Medical error definitions

What should we report to medical error reporting systems?

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A satisfactory definition of ''medical error'' still eludes us

The Netherlands is the latest country to announce the development of a national medical error reporting system.[1] Australia has had one since 1989, Denmark has one, the UK introduced theirs in 2001, Canada announced their plans in 2003, and the USA has a proliferation of error reporting systems, including several that have been going for a number of years and that have a well developed body of knowledge steering their use and development—for example, the Medical Event Reporting System for Transfusion Medicine (MERS-TM)[2] and the US Pharmacopeia's MEDMARX Reporting System[3]. Developed western countries do therefore seem to have ''bought into'' the message that medical error reporting systems are a very ''good thing''—although there is little evidence that Johnson's[4] pragmatic cautions have been well considered in setting them up.

The reporting of ''medical errors''—whatever they are—is still an embryonic endeavor and, before national and international medical error reporting systems get well under way, some crucial topics—such as defining what we are to report to error reporting systems—should be addressed with clarity. An occasional error reporting system has dealt with ambiguity over what needs to be reported by adopting a list of explicitly defined events ''that should never happen'',[5] but most are far less precise. Hopefully, the national medical error reporting systems of different countries will ultimately (if not initially) use the same definitions. We raise some issues here that expose the complexity of defining ''medical error'' and demonstrate just how peculiar, unnatural, and un-useful are some of the terms and definitions in current use.

Starting from first principles, it seems clear that a medical error reporting system should hold reports of ''medical errors'' and any dictionary will tell readers that ''medical'' means ''relating to medicine''. This seems reasonably straightforward but tends to have been narrowly interpreted by many medical error reporting systems as medical care provided by doctors and nurses to patients in hospitals. In developed countries most medicine is provided and received outside hospitals and a huge number of different occupational groups are involved—from accountants to microbiologists to social workers. The inclusion of medical errors happening and/or observed outside hospitals is crucial, and we therefore support a systems perspective that would draw attention to errors in medicine related policy, regulation, payment, and management as well as medical care delivery.

''Error'' is an even more problematic word than ''medical''. At its simplest it means ''mistake''. It also has other distinct meanings in mathematical and sports contexts. Over the last few years it has started to look as if ''error'' does not mean simply ''mistake'' when preceded by ''medical'' but, as in mathematics, it has a context-specific meaning. In our view, this meaning has not yet been authoritatively defined *simply, clearly, usefully*, and *inclusively*.

Simple definitions of ''medical error'' do exist. What could be more simple than ''underuse, overuse, or misuse''? But try applying it—categorizing events as one or other of these three—and you soon find that underuse of one thing is often overuse or misuse of another. When faced with coding and classifying reported errors,[6] we found similar problems with ''slips'', ''lapses'', ''knowledge-based mistakes'', and ''rule-based mistakes''.[7] In ''lapsing'' or forgetting to do one thing, a ''slip'' would happen—so which one was it? There were problems with ''knowing'' about ''rules'' that confounded coders. Ultimately, the reported events we dealt with just looked like mistakes (in the plain English sense) to us. We found that, despite their theoretical coherence, we could not use these simple definitions.

A similarly simple definition is ''harm'' or ''adverse event''; that is, a mistake doesn't qualify as a ''medical error'' unless it causes harm to patients and/or people are worse off than they would have been had the mistake not occurred. The debunked notion that medical malpractice claims are synonymous with medical errors is probably the genesis of this definition. Many favour it because, if something causes no harm (they argue), it is not worth being concerned about and because they maintain the ''harm'' definition is *clear* as well as *simple*. We disagree. By excluding medical errors that did not cause harm, medical error reporting systems will miss enormous opportunities to improve health care and create safer healthcare environments. Most error reporting system developers seem to agree with us on this. But they also seem to favour using another odd term—the ''near miss''—to define these events. ''Near miss'' is an expression borrowed from the aviation industry and it makes intuitive sense in that context. One can imagine an aeroplane swooping close to a building, for example, and ''missing''—but only just. ''Near hit'' captures the same idea. The translation of ''near miss'' to the industry of medicine is a bit of a stretch, though. One can never really know how ''nearly'' a medical error ''misses'' (presumably) causing harm. In aviation measures of ''nearness'' are objective—a kilometre is far enough away not to be regarded as ''near'' but a metre is not. There is no equivalently objective measure in medicine to determine whether an event qualifies as a ''near miss'' or not.

A further reason that we find the ''harm'' definition of medical error unsatisfactory is that the people who are the intended reporters to medical error reporting systems are poor judges of harm.[8] Healthcare providers tend to discount consequences such as patients having extended waiting times, having to spend extra money on travel or taking time off work, or being emotionally upset. They tend instead to negatively weight outcomes that patients may actually regard as benefits rather than harms, such as death. The notion of ''harm'' is far too subjective and lacking in clarity for it to be rolled into a definition of ''medical error''.

So, if the simple medical error definitions are problematic, perhaps it is inevitable that more complex definitions will have to be used. A number of these have been proposed such as: ''the failure, for reasons that are preventable, of a planned action to be completed as intended (error of execution) or the use

of a wrong plan to achieve an aim (error of planning)'';[9] ''active failures that occur at the sharp end of a continuum of decisions, environmental factors, and actions that affect patient care'';[10] and ''anything small or large, administrative or clinical, that you identify as something to be avoided in the future, that happened in your own practice that should not have happened, that was not anticipated, that you don't want to happen again''. These long definitions are summarized here—they become even longer and more detailed if readers go back to their sources. The longer a definition, the greater the chance something untoward and unhelpful will be included in it. The third of our examples, for instance, is a definition we developed while working with general practitioners and family physicians.[6] It includes a phrase that became difficult: ''*… that was not anticipated*''. Many of the primary care doctors we worked with encountered medical errors so regularly and frequently that they had trouble identifying errors that were not anticipated. In fact, the reporting system we were developing aimed to capture exactly these regular, frequent, and anticipated errors, so we had to revise the error definition we used in later work to remove the offending phrase.

If the beginning of wisdom is knowing what to call things, defining ''medical error'' is a beginning that has not yet been completed. An internationally shared definition will be important because, just as the problems of mathematics are not the concern of any single country or constituency, neither are the problems of patient safety. Perhaps the most useful learning opportunities from overarching national reporting systems will come from international comparisons: there may be transferable characteristics of a country's healthcare system that protect patients from certain kinds of harm and other characteristics that unnecessarily constrain patient safety. No country (let alone any organization or person) holds moral authority to unilaterally propose a ''medical error'' definition for general use. However, there are enough definitions already in circulation to inform fruitful discussions about what we are to report to national medical error reporting systems. Rather than more unilateral attempts to create the *best* definition, we look forward to consensus activities that will eventually deliver a sound definition we can all work with—patients, doctors, nurses, planners, policymakers, researchers, and others encountering medical errors in hospitals, primary care clinics, research units, government departments, ambulances, and anywhere else they occur.

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Pay for performance

Pay for performance: the best worst choice

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A new concept in healthcare reimbursement that links payment and adherence to safety and quality standards

Pay for performance (''P4P'') is the latest catch phrase to cross over from the world of commerce to the work of clinicians. The basic concept is simple: rather than paying for care by the piecework method (fee for service) or using administered price arrangements (for example, daily rates, fee schedules and capitation), reimbursement should be linked at least in part to adherence to safety and quality measures.

According to the American Academy of Family Physicians, typical measures center on utilization and cost management (for example, average number of emergency department visits per patient per year); clinical quality/effectiveness (for example, the percentage of patients with asthma on controller medications); patient satisfaction (for example, the percentage of patients who would recommend the physician to a family member or friend); administrative (for example, the practice's level of information technology); and patient safety (for example, the percentage of patients questioned about allergic drug reactions).[1]

P4P programs offered by health maintenance organizations (HMOs) in the US already affect more than 30 million people (or nearly a third of all HMO members), according to one survey. Physician practices participating in these programs find that 1–40% of their annual income is involved in a P4P bonus or withhold, with an average of 10%. More to the point, the percentage of state governments, employer coalitions, and health plans sponsoring these programs was projected to increase from 40% in 2003 to about 80% by 2006.[2]

Crucially, one of the new participants is likely to be the federal Medicare program. The Medicare Prescription Drug, Improvement and Modernization Act of 2003, which established a drug benefit for seniors, also directs the Institute of Medicine (IOM) to develop a strategy for aligning payment and clinical performance. Medicare and its sister programs for the poor and for children together account for close to a third of all US health care spending.

In the UK, meanwhile, the National Health Service's current contract for general practitioners provides financial