A national database of medical error

Aziz Sheikh MRCP MRCGP Brian Hurwitz FRCP MRCGP

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Events at Bristol have brought before the public and profession the intense pain and distress that medical errors can cause—pain suffered by patients, by relatives and, in different ways, by clinicians too. Medical errors by definition are unintentional, their causes usually multifactorial. Will chastisement, 'naming and shaming', or 'recertification' decrease current levels of medical error? If we are to make progress in this emotive area, profession and public alike will need to acknowledge that most errors do not amount to negligence; they stem more from systemic organizational failures rather than from the isolated failure of individuals[1].

EPIDEMIOLOGY OF MEDICAL ERRORS

A reliable estimate of the incidence of medical errors in Britain is not yet possible. In the absence of both an agreed working definition of the range of occurrences to be enumerated and a database of adverse medical incidents, meaningful data are unlikely to emerge. According to work in the USA and Australia, errors are made in between 4% and 45% of all hospital admissions, such widely varying rates reflecting to a large degree differences in definition[2–5]. Whilst many errors are minor in their consequences and of little clinical relevance, some 15% are clinically significant.

Box 1 **Proposed operational definition of significant clinical error**

> A clinical encounter that results in, or has the potential to result in, unintentional and unexpected patient harm

Significant medical errors are characterized as ones that result either in prolongation of hospital admission or in patient injury[6]. Using such a definition, Vincent estimates that a hospital with 50 000 admissions per annum can expect within its walls 2000–8000 clinically significant adverse events each year. Vincent's definition of error, however, seems framed too narrowly for those interested in its occurrence in primary care, where at least 70% of NHS doctor–patient encounters take place[7]. A tension arises between adopting a generic definition designed to widen the spread of clinical episodes to be counted as significant error (Box 1), and adopting a more restrictive definition that makes recognition and enumeration easier, but narrows the field.

ERROR REDUCTION STRATEGIES

Various intervention programmes have been designed to reduce the likelihood of systematic error[8]. Certain specialties have used confidential enquiries[9] and external peer review,[10] and the new clinical governance frameworks in the UK will provide scope for additional approaches such as clinical audits in which error detection is the principal measure. Such approaches need to focus on tasks, teams, and working conditions as well as on individuals[11].

CHANGE OF CULTURE

The culture of undergraduate medical education needs to be one in which tomorrow's doctors are sensitized to the importance of error recognition, enumeration, and investigation. The 'bravado' culture identified in some medical schools almost certainly hinders recognition and investigation of clinical error and discourages the necessary sharing of emotions with colleagues after error has been detected[12,13]. The phenomenon of clinical error thereby continues to occupy a shadowy and barely acknowledged territory in medicine; a crucial aim must be to bring it forth to a more civic cultural position, open to scrutiny that is not necessarily driven by blame.

Whether the revalidation process endorsed by the General Medical Council (GMC)[14] will make an impact in reducing error will depend very much on the approach taken. Attempts to raise standards globally, by helping doctors to develop skills and services, will almost certainly be more effective than seeking to identify 'dysfunctional doctors'—the principal approach adopted by the GMC until recently. Clearly, before embarking on such an exercise, the profession needs to identify appropriate outcome measures to see if the desired objectives of revalidation, including error reduction, can be met.

RESEARCH PRIORITIES

The research agenda is potentially broad, and should press the best available research tools into service, including

Department of General Practice & Primary Health Care, Imperial College School of Medicine, Norfolk Place, London W2 1PG, UK

Correspondence to: Dr Aziz Sheikh
E-mail: aziz.sheikh@ic.ac.uk

pragmatic randomized controlled trials to assess the efficacy of contrasting error reduction programmes. A prerequisite to studies of this kind is a database, perhaps akin to that kept by the Committee on Safety of Medicines for adverse drug reactions. It should contain material that will help to identify research priorities, including information on the frequency with which different kinds of medical error occur. A nationally representative group of general practices and hospitals, provided with guarantees of anonymity and confidentiality and adequate human and technical support, could contribute useful data on the most frequent types and sources of medical error and perhaps also some estimate of their potential gravity. One way to assemble the database would be to set up a confidential telephone line, providing anonymous access to staff trained to determine, *prima facie*, where actual errors have taken place. In its construction, the expertise of medical defence organizations and existing confidential medical helplines could be drawn upon.

CONCLUSIONS

As medical interventions become increasingly specialized and complex, the scope for error becomes wider and we should be enumerating and researching the many variants. But such scrutiny will be impossible without a sustained commitment by the medical profession to adopt a much more open attitude to the discussion of clinical errors of all sorts. There is a growing case for establishing a national log—or perhaps a series of local logs—of adverse clinical incidents, and the political will is also gaining strength[15].

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