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The folly of rewarding silence while hoping for open reporting of adverse medical events—how to realign the rewards

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Abstract

The recent release under the Official Information Act (OIA) of Capital & Coast District Health Boards (C&C DHB) Serious and Sentinel Event Report, the subsequent national report, and the commitment to fund a New Zealand-wide incident reporting system raise a number of important issues. This paper discusses the barriers to incident reporting and the folly of attempting to reward system improvements while the barriers are still in place. Suggestions are also made to help guide the development of appropriate systems which will eliminate barriers and realign the rewards.

Nearly 3 years ago, I submitted a paper to the *NZMJ* with the above title and was asked to make a revised submission in the form of a viewpoint article within 2 months. At the time I had a sense that many of the ideas in the paper were being explored anyway, and that the 'environment' was improving with the promotion of a low-blame culture and the promise of a New Zealand (NZ)-wide incident reporting system by mid 2005—so the article was never completed.

Two recent events have prompted me to re-visit this paper and emphasise the points made in the original submission. The first event was the media and political storm created by the release under the Official Information Act (OIA) of Capital & Coast District Health Boards (C&C DHB) Serious and Sentinel Event Report, and the subsequent national report. The second is the commitment from the Ministry of Health to fund a NZ-wide incident reporting system and the agreement from District Health Boards (DHBs) to support this and other quality initiatives in order to receive full funding for the 2008/9 year.

This paper aims to identify the barriers to incident reporting and the folly of attempting to reward system improvements while the barriers are still in place. Suggestions are also made to help guide the development of appropriate systems which will eliminate barriers and realign the rewards.

A background of medical adverse events

There is sufficient evidence to indicate that injury as a result of medical treatment is one of the leading contributors to hospitalisation, disability, and death in the Western world.[1–7] Healthcare is a complex adaptive system; and these systems with their 24-hours a day activity, the need for quick reaction times, team coordination in the context of long hours, and trade-offs between service and safety, have a high potential for error.[8] Despite this, a review of the literature (refer to next section) reveals there is still very sparse use of incident or near miss reporting systems and even fewer evaluations of the outcomes of implementing these systems.

In 1999, the Institute of Medicine report on medical adverse events *To err is human*[9] documented the surprising and somewhat disturbing estimate that more than a million preventable events (incidents such as adverse drug effects, complications of procedures and medical errors, that result in unexpected harm, unrelated to the patients illness, injury or disease) occur each year in the US, of which up to 98,000 are fatal. This is graphically brought home by the analogy of it being equivalent to a Jumbo jet crashing every 3 days.[10]

Since then, similar studies in many countries including Australia,[11] UK,[12] Denmark,[13] and more recently NZ,[4,14] have found adverse event rates ranging from 3.7 (U.S)–16.6% (Australia) of all hospital admissions. NZ sits somewhere in the middle with a rate of 12.9%.[14]

The New Zealand Ministry of Health[15] reports that 27% of all hospitalisations caused by injury are a result of adverse medical events and that about 1000 people die in New Zealand as a result of an adverse medical event annually. Approximately 500 of these deaths are preventable and approximately twice as many people will suffer moderate to severe or permanent impairment. Studies consistently show that around half of all events are preventable, and half are due to system or process faults.

Incident reporting

A common recommendation from these studies is that incident reporting systems are set up to ensure health professionals report all adverse events, including serious and sentinel events and near misses.

Both mandatory and voluntary incident reporting systems have been established in the US, Australia, UK and many other countries. In 2003, the Ministry of Health (MOH) released a report 'Improving quality (IQ): A systems approach for the New Zealand health and Disability Sector[16] which required DHBs to have an incident reporting system in place by 30 June 2005. In late 2007, the MOH, with the support of DHBs, committed to a national incident reporting system. Unfortunately, most DHBs have implemented or are implementing their own systems making national consistency a challenge. This was clearly demonstrated by the wide variation in reporting seen in the first publicly available national serious and sentinel event report published in early 2008.

This first report was hastily prepared following widespread OIA requests, to ensure that other individual DHBs would not be picked off as was the case with Capital & Coast DHB. It provided some national context and was released following an education campaign to assist the media in understanding and interpreting the data and information.

There is also ongoing work being undertaken by all DHBs on improving the consistency of classification using a severity assessment code (SAC) which should significantly improve the quality of the next report. A score from 1–4 is calculated by multiplying the outcome or consequence of the event by the likelihood of its recurrence. Scores 1 and 2 are the most serious and will need to be included in the 2008 report. However, serious and sentinel events are only a subset of incidents, The same rigor and consistency needs to occur with all incident reporting, and even an accurate classification system will not guarantee compliance with reporting.

The overriding rationale for establishing incident reporting systems is that they improve the quality of patient care, and measurably improve patient safety.[17] One study showed incident reporting reduced the adverse event rate in hospitals and emergency departments to a half and a quarter respectively over an 8-year period.[18]

Incident reporting systems also encourage the early identification of competency concerns in a supportive rather than a punitive manner; increase knowledge about system errors and the system improvements that could reduce this error rate; support peer review and use comparative data in a safe, quality assurance protected environment; and encourage the development of a low blame culture similar to that developed within the aviation industry.

However, overseas experience has shown that compliance and uptake of incident reporting among health professionals, is extremely low, inconsistent and variable, regardless of whether systems are mandated or not.[19] With fear of litigation, clinicians are disclosing selectively and only one third of hospitals have board approved disclosure policies in place. In an audit of New York State's well designed web and guideline-based, feedback providing incident reporting system, Tuttle[20] found significant under-reporting. He concludes that although the audit has helped identify previously unreported occurrences, increase institutional awareness of mandatory reporting processes, and stimulate the redesign of concurrent detection process, it is unclear whether it will have any impact on compliance with the mandatory reporting system.

It appears that in many countries, including NZ, the selective use of open disclosure and incident reporting amounts to tokenism.[21] There are a number of reasons for this, but the overriding issue is that there is misalignment between reporting systems and the (dis)incentives that surround them.

Disincentives or barriers

The disincentives or barriers to regular, frank and open reporting include:

Fear factors—The 'blame and shame' culture—Experience in the aviation industry shows that critical to an incident reporting system working to its full potential is a no or low-blame culture, and a supportive, non-hostile environment. Currently in New Zealand there is a strong sense among health professionals that the opposite is true. A medical practitioner can be "tested" by various organisations which include the media, the legal system , civil proceedings, coroners courts, Medical council , health and disability commissioner, privacy commissioner, Accident Compensation Commission (ACC), Health select committees, etc.. The new Health Professionals Competency Assurance Act (HPCAA) attempts to address this by using the Health and Disability Commissioner as a gatekeeper and clearing house for these claims, however the act has decreased the protection that Quality Assurance activities used to provide, allowing the Minister of Health access to this information. In addition, there is also the potential for punitive action by employers if misconduct or negligence is suspected.

Understanding the widespread medico-legally based behaviour alterations which occur in medical practice, ranging from over-ordering diagnostic tests to being

unwilling to participate in incident reporting is essential; as this more than any other barrier impacts on our ability to implement an effective error reporting system.

The medical culture factor—Doctors are extremely influential healthcare team members and usually lead the team and carry the greatest medico-legal burden. The 'medical culture' can be fiercely competitive and individualistic, and understandably, can produce a fear of failure and a reluctance to admit fallibility. Doctors are experts and they may not support organizational goals including incident reporting unless they are in line with their viewpoint and supported by their professional colleges.[22]

Individual factors—These factors are those that either do not reward individual practitioners for participating in incident reporting, or in some cases, actively discourage such activity. For example pay schemes often do not reward these quality activities, Colleges and Health Standards auditors and medical indemnity insurance companies do not always encourage or reward this form of self audit within their QA, accreditation or credentialing processes. Those that do not report incidents or near misses may be viewed as the most competent as they have the lowest error rates. A spotless record may even be rewarded by promotion or progression through the pay scales.

In the past, data has been collected but not fed back in a useful, comparative manner. Staff have not had clarity on "what is important to report, event definition codes or criteria, staff resources, disclosure issues, cultural issues, and, most importantly they have not been able to effectively use the information collected."[20]

Organisational factors—Perverse reward systems also exist at the organizational level. A DHB that reports all incidents may be interpreted by the media and public as having a high error rate. DHBs do not yet have incident reporting as one of their non-financial Performance indicators or targets, and following C&C DHB's recent experience would probably be reluctant to agree to it because of the potential adverse publicity and liability. In C&C DHB's case, even average serious and sentinel event rates seemed high to an un-informed public.

Knowledge factors—Some clinicians may believe medical error is not as big a problem as stated, that it won't happen to them, or that incident reporting is futile and will not bring about constructive change. There may also be a lack of clarity about how or which types of incidents should be reported. Clinicians still view incident reporting as inferior qualitative research[23] and their participation in an activity that takes significant time, that could change standard practice patterns, that is unsupported by the organisation, and that will most likely only provide visible results in the long-term, will be limited.[8]

Reward systems and motivation

The problems outlined above are not unique to NZ, but they must be considered and addressed during the planning of a national incident reporting system. It is thought that cultural change may be necessary before either informal reporting or a mandatory system can work optimally.[24] Cultural change is difficult and takes time. It would seem more practical to ensure the rewards are in place to encourage behavioural change which will then gradually result in a change in culture. No literature was found on the use and analysis of the reward systems in place to encourage this

behaviour or cultural change. In fact there are very few examples of rewards being used within the public health system.

In 1975 Steven Kerr[25] published a paper entitled 'On the folly of rewarding A, while hoping for B'. In it he describes "numerous examples of reward systems that are fouled up in that the types of behaviour rewarded are those which the rewarder is trying to discourage, while the behaviour desired is not being rewarded at all." This seems to reflect accurately the current situation with incident reporting. Kerr[25] suggested managers should "explore what types of behaviour are currently being rewarded. They might find that undesirable behaviour by clinicians may be explained by the reward systems used. The reward system should positively reinforce the desired behaviour, not constitute an obstacle to be overcome". The paper has since become somewhat of a classic, and a survey[26] of corporate America twenty years after Kerr's paper suggested that the folly was still prevalent. System focused, non-quantifiable behaviour should be where the rewards are aligned. This requires the revamping and revitalising of performance management processes and systems, but more than that it requires recognition that to get any change in behaviour, there needs to be a change in the rewards.

Realigning the rewards

Organisational Behaviour scholars and managers are well aware of reward systems. McShane and Travaglione describe a number of theories of motivating behaviour.[27] Expectancy theory is one that appears to fit the discussion on reducing adverse medical events well. It is a motivational process theory which advocates the use of rewards and clear guidelines for increasing employee motivation. There is a need to ensure rewards, whether they are individual, team-based, or organisational, are aligned to address the barriers previously identified. The following are some suggestions to achieve this:

A low-blame team culture—A more compliant culture would be fostered by moving away from blaming the individual to proactively identifying system errors. No-blame may be difficult to obtain, however a "low-blame", open and fair culture should be achievable where clinicians are part of a team and system, and only held responsible if they have acted in a negligent or reckless manner.[28]

The father of the medical error movement, Lucian Leape,[17] states that physicians have been reluctant partners in reporting. There is the "unresolved conflict between the public's desire for accountability and doctors' and hospitals' fear of damage to their reputations and of malpractice liability". Incident reporting should be anonymous. Medical error reports will undoubtedly be publicly available, and while open disclosure and apologising to patients and families affected by medical error is now becoming part of established medical practice, public disclosure or public reporting of any identifiable data should not occur.

Because of the risk of misinterpretation by the media and the resulting loss of public confidence, even the public release of 'non-identifiable' national reports such as the 'Serious and Sentinel Events Report' should only be done once there has been public and media education about adverse events, and there is a consistent level of reporting across all DHBs. Trial by media and increasing the blame and shame culture will severely compromise a national incident reporting system. This may be criticised as

preventing accountability and transparency. However, where there has been reckless or aberrant behaviour, evidence can still be obtained, although not through this channel.

The medical culture—This can only be overcome if all clinicians in an organisation consistently report incidents or near misses, and the environment is conducive to the 'safe' reporting of adverse incidents. This sort of trust only develops over time and clinical champions and early adopters will need to take the lead. Clinicians, and their unions and professional colleges need to be consulted early and support incident reporting as a valued quality improvement activity. It should be viewed as a vital part of a new concept of professionalism where clinicians are trusted to be more involved in planning and decision-making; while accepting that evaluation and accountability go with this trust and responsibility.

Clinicians are only likely to participate in incident reporting if they believe that their time and effort will result in improved health outcomes. This can be assisted by describing studies where incident reporting has led to a reduction in error, but will gain real momentum with the provision of a supportive environment that provides feedback on progress and outcomes as systems are put in place.

Individual rewards—A number of individual rewards may be effective. The use of an incentive pay scheme where a small percentage of an employees salary is contingent on them participating in quality assurance activities including clinical audit, incident reporting etc. could be considered. Discounted or fully funded medical indemnity insurance should also be dependent on full participation in a quality programme. Simple actions such as changes to local protocols, worksheets, audits and supervision practices, as well as incorporation of checklists and assessment tools and feedback discussion are all low cost activities that have worked and produced impressive results.[18]

DHBs need to facilitate the reporting of incidents, for example, by a simple 0800 phone number or web-based approaches. Bent[29] describes the use of handheld personal digital assistants for incident reporting. Non-clinical time dedicated to quality assurance activities should be audited and there should be a system that supports and encourages these activities and rewards research in this area by including it as an organisational performance indicator. A more participatory approach in which clinical staff help develop criteria for assessing adverse events, get individualized feedback and comparative data, and help to implement system changes are likely to result in a greater sense of ownership and compliance.

Organisational rewards—This year, DHBs will have funding linked to participation in 5 quality initiatives, one of which is incident reporting. There are also the inevitable savings from decreased hospital length of stay etc. if adverse medical events can be reduced. However, the greatest organisational rewards result from the system changes that can significantly improve the quality of care, the culture and the reputation of the organization. This will only occur if there are consistent reporting standards, otherwise those DHBs that report least will be rewarded most.

Knowledge—Clarity about the purpose of an incident reporting system is necessary. It is not about identifying aberrant individuals. The function should be to identify

whether an error is preventable and how to prevent it happening again.[30] More specifically this involves indentifying:

- Human errors and developing anticipatory systems to prevent these errors or mitigate their impact
- Faulty systems and processes causing or contributing to incidents and suggesting improvements to them
- Latent errors— errors waiting to happen and making recommendations regarding these.

Lack of knowledge can be addressed by education and training as long as the other organisational rewards are in place. However, DHBs are more than just hospitals, and although this paper refers to hospital incident reporting, there is a need for the incident reporting system, education and training to be available to Primary care and other community providers. The possibility of a national web-based system opens up this opportunity and could provide a rich data source for joint primary-secondary clinical governance meetings. Strategic communication must be directed at improving the public's knowledge, understanding and tolerance of medical error, and reassure them that system changes such as incident reporting will be much more effective than shame and blame of individuals.

Leape[17] identifies the characteristics of successful reporting systems and states they should be non-punitive, confidential, independent, involve expert analysis, timely, systems oriented, and responsive. If this could be achieved, then surely most of the above rewards would follow, and as long as the new national system is implemented intelligently with these characteristics in mind, some of the required behaviour and cultural change, will also follow.

Conclusion

It is a number of years since the world and, in particular the health world, became aware that adverse medical events are a significant problem, and that by using a systems approach, an incident reporting system could be put in place to identify, document, and learn from these events. Recommendations have been in place, but the organisational support needed has not eventuated. Silence rather than open disclosure and universal incident reporting are being rewarded.

Error reduction requires detection and this will only occur if incident reporting is widespread and becomes a culturally accepted activity within the health system. As a first step, all reporting activities must be non-punitive and publicly non-discoverable. Mandatory reporting systems will have little chance of success unless this negative incentive is dealt with.

Our blame culture still needs to be addressed. Incentives and rewards need to be realigned or created which will drive a cultural change in incident management as part of a broader quality improvement programme.

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