active. It is an indication of the strength of general practice that we receive four times more papers than it is possible for us to publish. It is also a strength that there is a balance in the authorship of papers with 63% of our general practitioner authors working in their own practices compared with 37% who are based in the university departments.

As the membership of the College and the circulation of the *Journal* have grown (now standing at over 16 000), so too has the status of the *Journal* as an academic journal. Yet this role is not and has not always been admired and appreciated by all members of the College. In 1969 an editorial declared that 'Unless a journal arouses criticism it hardly achieves the objects for which it is published' and reported a questionnaire to readers