'Oh no. It happened again!'

Steven Lillis and Veronique Gibbons

Correspondence to: slillis@wave.co.nz

The reality

I was running slightly late, had missed morning tea break, the previous patient had also brought her three-year-old in for a 'general check' and I was aware that an asthmatic who had been puffing way too frequently on Ventolin all night would be turning up soon. The receptionist caught me between patients as Mr *** needed a repeat prescription for his Atenolol NOW and was promising to return later in the week for a check of his blood pressure. Yes, I typed a prescription on my computer but it was for 50mg of Atenolol for the three-year-old. As usual, the pharmacist found the error and phoned me about it.

Sadly, such minor errors are all too common in general practice. A review paper found eleven studies on medical error in primary health care and concluded that error rates are between five and 80 per 100 000 consultations.[1] The wide variation in reported rates reflects the lack of systematic methods for investigating and understanding what has become an increasingly visible part of professional life for general practitioners. Lest we assume that error in primary health care is not associated with calamitous outcomes, the Linnaeus Collaboration would correct us in their report of a database of 508 self reported errors by general practitioners.[2] Harm to patients occurred in 31% of errors, serious harm in 9.6% and there were five deaths.

Minor errors are all too common in general practice

There is now significant international focus on the dangers of medical care with organisations such as the Institute for Healthcare Improvement, the National Patient Safety Foundation in the USA, and the World Alliance for Patient Safety as an arm of the World Health Organization creating public awareness on issues of safety in medical care. New Zealand has multiple bodies such as the Health and Disability Commission and the Medical Council that are taking an increasingly proactive stance to reducing medical error. The bar has been raised regarding our performance and we are under scrutiny. *'The sleeping giant has been awakened. Both the public and purchasers are increasingly aware of the safety problems in medicine and they are applying pressure'* reads an influential American journal.[3] Yet the common reaction of many practitioners to issues of safety in their work is one of denial, defensiveness and passive resistance.

The 'sick' culture of medicine

How did we get to such a dismal state? Ten years ago, an editorial in the *Journal of Family Practice* commented, *'...the study of errors in American medicine occupies a dim, nether region of ignorance and shame, where open discussion invites persecution.'*[4] There is little to suggest that the position in New Zealand is any different today. The 'perfectibility' model of error in medicine has been the dominant paradigm for many years. It was conceived and driven by our own profession. It assumes that if medical staff are correctly trained and motivated, then mistakes will not happen.[5] The methods for reducing error are training and punishment. The training for doctors focuses on improving their knowledge base whereas the training for nurses focuses more on adherence to protocols. Peers, the medical hierarchy and the legal system

Steven Lillis *is a general practitioner in Hamilton, Senior Lecturer in General Practice at the Waikato Clinical School and Censor Examinations for the RNZCGP.*

Veronique Gibbons *was previously National Coordinator for IMAC and is currently working as a Research Fellow in Primary Care for the Waikato Clinical School.*

mete out punishment. An individual or individuals are often found to blame and underlying causes are seldom investigated. The quest is to find deficient people using tools of inspection. An eloquent comment on this method of error reduction was made by Donald Berwick:[6]

'The foreman has defined the rules of a game called "Prove that you are acceptable", and that is what the workers play. The game is not fun, of course; the workers are afraid, angry and sullen, but they play nonetheless.'

The practitioner will not seek understanding of actions taken and their resultant consequences; the practitioner will seek escape through denial and deflection. The individual becomes detached from the conditions in which they work and we are denied crucial information regarding error provoking conditions.[9] The inappropriateness of this model in providing adequate quality control in medicine is becoming increasingly recognised.[7] Medicine is intensely hierarchical in structure and the currency of status is knowledge. Specialised, rare and detailed knowledge accords high status on those who possess it. Outcomes, particularly from a consumer's perspective become a secondary consideration. The culture of training becomes 'trial by humiliation and exhaustion' and the response to error is that the perpetrator lacks knowledge. It is hardly surprising that the offspring of such a shallow culture is the 'perfectibility' model of error.

Thinking differently

It is important to acknowledge error, and to be able to do so in an environment which moves away from the 'blame culture' and one which also recognises the hard work and effectiveness of most doctors.[8]

If we are to move forward, first we must think differently about error. Reason[9] describes the 'Swiss cheese' concept of error. High technology systems such as medicine have many defensive layers. Well-trained professionals, procedures, guidelines and computerisation all can be considered defensive layers against error and can be likened to individual slices of Swiss cheese; mostly intact but with some holes. The presence of a hole in one slice does not necessarily cause an error, as it is probable that the next slice in the series will prevent the error. When holes in successive slices line up momentarily, error occurs.

The initial scenario of clinical circumstances outlined above can be considered vintage Swiss cheese. Why was I running late, did I not have sufficient appointment slots available to see urgent cases? Have I instilled a culture in which my patients feel that they can place inappropriate demands on me or in which my staff feel able to squeeze both mother and child into the same consultation? Was there a robust practice process for generating repeat prescriptions when good evidence suggests that prescribing is the most error prone of general practice activities?[10] Most important of all, why is this error happening again? Do I work in an organisation incapable of learning?

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Learning

The second change we need to make is to become a learning organisation. Westrum describes three different responses of health organisations when things go wrong.[11] The pathological response is power-orientated; messengers are shot, co-operation is low, responsibility is dodged, risks are ignored and innovation is stifled. The bureaucratic response is rule based; some cooperation occurs, risks are documented, innovation is problematic and messengers are neglected. The generative response is performance-orientated; co-operation is high, risks are managed, innovation is encouraged, error results in inquiry and messengers are trained. As much as we would like to believe that the vast majority of general practices respond to error with a generative framework, the sad reality is that we do not; a pathological response to error is all too frequent. This is 'the truth we know but agree not to talk about'.

Those detractors who believe too much emphasis is placed on error reduction would point to other measures of quality of general practice services as evidence that we do our job well and the difficulty in measuring error in a discipline where defining success can be problematic. After all, particularly in general practice *'it is not always possible to arrive at diagnostic certainty'*.[12] Concern has been voiced that undue focus on systems and processes will erode the unique nature of general practice. As Veldhuis observes, *'elements combine to demand flexibility and diversity that primary care clinicians regard as a strength'*.[13]

Safety is the sharp and pointy end of quality. General practitioners work in complex systems that are highly dependent on successfully integrating technology, teamwork and communication. Such integration is anchored in an environment of effective processes and systems. Error reports can be likened to the canaries carried by coal miners in bygone years; methods of detecting toxic environments in which outcomes are

likely to be less than optimum. These adverse outcomes may span a range of internal practice problems resulting in poor clinical care, high staff turnover, dissatisfied doctors and unhappy patients.

The art of medicine resides in the bond we form with our patients; it is in clinical intuition and in the knowledge and wisdom that we bring to what we do. This should not be confused with the science of medicine; the intellectually rigorous approach that assists in preventing ourselves from being fooled by what we see. Safety and quality are part of the science of medicine and should go hand in hand with the art.

The tools

Solutions to these problems have been developed. Significant event reporting is a successful technique pioneered overseas and now adapted to the New Zealand environment.[14] The concepts of Clinical Governance are widely known both internationally and in New Zealand.[15] Error literature is available in abundance. Root cause analysis as a method of investigating error had proved itself robust in understanding the systems and processes that have malfunctioned.[16] Our secondary care colleagues have accepted change to incorporate many of these concepts as part of their clinical work. There are isolated general practice organisations currently collecting and collating significant events on an aggregated and anonymised basis. Yet the majority of general practice seems reluctant to change in the face of convincing reasons that suggest change is urgently needed.

Leadership

Of critical importance is the desire for change and the leadership to make it happen. National leadership is fraught with difficulty; general practice is a widely diverse discipline where staunch independence comfortably co-exists with uniformity. However, such independence is only tolerated because it is assumed that quality of care is not compromised. Hence leadership at the practice level provides the greatest opportunity for change. Dowton describes the need for health structures to become 'organic' organisations capable of self-regulation in dynamic environments, not hierarchical and mechanical entities riven with factional interest and power struggles.[17] Leadership in such organisations requires involvement in the design and supervision of complex networks, it requires vision and the ability to articulate this vision to others. It requires fashioning new stories about our identity and what we stand for. Only then will we think differently. *'We cannot change the human condition, but we can change the conditions under which humans work.'*[9] We have an obligation to our patients and ourselves to do so.

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Competing interests

None declared.

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