further improvement in survival of these patients. A better understanding of multiple organ failure after injury is required: the search for a unitary theory is still on.

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1 Baue AE. Multiple, progressive or sequential system failure: a syndrome for the 1970s. *Arch Surg* 1975;**110**:779-81.
2 Carrico CJ. The elusive pathophysiology of the multiple organ failure syndrome. *Ann Surg* 1993;**218**:109-10.
3 Consensus conference. American College of Chest Physicians/Society of Critical Care Medicine: definitions for sepsis and organ failure and guidelines for the use of innovative therapies in sepsis. *Crit Care Med* 1992;**20**:864-74.
4 Fry DE, Pearlstein L, Fulton RL, Polk HC. Multiple system organ failure: the role of uncontrolled infection. *Arch Surg* 1980;**115**:136-40.
5 Goodwin CW. Multiple organ failure: clinical overview of the syndrome. *J Trauma* 1990;**30**(suppl): 163-5.
6 Norton LW. Does drainage of intra-abdominal pus reverse multiple organ failure? *Am J Surg* 1985;**149**:347-51.
7 Faist E, Baue AE, Dittmer H, Heberer G. Multiple organ failure in polytrauma patients. *J Trauma* 1983;**23**:775-87.
8 Saadia R, Schein M, MacFarlane C, Boffard KD. Gut barrier function and the surgeon. *Br J Surg* 1990;77:487-92.
9 Saadia R. Trauma and bacterial translocation. *Br J Surg* 1995;**82**:1243-4.
10 Atkinson SW, Bihari DJ. Selective decontamination of the gut. *BMJ* 1993;**306**:1480-1.
11 Schlag G, Redl H, Hallstrom S. The cell in shock: the origin of multiple organ failure. *Resuscitation* 1991;**21**:137-80.
12 Moore FA, Moore EE. Evolving concepts in the pathogenesis of postinjury multiple organ failure. *Surg Clin North Am* 1995;75:257-77.

The future of clinical audit: learning to work together

There are lessons to be learnt from audit in primary care

Since 1990 a quiet revolution has taken place in the National Health Service. Against a background of rapid change and, in some places, considerable disruption, clinical audit has become part of everyday life for most health care professionals.[1 2] Different approaches have, however, been adopted in hospital and community trusts and in primary care. The challenge now for commissioning agencies is to discover which aspects of the clinical audit initiative have been successful and to exploit them across traditional organisational boundaries.

Clinical audit is pivotal in patient care: it brings together professionals from all sectors of health care to consider clinical evidence, promote education and research, develop and implement clinical guidelines, enhance information management skills, and contribute to better management of resources—all with the aim of improving the quality of care of patients. Since 1990 participation in audit has been a contractual requirement for doctors in hospital and community health services[3 4]; nursing and therapy audit was developed later and was funded separately. In primary care clinical audit has not been compulsory, but from 1991 each family health services authority set up a medical audit advisory group to support practices making audits.[5]

The most successful medical audit advisory groups have been professionally led. They have taken a helping and educational role, and this approach has secured the commitment of most general practitioners and their teams.[6 7] Audit support staff have been vital in helping busy practice teams to improve their clinical care. This has been an exacting task—doctors initially suspected managerial interference,[6] and practices have found it increasingly difficult to find time for what remains a voluntary (and unpaid) activity in already crowded days.[6] Nevertheless, the recent survey by Baker *et al* found an increase in the quantity and quality of clinical audit in general practice as a direct result of the activity of medical audit advisory groups.[7] This was accompanied by improvements in care and acceptance of audit as part of general practice. A recent report from the National Audit Office also showed improvements in the process of care and outcome.[8]

The recent changes in the structure of health authorities provide an opportunity to integrate clinical audit bodies more closely with each other and with purchasers. Recent executive letters show that the NHS Executive recognises that medical audit advisory groups have been effective in fostering audit in primary care,[9 10] and it recommends that health authorities should build on the strengths of what already exists in any new arrangements they make for supporting clinical audit.

Various models are emerging. Some health authorities are setting up coordinating functions to promote evidence based clinical guidelines and clinically effective management throughout both primary and secondary care. Others are looking at clinical audit as a way of informing the contracting process. Yet others are forming clinical audit committees to oversee the activity of all local clinical audit organisations. All these approaches will create partnerships which should improve audit skills across primary, secondary, and community care and contribute to the clinical education of health care professionals. Clinical audit should also support health authorities' work on assessing health needs and improving the health of the population.

Much work remains for clinical audit groups to do. We must continue to train health care professionals in the various forms of audit, motivate them to use the tools, and promote the use of evidence based guidelines. But none of these measures will be successful unless practice teams are helped to understand how to use data and information effectively. A training course for managing information in primary care has been developed for the Institute of Health and Care Development,[11] and work is in progress to implement this curriculum.

In our enthusiasm for taking on new roles and challenges, we must not forget that clinical audit is designed to improve the care of individual patients. Now is the time for colleagues in primary, secondary, and community care to work more closely than ever on quality issues. From the patient's point of view organisational boundaries are irrelevant to the care they receive.

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1 Stern M, Brennan S. *Medical audit in the hospital and community health service*. London: Department of Health, 1994.
2 Humphrey C, Berrow D. *Medical audit in primary care*. London: Department of Health, 1994.
3 Department of Health. *Working for patients*. London: HMSO, 1989. (Cmd 555.)
4 Department of Health. *Working paper 6: medical audit*. London: HMSO, 1989.
5 Department of Health. *Health service development. Working for patients. Medical audit in the family practitioner services*. London: DoH, 1990. (HC(FP)(90)8.)
6 Pringle M, Butterworth E, Leach S, Norton A, Teasdale S. *Report of the task force on the future of clinical audit in Lincolnshire*. Lincoln:Lincolnshire Clinical Audit Committee, 1996.
7 Baker R, Hearnshaw H, Cooper A, Cheater F, Robertson N. Assessing the work of medical audit advisory groups in promoting audit in general practice. *Quality in Health Care* 1995;4:234–9.
8 National Audit Office. *Clinical audit in England*. London: HMSO, 1995.
9 Department of Health. *The new health authorities and the clinical audit initiative: outline of planned monitoring arrangements*. London: DoH, 1995. (EL(95)103.)
10 Department of Health. *Arrangements for clinical audit in primary health care*. London: DoH, 1996. (EL(96)16.)
11 Teasdale SJ, Bainbridge MA, Horsfield P, Simpson L, Teasdale JK, Williams JG. *JIGSAW information management and technology programme: foundations and quality of care programmes: curriculum specification*. Bristol: Institute of Health and Care Development (in press).