ficial airway and instant access to adrenaline; the provision of oxygen and full intubation equipment was considered unnecessary in this report.

Another potential source of problems in the practice is the need for sterile instruments.[21,22] These are best obtained by the use of an autoclave, and recent Department of Health circulars have set basic standards for sterilizing equipment in the practice setting. Alternatively, sterile instruments may be available from the local hospital's central sterile supply department either on loan or by lease agreement. Disposable instruments are unlikely to be the answer as many procedures will require a scalpel, forceps, scissors, needle holder and artery forceps, or any combination of these, some of which are not available as disposable items and even those that are available are often of poor quality so making the procedure technically more difficult.

The solutions to many of the points raised here are self-evident, but the provision and timing of appropriate training remains a source of great debate and is of fundamental importance if the role of general practice minor surgery is to receive universal acceptance in both the hospital and primary health care systems. This training should be supervised by experienced trainers so that eventually the 'minor surgery specialist' will be able to identify suitable patients and conditions, operate safely and appropriately and thus provide a service which is satisfying for patients and doctors. The recognition of a need for adequate and structured continuing education in minor surgery is something the profession should take up with enthusiasm, otherwise it is likely that regulations will be set by others who may not be as constructive in ensuring the maintenance and continuing development of this service throughout general practice.

D P BERRY
Surgical research fellow
K G HARDING
Director, Wound Healing Research Unit,
University of Wales College of Medicine

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Address for correspondence
Mr D P Berry, Wound Healing Research Unit, University Department of Surgery, University of Wales College of Medicine, Heath Park, Cardiff CF4 4XN.

Making changes? Audit and research in general practice

CONTRACTUAL obligations and financial incentives have been effective in modifying professional behaviour among general practitioners,[1] who are traditionally, some would say notoriously, resistant to imposed change. Blunt instruments have been needed to achieve the pace and scale of change demanded by the Department of Health, not least because grave concerns about the impact of reforms on professional relationships and patient care have impaired their early adoption. Audit and research are other potential agents of change with more intellectual appeal but which have more question marks over their efficacy.

Research and audit in general practice are both underwritten largely by rhetoric, but audit has also been supported by substantial central funding. Audit is participative and, because participation in change is more likely to make changes stick, it is thought to be a good way of effecting professional behavioural change.[2] Little is known about the time, energy and money consumed by audit in general practice, or its opportunity costs and impact on the costs and quality of health care. Audit is not at present an explicit component of the National Health Service research and development strategy. Research in general practice, however, is more likely to be a solitary than a participative activity[3] and there is little evidence that it is a particularly powerful agent of change.[4] Although the management of change and the diffusion of innovation in general practice have received some attention,[5,6] there is incomplete understanding about the forces that initiate and sustain significant change and conversely about the factors which act as barriers to change.

Research involves the quest for new knowledge while audit incorporates that knowledge into a process aimed at improving care. A national conference on medical audit and medical

research explored some of their other characteristics and relationships.[7] Research seeks generalizable results while audit tries to incorporate research information into local activity. While research is likely to be performed in a setting which controls for extraneous factors, the methodology of audit tends to be naturalistic and to reflect the realities of clinical practice. The research question may be answered by doing a one-off study, while the audit cycle may have to turn again and again as a practice moves towards required standards. Both audit and research require analysis of accurately collected information, and make use of the same methodologies for doing so. Both require commitment and support. The search for criteria for good practice as the basis of audit may well highlight research questions, further emphasizing the complementarity between the two. The conference believed that carrying out audit and producing guidelines affect practice, although perhaps only transiently, and underlined the importance of evaluating audit and of auditing research. We need to establish whether research is ethical and relevant and whether its findings are effectively disseminated and have an impact on clinical practice.

Where does this leave audit and research in general practice? If audit really is an effective way of promoting and sustaining change leading to improved health and health care, is enough being done to support and evaluate it? Information is required about the level of meaningful audit activity in general practice and the relationships between family health services authorities, medical audit advisory groups, primary health care teams and their patients. If audit is not an efficient agent for change, we need to know about that quickly. Doing audit properly has opportunity costs for practices in terms of activities which could otherwise have been pursued. Time may be wasted reinventing the wheel for every protocol for every condition in every practice and we should perhaps consider a central or regional audit resource to supply most of the framework and content, although generating one's own standards may be the only way to ensure that they are aimed for.[8] Claims are made that audit money grows on trees and funds what often might be regarded as poor research,[9] and an evaluation of a range of audit projects and initiatives is urgently needed, not least to position audit appropriately in relation to regional research and development strategies.

What about research in general practice? There is still no adequate infrastructure for general practitioner researchers outside university departments, although the Royal College of General Practitioners' research training fellowships and the innovative appointment of a regional research fellow in the northern region are important initiatives. Yet no one can be in any doubt that research and development in primary care and community settings will assume ever-increasing importance in our financially constrained, post-Tomlinson[10] health service and as health promotion and health targets receive more and more attention. However, we should beware uncritical 'every practice a research practice' evangelism. What is needed is a climate — culture overstates the issue — in which inquisitive people with good ideas and energy can at least think about researching their questions with a reasonable prospect of getting some time, money and support to do so. This has clear implications for a review of general practitioners' contractual and working arrangements and for a commitment, most likely from regional health authorities but also involving the universities and postgraduate education, to providing research training, especially in health services research methodology. University departments will need continuing support if they are to contribute to training and to supervision of research, although better links with secondary care and other caring agencies and non-clinical research groups will strengthen research capabilities and spread the load. In the new climate of research and development in the NHS, the creation of powerful research groups of this kind will be essential to bid credibly for research contracts and to undertake commissioned research.

There has never been a better time for primary care research to establish its place in a national research and development strategy; we need to be able to respond to the research agenda generated by the Central Research and Development Committee.[11] Such a strategy will have most effect on the health of the population if the links between research developments, dissemination and implementation are understood and considered. A variety of techniques will be needed to make changes and to make changes stick: the incorporation of the results of research studies into contracts for the purchase of health care would certainly be one way of commanding our attention.

ROGER JONES
Professor, Department of Primary Health Care
University of Newcastle upon Tyne

JOHN SPENCER
Senior lecturer and RCGP audit fellow,
Department of Primary Health Care
University of Newcastle upon Tyne

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Address for correspondence

Professor R Jones, Department of Primary Health Care, The Medical School, University of Newcastle upon Tyne, Framlington Place, Newcastle upon Tyne NE2 4HH.

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