

# 22 Error in medical practice

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*“On one hand, mistakes are inevitable. On the other hand they are to be avoided...This fundamental paradox creates the moral challenge of accepting our fallibility and at the same time struggling against it.”<sup>1</sup>*

## Error is common

The incidence, cause and prevention of medical error has attracted considerable interest in both the public and professional domains. Two research papers highlighted the extent of the problem by quantifying the number of patient deaths caused by error in the U.S.A.<sup>2, 3</sup> The results indicated that somewhere between 44,000 and 98,000 people die each year as a result of medical error in the U.S.A. A further study based on Australian hospitals revealed similar statistics.<sup>4</sup> New Zealand data indicate 13 percent of hospital admissions are associated with an adverse event and 15 percent of these adverse events are associated with permanent disability or death.<sup>5</sup> All practicing doctors are aware of error in their day to day work.

## Causes of error

It is rare for lack of clinical knowledge to cause an adverse outcome whereas it is common for poorly designed systems and processes to result in adverse patient outcomes. Traditionally, medicine has blamed an individual when mistakes have occurred rather than look at the system in which the doctor was working. This way of thinking has much to do with the historical focus on knowledge as the currency of medicine and lack of knowledge being the reason as to why an outcome was less than desired. It falsely assumes that if medical staff is correctly trained and motivated, then mistakes would not happen and the methods of reducing error are training and punishment.<sup>6</sup> The deficits of this model in providing adequate quality control in medicine are becoming increasingly recognized.<sup>7</sup> An editorial in the *Journal of Family Practice* commented, “...the study of errors in... medicine occupies a dim, neither region of ignorance and shame, where open discussion invites persecution.”<sup>8</sup>

A very different and much more useful concept is to look at error as a failing of processes and systems. An individual may be at the sharp end of this failure but

should not be blamed for its defects. Reason describes the “Swiss cheese” concept of error.<sup>9</sup> High technology systems such as medicine have many defensive layers. Well-trained professionals, procedures, guidelines and computerization 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 doesn’t 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.

## Preventing error

The study of error in medicine would indicate that solutions range from the very simple to the complex.<sup>10</sup> Prescription errors are a common and serious cause of error in both hospital and community based medical practice. Better systems for safe prescribing can have significant impact on the rate of prescribing error.<sup>11, 12</sup> Utilizing error reporting systems to better understand what has gone wrong has also shown effective in reducing error.<sup>13</sup>

There is, however, a common underlying theme to the continued high prevalence of medical error; blaming the individual rather than the process. Failure of medicine as a profession and health care as an industry to recognize the negative effect of dealing with error by ‘naming, blaming and shaming’ the person involved in the mistake has led to disappointing results in reducing error rates.<sup>14</sup> Medical culture has proved quite resistant to change.<sup>15</sup>

Many other industries face similar work environments as medicine where real time decisions have to be made, there is constant interaction between humans and technology, the processes are complex and the end result of error can be catastrophic in human and resource costs for both those receiving the service and those providing it. Common themes that emerge from these industries as to methods of reducing error include systematic reporting systems, collecting data on ‘near misses’, confidential reporting systems and developing a culture of safety.<sup>16</sup>

The aviation industry has provided some very useful initiatives for increasing safety in medicine. Aviation based communication skills training used for medical teams such as is found in the emergency departments of large hospitals has been shown to substantially improve teamwork and reduce error rates.<sup>17, 18</sup> Flying in an aircraft is not intrinsically safe, as early statistics on flying would reveal. However, aircraft manufacturers and aircraft operators have made flying safe. The industry is highly focused on safety and understands that safety has to be built into their activities. Effective communication between those working in the industry is a critical component of a culture of safety in aviation, and the lessons are very relevant to medicine.

Not all error results in an adverse outcome. However, collecting information on ‘near misses’ – events that could easily have led to an adverse outcome if not discovered - allows better understanding of what processes are deficient and how to fix them. The key to collecting information on things that go wrong is effective communication. This in turn requires a culture in medicine that encourages and supports open communication and recognizes that it is a defective system and not an individual that is responsible for the vast majority of errors that occur.

## Clinical governance

In 1995, the Bristol Royal Infirmary closed its cardiac surgical unit because of concerns that the mortality rate of cardiac procedures on children seemed to be substantially higher than other units. Extensive investigation revealed that this indeed was the case. The report stated that although various individuals behaved

dishonourably, the majority of healthcare staff were "victims of circumstances which owed as much to the general failings in the NHS at the time than to any individual failings...A great many well intentioned people worked hard to do good but did dreadful harm."<sup>19</sup>

One outcome of the Bristol report was the development of the concepts of clinical governance and the acceptance of the concepts in many countries including New Zealand. The National Health Committee defines clinical governance as . "A framework through which New Zealand health sector organisations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish." A more concise way of thinking about it is "Taking responsibility for clinical outcomes at a locality level.". The five components are:

- Clear lines of accountability for the overall quality of clinical care at practice level
- A comprehensive programme of quality improvement systems in each practice
- Supporting and applying evidence-based practice
- Clear policies aimed at managing risk
- Procedures to identify and remedy poor performance integrated into practices

### Reporting error

There is increasing recognition of the importance of collecting information on error in a systematic way that will allow greater understanding of why error occurs and therefore develop preventative methods. However, the medical profession is yet to translate such principles into practice. A survey of 338 North American consultants and residents revealed that doctors are far more comfortable reporting 'near misses' than incidents where harm occurred.<sup>20</sup> An uncomfortable gap would appear to exist between what doctors know should be reported and what reports are filed.<sup>21</sup> New Zealand data would suggest that doctors working within our hospital system have reluctance to report minor errors, thus missing the opportunity to detect systemic flaws that can create both minor and major errors.<sup>22</sup>

The work environment must also be conducive to the reporting of error. A New Zealand study of general practitioners found that issues of time pressure and ease of reporting systems were significant variables that need to be considered when designing reporting systems.<sup>23</sup> Reporting systems are being designed and refined for both primary and secondary care.<sup>24-26</sup> However, without the involvement and commitment of doctors to the objectives of such systems, the ability of these systems to reduce error is limited.

### Responding to error

It is an inevitable part of professional practice that all doctors will make mistakes and that some of these mistakes will result in patient harm. Most doctors who are involved in patient care where error has occurred are significantly affected by it, particularly if the error results in harm to the patient and formal complaint. Reactions include anger, shame, guilt, depression and reduced enjoyment of the practice of medicine.<sup>27, 28</sup> However, the importance of effective emotional support during a time of professional crisis is also being recognized.<sup>29</sup>

Communication would seem to be a strong predictor of the outcome of medical error. Not all litigation and complaint is occasioned by medical error and only a small proportion of error results in complaint.<sup>30</sup> An American study looking at why a decision to pursue litigation was made by patients suggested that failure of communication was a crucial factor in the majority of cases.<sup>31</sup> Good

communication between doctor and patient is crucial should error occur. The majority of patients whom have suffered from medical error want disclosure of error, truthful explanations, understanding of what has happened and reassurances that the 'system' has been fixed so that the error will not happen again.<sup>32</sup> Failure to meet these expectations is more likely to result in the patient seeking such explanations in a court or through disciplinary processes.

A common question asked when error occurs is "Should I apologise?" The uncertainty as to what to do is usually driven by fear of disclosure to the patient and colleagues, fear of complaint, the threat to ones own sense of professional competence and the desire to avoid compromising a legal situation. Clearly, if working as an employee, the institution in which a doctor is employed should be notified at the earliest opportunity should error occur and the appropriate indemnity insurance company notified. Once such notification has occurred, the error should be disclosed. Acknowledging and apologising for the error places the incident in an interpersonal framework rather than the impersonal and distant hierarchy of an institution. It is an important step in the process of recovery for both the patient and the doctor concerned. It empowers patients as they have both understanding and involvement whereas non-disclosure disempowers patients. Disclosure may lessen the likelihood of formal complaint and allows a transparent process of understanding what went wrong and how to prevent it from happening again. A 2006 study undertaken in New Zealand reported that 86 percent of hospital doctors surveyed believed that disclosure of error to patients would decrease the likelihood of a complaint being filed against them.<sup>22</sup>

## The future

It is inevitable that in New Zealand and around the world there will be increasing focus on error in medicine. Error is expensive, time consuming, often avoidable and is associated with human consequences that range from the inconvenient to the truly tragic. The Institute of Healthcare Improvement in the U.S.A. has already had substantial impact on the safety of American health care and is sharing its knowledge and resources with other countries. In New Zealand, the Safety Improvement Program will take a national perspective on safety in health care and provide an overarching structure to develop safer systems.

## Conclusion

Developing a culture of safety in medicine requires effective communication and trust between team members and acknowledgement of the failure of processes rather than individuals as the cause of the majority of errors in medicine. If and when error occurs, effective communication and transparency can lessen the emotional, physical and financial cost for both the patient and the doctor involved. Like many things in medicine, effective communication is the key to improving outcomes. Errors are to be avoided. When they occur, the learning that can be found in them is invaluable in ensuring they don't happen again. The opportunity for learning should not be overlooked.

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