

Primary care research: moving on from the 1996 research assessment exercise

RESEARCH in general practice and primary care has attained a high profile in recent years. Not only has the importance of a research base in primary care been emphasized, but also new funding opportunities have become available. The university departments of general practice play a key role in undertaking and supporting research in general practice, and are increasingly linked to the research activities of National Health Service (NHS) general practitioners through mutual involvement in the rapidly expanding number of research networks in the United Kingdom.

Funding for universities and medical schools is increasingly linked to academic performance. The United Kingdom Higher Education Funding Councils (HEFC) carried out their fourth periodic research assessment exercise (RAE) in 1996, producing ratings on which to base the future allocation of their research funding.¹ Research quality was assessed by panels of experts judging university departments in particular 'units of assessment', giving one of seven ratings ranging from 1 (worst) to 7 (best). University departments of general practice and primary care were rated within the unit of assessment 'community-based clinical subjects', along with departments of public health and psychiatry. Medical academics have protested that the RAE uses unfair methods, takes no account of the teaching load of a department, and has led to damaging cuts in medical schools.^{2,3}

To assess the effects of the 1996 RAE on university departments of general practice, a survey was carried out of all heads of department at the end of 1997.⁴ The findings suggested that, overall, funding for academic primary care was reduced by the 1996 RAE: only three departments declared increased funding had resulted from the exercise, while 10 reported cuts, leading to the loss of some academic posts.

Some departments were bound to lose out, since the principle of the RAE is to reward selectively more highly rated units of assessment. However, there were clearly more losers than winners among departments of general practice, and the exercise proved costly to the developing academic discipline of primary care, which could ill-afford such cuts. One head of department commented that, despite all their efforts to develop new programmes of research and teaching throughout the 1990s, the overall feeling at the end of 1996 was that the discipline had been 'deflated'. It is, however, worth remembering that medicine as a whole did rather badly in the 1996 RAE compared with non-medical university subjects.

This is not to suggest that the 1996 exercise was unfair. The heads were evenly split as a group about its fairness, with those rated more highly being significantly more likely to view it as fair, which is perhaps predictable. A study of heads' assessments of their fellow departments of general practice following the 1992 RAE showed a high correlation between peer ratings and ratings for individual departments given by the general practice members of the RAE panel.⁵ These findings served to validate the panel's ratings, and, in these terms, the exercise can be seen to be fair. Nevertheless, the heads had some significant concerns about how primary care research was rated in the wider exercise in comparison with other disciplines.

Moving on from the 1996 RAE, the academic departments have been responding in two ways. First, they have been trying to influence the assessment methods used in the next exercise

planned for 2001. In response to changes suggested in the questionnaire survey, the majority of heads agreed that health services research should be afforded greater status, and that the judging panel should include a social scientist.⁴ A recent consultation paper from the funding councils has, indeed, suggested that sub-panels might be created to provide a more accurate assessment of subjects, such as health services research and primary care research. Most heads wanted the criteria that are used to judge research papers to be much more explicit, but only one in three agreed that journal impact factors should be used to judge papers, which lends support to an alternative suggestion that panels should assign journal ratings in consultation with academics.²

Secondly, the academic departments have responded by increasing their bids to alternative sources of funding for research, some of which are becoming more important than the education councils. HEFC funding for research has been reduced overall, and may end altogether if the Government accepts the recommendation of the Council for Science and Technology, which states that up to £100 million should be transferred from the education councils to the research councils.⁶

Several welcome initiatives are likely to lead to increased investment in research in general practice and primary care. The 1996 White Paper, *Primary Care: Delivering the Future*, recommended that Government funding for research and development (R&D) in primary care should be doubled from £25 million to £50 million over the next five years,⁷ and in 1997 two major reports appeared that emphasized the need to train more primary care researchers and provided strategies for using the anticipated increases in funding. These reports were the Medical Research Council's Topic Review on Primary Health Care⁸ and the report of the National Working Group on R&D in Primary Care.⁹

Advertisements have appeared recently, inviting applications for programme grants in primary care research and primary care young researcher and career scientist awards, jointly funded by the Medical Research Council and Department of Health. Together with anticipated increases in regional NHS funding for primary care research networks and the extension of NHS 'Culyer' R&D support funding to general practice providers,¹⁰ these initiatives will help expand the research capacity in primary care, both in academic departments and in research practices. The Government clearly recognizes that we must develop the infrastructure as rapidly as possible to address the important clinical and policy research questions facing primary care. The answers will help inform, support, and evaluate the 'primary-care led NHS' as we begin its second half-century facing further major reforms.¹¹

Although some university departments of general practice have undoubtedly suffered setbacks in the short term as a result of the 1996 RAE, the insistent demand for more primary care research and the new alternative sources of funding should create a much more favourable climate for research in general practice and primary care. However, with these opportunities come a number of challenges, including a need to ensure that our research capacity is adequate, that we develop a career structure capable of training high-quality researchers, and that we develop a better understanding of the elusive links between research and practice.

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The medicine of primary care

PRIMARY care is a portmanteau concept. It has become a favourite of politicians and can be viewed variously as a set of activities, a process, a level of care, or even a strategy for organizing the health care system as a whole.¹ Starfield's definition is typical of many: 'Primary care is first contact, continuous, comprehensive and co-ordinated care provided to individuals and populations undifferentiated by age, gender, disease or organ system.'² The problem with such all-embracing definitions is that they begin to beg the question as to whether much of what is now taken to be primary care could be more cost-effectively delivered by persons or groups other than expensively-trained general practitioners (GPs).

In keeping with the broad definition of primary care, United Kingdom GPs are being expected to take on an increasingly wide range of tasks. In caring for individuals, this change reflects both the increasing expectations of society as well as the deterioration of traditional community-based support, such as the church or the family. At a population level, the involvement of GPs in primary care groups (PCGs) will involve everyone in population-based care. For many GPs, there is an increasingly urgent need to consider what the true nature of clinical general practice is.³

One of the great advances in primary care over the past 20 to 30 years has been the appreciation that the primary care physician's responsibilities and tasks extend beyond the narrow technological confines of diagnosis and treatment. Problems need to be seen in the context of a person's lifestyle, family, and community.⁴ In consideration of this trend, the teaching of patient-centred consultation skills and the psychosocial elements of medical practice have been the traditional remit of the undergraduate and postgraduate general practice attachments. Colleagues in secondary care settings continue to teach the 'clinical medicine', as there is a perception that this is best learnt in hospital settings from appropriate specialists.⁵ However, it is clear that the types of patients or the conditions encountered in a GP's surgery will be quite unlike those seen in secondary care settings.⁶ Not only will the pathologies be different, but also the prevalences of the disorders will vary. To compound matters further, the discriminant values of signs and symptoms will differ.⁷ In 1990, Sox and colleagues showed that the predictive value of the 'traditional' chest pain history is reduced if the prevalence of coronary disease is low, as is likely in a primary care setting.⁸

Within primary care, conditions will be seen at an evolution-

ary stage when 'text book' descriptions and classifications simply do not apply, and sensitivities and specificities of features in the history, examination, or investigations are also changing.^{9,10} The signs and symptoms of pneumonia in primary care are, more often than not, far from classical.¹¹

Decisions made by GPs are different from those made by specialists — the precise diagnostic labels are often less important than deciding on an appropriate course of action. Diagnoses may be framed in terms of dichotomous decisions: treatment versus non-treatment, referral versus non-referral, and urgent versus not urgent.¹² The information used to make such decisions will not only be the 'traditional' static clinical information, but also information gained over a period of time (dynamic evidence) and clusters of information. Moreover, a patient's pattern of attendance, and other pieces of information more uniquely available in primary care, may have significant weights of evidence assisting the diagnosis of common and important conditions in the primary care setting.^{13,14} The frequent use of non-specific investigations within primary care, such as erythrocyte sedimentation rate, reflects the broader approach of primary care medicine.¹⁵

The North American Institute of Medicine, in a recent review, developed a more practical definition of primary care, as 'the provision of integrated accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients and practising in the context of family and community'.¹⁶ The committee emphasized that the central feature of health care remains the patient-clinician interaction, and they went on to define a clinician as: 'an individual who uses a recognized scientific knowledge base'. This definition emphasizes that primary care physicians deal with all problems and often at an earlier and more undifferentiated stage than do their specialist colleagues. Thus, in problem solving, GPs adopt a more patient-focused approach and inevitably have to cope with greater diagnostic uncertainty. All clinical diagnosis is probabilistic; the problem in primary care is often the low levels of probability at which decisions need to be made.^{15,17}

There is an urgent need for more research into the clinical content of primary care. In relation to diagnosis, it seems that we have yet to address in any meaningful manner what is indicated by symptoms and signs in primary care: just how useful is a particular symptom at predicting a certain disease, which symptoms are not useful, and which symptoms will rule out disease?¹⁷⁻¹⁹

Recently, the Medical Research Council Topic Review on Primary Health Care highlighted the need for relevant clinical research in relation to both acute and chronic disorders in primary care.²¹ Furthermore, many problems in primary care are ill-defined and do not fit easily into traditional diagnostic categories.

With the recent growth in research networks it is now feasible to develop rigorous epidemiological evidence to assist in the rational assessment of patients in general practice. By comparing the primary care presenting symptoms and signs against a diagnostic 'bench mark' it is possible to decide what clinical information (individually, or in clusters and modified to incorporate specific and unique features more easily accessible in primary care) may have most significance and provide the greatest 'weight of evidence' for diagnosis in a primary care setting. Such work is already beginning to overturn some of the traditional secondary care teaching. In a recent paper by Lindbæk, Hjortdahl, and Johnsen, it was reported that four symptoms, signs, and blood tests were significantly and independently associated with the presence of sinus infection in primary care.²² Their findings were at variance with a secondary care review by Williams and Simel.²³

In relation to treatment, rigorous randomized controlled trials and systematic reviews are gradually beginning to appear on clinical conditions that matter to primary care clinicians and their patients, such as otitis media²⁴ or acute cough.²⁵ Night cramps are of little interest to secondary care, but many patients in primary care remain on quinine — is this sensible or safe?²⁶ Even more importantly, such research is more generalizable as it is increasingly being undertaken within primary care settings.

Unfortunately, where such clinical information exists, it remains relatively inaccessible to the majority of GPs and, so far, it seems to have had little impact on either undergraduate or postgraduate teaching. However, one of the most exciting developments in recent years has been the development of the Patient-Oriented Evidence that Matters (POEM) movement.²⁷ POEMs are summaries of primary care evidence that address common primary care problems, use valid research methods, and report outcomes that matter to patients. Each month, the USA-based POEM editorial team scans 80 journals of interest to primary care physicians, identifying articles that should have a direct and immediate impact on primary care practices. This information is now available via the Internet.²⁸ Primary care research needs to explicitly feed into the POEM process.²⁹

Primary care medicine is a growing and unique specialty; it is about correctly and rationally addressing the clinical questions that matter in primary care by using evidence from research within primary care. Such clinical questions may be diagnostic, therapeutic, or prognostic.³⁰ As primary care clinicians we need to be sure of the adequacy of our knowledge base, not only in consultation skills and the context of illness but also in relation to the medicine of primary care.

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