

Collaborative reduced the wait for an appointment with a doctor and more than four-fifths of general practitioners felt that their participation in the collaborative had been worthwhile.¹³ But the research was commissioned within a very short time-scale and has a number of important limitations, as the authors recognise. No control practices were examined and little baseline data were available. The practices involved were not representative of all general practices, being more likely to be training practices and ex-fundholding practices, and less likely to be in urban or deprived areas. Data about appointment availability was collected by the practices themselves and is therefore of uncertain reliability. Most importantly, the evaluation did not include any information from patients about their experiences of the changes to access arrangements.

We need more research about the experience and priorities of patients in gaining access to primary care, including all patients, not just those successful in gaining access. Research should focus on the needs of particular groups of patients who may lose out under the new arrangements, and should explore the trade-offs that patients make between speed of access, choice of clinician and ability to book in advance. We need evidence about the impact on other health services (particularly out-of-hours services) and the concern that increased speed of access may increase demand and/or reduce continuity of care.

Perhaps the lack of evaluation of Advanced Access is not surprising. It is inconceivable that a new drug could be licensed for use in the UK without clear evidence of benefit or consideration of side effects, yet this is routine with regard to the introduction of major changes in organisation within the NHS. Another paper in this month's *Journal* describes a host of innovations to improve access with a very limited evidence base.¹⁴ There seems little consideration of the possibility that changes which seem a good idea at face value may not always be universally helpful or may have unintended adverse consequences. Although the NHS research and development programme has now funded research on Advanced Access that addresses many of the above questions, the organisational change itself has been promoted for more than 3 years, with considerable investment of resources.

The importance of independent and rigorous evaluation of new developments in the NHS *before* they are widely introduced is hardly an original observation but it needs to be made repeatedly and vigorously. Perhaps, as well as a clearer understanding of Advanced Access, we need a better

understanding of why the message about evidence-based policy is not getting through.¹⁵

CHRIS SALISBURY

Reader in Primary Health Care

Division of Primary Health Care, University of Bristol

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Conflict of interest

Chris Salisbury is receiving funding from the NHS Service Delivery and Organisation Research and Development Programme to undertake research on Advanced Access.

Address for correspondence

Dr Chris Salisbury, Reader in Primary Health Care, Department of Community Based Medicine, University of Bristol, Cotham House, Cotham Hill, Bristol BS6 6JL. E-mail: c.salisbury@bristol.ac.uk

The work of the National Patient Safety Agency to improve medication safety

PATIENT safety is defined as freedom from accidental injury due to medical care.¹ Two reports on patient safety in the National Health Service (NHS) have been published by the Department of Health: *An organisation with a memory*² and its follow-up, *Building a safer NHS for patients: implementing an organisation with a memory*.³

The reports highlighted research that indicated that

around 10% of patients admitted to United Kingdom (UK) acute hospitals experience some kind of incident that might threaten their safety,⁴ and that up to half of these could have been prevented. Findings in the United States,^{5,6} Australia,⁷ New Zealand,⁸ and Denmark⁹ have suggested similar error rates. The little data reported from primary care suggests similar rates of safety incidents.¹⁰

The reports noted, however, that in the UK, as well as in many other countries, little systematic learning resulted from incidents or failures in health care.

The international evidence tells us that in complex healthcare systems things can, will and do go wrong. *An organisation with a memory* concluded that the best way of reducing error rates is to target the underlying systems failures, rather than to take action against individual members of staff, since most incidents result from weaknesses in systems and processes rather than the acts of individuals.

Although the majority of studies looking at the frequency of patient safety incidents have been conducted in an acute setting, the results of a study carried out by Sanders and Esmail in the UK suggests a similar situation in general practice.¹⁰

The National Patient Safety Agency (NPSA) is a Special Health Authority in the NHS and was set up in 2001, following the publication of these reports. The role of the NPSA is to:

- collect and analyse information on adverse events in the NHS;
- assimilate other safety-related information from within the UK and worldwide;
- learn lessons and ensure that they are fed back into practice;
- where risks are identified, produce solutions to prevent harm, specify national goals, and establish mechanisms to track progress.

The National Reporting and Learning System

The National Reporting and Learning System (NRLS) that is being implemented in England and Wales during 2004 will coordinate the reporting of patient safety incidents nationally and, more importantly, improve the ability of the NHS to learn from an analysis of these incidents.

The NRLS has been designed to build on incident reporting systems that are already used in NHS organisations and the system has been developed to be compatible with all the major commercial local risk-management systems used in most NHS organisations. This means that incident information that was previously only collected locally can now be gathered to track national trends. The system depends on two main features for its operation:

- An NPSA dataset — a standard national framework used to gather patient safety incident information and ensure optimum learning.¹¹
- An electronic reporting form transmitted via NHSnet, Health of Wales Information Service or the Internet, for organisations without a commercial local risk management system, or for those staff who only wish to report independently of their organisation.¹¹

The NPSA expects that, when possible, general practitioners (GPs) will report patient safety incidents through their own primary care organisations, so that local learning can take place when things go wrong. Eventually, GPs will be able to use the electronic reporting form on the World Wide Web to report incidents directly to the NPSA to inform national learning.

As part of its commitment to maintaining the anonymity of staff and patients, the NPSA will not record names of

patients or healthcare staff, pass information to regulators or performance managers concerning individual cases, and will not investigate individual incidents.

The analysis of NRLS data will focus on the key themes and trends that emerge, and how they shed light on systemic failures in patient care and will inform the development and prioritisation of practical national solutions.

The development and implementation of patient safety solutions

Incidents involving medicines are the largest incident type after slips, trips and falls, and accounted for 9% of all the incident reports in the NRLS pilot of 28 NHS organisations, carried out over a 9-month period in 2002, during which 28 998 incident reports were sent to the NPSA.

The Department of Health has recently published a follow-on report to *Building a safer NHS for patients: implementing an organisation with a memory* called *Building a safer NHS for patients: improving medication safety*.¹² The report collects together information concerning the causes and frequency of medication errors, highlights drugs and clinical settings that carry particular risk, and identifies models of good practice. The NPSA has already been working on some of the high-risk areas identified in the report. One example is the use of methotrexate tablets in primary care.

Oral methotrexate therapy

There have been regular patient safety incidents associated with oral methotrexate use in the UK and in other countries. In the UK between 1993–2002 there were 137 cases of harm and 25 deaths associated with this problem (National Patient Safety Agency, personal communication, 2003). These harms were associated with methotrexate tablets being prescribed and/or dispensed and administered in a once-daily dose, rather than as a once-weekly dose; or that 10 mg tablets were prescribed and/or dispensed rather than 2.5 mg; or that the patients did not receive the regular blood test monitoring required for this type of therapy.

The NPSA is developing three safety solutions for this problem. The first solution involves improved patient-held information, clarifying the safe use of methotrexate and enabling patients to track their own monitoring. The second solution involves improved labelling and packaging of methotrexate tablets from industry. The final solution is an initiative working with software companies supplying GP electronic prescribing systems and community pharmacy dispensing systems, to incorporate flagging mechanisms to provide alerts to practitioners concerning overdosage and frequency of administration of methotrexate. The methotrexate example provides an introduction for two broader safety solutions.

Improving the labelling and packaging of medicines

Problems with the labelling and packaging of medicines in use were included in *Building a safer NHS for patients: implementing an organisation with a memory*.³ It was acknowledged that some different medicines are presented to clinicians in almost identical packaging and that medicines should be packaged in such a way that confusion is removed. In 2003 the Medicines and Healthcare Products Regulatory Agency

(MHRA) published the *Best practice guide for the labelling and packaging of medicines*.¹³ The guide recommended the use of large font sizes, and colour and design to help differentiate medicine packs of different drugs and strengths. The NPSA is working with practitioners, the MHRA and the pharmaceutical industry to implement the best practice guidelines for medicine products identified as high risk. The National Learning and Reporting System includes codes for patient safety incidents involving medicines, where poor labelling and packaging of medicines, including parallel imported medicines from other countries, have contributed to the incident. There are already examples of safer medicine packs being introduced into practice as a result of this initiative.

Information technology

In 2002, the NPSA commissioned research to identify factors that would help realise the potential of GP systems to improve patient safety.¹⁴

Computers have considerable potential to help GPs practice safely in terms of providing accurate information on patients and drugs at the point of decision making, effective decision support, and intelligent hazard alerts for cautions, contraindications, drug interactions and allergies. They also provide help with timely and appropriate monitoring and reporting on patients at risk.

There are problems that have been highlighted with computer systems. For example, GPs and practice staff may not know how to make best use of their systems and the safety features available. In addition, computer systems may not contain all the safety features that are desirable, and important hazard alerts may not be sufficiently well displayed and differentiated from other more advisory information.

Key points from the research indicated that problems included a lack of alerts in relation to contraindications, the presence of spurious alerts, failures of drug allergy warnings, risks from prescribing drugs with similar names, a lack of warnings for certain drugs, and important alert warnings that were poorly designed and too easily overridden. There was also a lack of audit trails.¹⁵

There are a number of solutions that could help improve the safety features of GP computer systems or the abilities of the healthcare professionals to use these safety features. A number of these solutions could be implemented relatively quickly, particularly where system suppliers are not currently making full use of the functionality available on the drug database that they use.

The NPSA recognises that the use of information technology in health care provides an important method for implementing effective safety solutions for a range of patient safety problems. The agency is working with the NHS National Programme for Information Technology, the industry, researchers, and practitioners to ensure that patient safety is an important consideration when developing these systems for the NHS in the future.

DAVID H COUSINS
Professor and Head of Safe Medication Practice

MAUREEN BAKER
*Director of Primary Care, National Patient Safety Agency
4-8 Maple Street, London, W1T 5HD*

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