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The immediate and long-term impact on New Zealand doctors who receive patient complaints
W Cunningham

This study looks at the impact of receiving a complaint in New Zealand doctors; it finds that complaints can have a serious emotional impact on doctors when they first receive them, thus reducing their ability to consult well. Complaints can also reduce doctors’ ability to provide high-quality care in the long-term. There is no evidence from this study that complaints improve patient care, and it questions whether New Zealand society is being well-served by the current complaints processes.

New Zealand doctors’ attitudes towards the complaints and disciplinary process
W Cunningham

This study looks at the New Zealand medical profession’s attitudes towards the complaints and disciplinary process. It finds that doctors strongly support society’s right to complain, and to having lay input into the complaints process. Doctors do not, however, believe that complaints are a useful tool to identify problems and to improve medical practice. They are concerned that the complaints process is flawed, and raise concern about whether complaints are appropriate, and whether appropriate standards of judgement are being used.

The medical complaints and disciplinary process in New Zealand: doctors’ suggestions for change
W Cunningham

This study asked New Zealand doctors for suggestions as to how the complaints and disciplinary process could be improved. Doctors indicated tension between society’s expectations of medicine and their ability to meet those expectations in practice. They supported a single point of entry (with a Complaints Tribunal rapidly responding to complaints), in which doctors could learn from any mistakes or errors, where both the doctor and the complainant could be heard and judged appropriately, and where a satisfactory outcome for both parties could be achieved.

Surgeons’ experiences of complaints to the Health and Disability Commissioner
R Tapper, L Malcolm, F Frizelle

Complaints to the HDC are a fact of life for medical practitioners. This study identifies general and orthopaedic surgeons as high-risk groups, and identifies surgeon and patient characteristics that are likely to increase the risk of complaints. The higher-risk surgeon characteristics are subspeciality general surgeons in private practice aged 40–50 years; and the higher-risk patient characteristics are white,
middle-class, middle-aged, female patients. The continuing evolution of the medical complaints system is discussed.

A Dharmalingam, I Pool, S Baxendine, J Sceats

Avoidable hospitalisations result from the inadequate availability of (and access to) primary health care. Between 1980 and 1997, avoidable hospitalisation rates have increased in New Zealand. The increase was noted for all medical conditions except for asthma and immunisable conditions. Regional variations in avoidable hospitalisation rates have narrowed between 1980 and 1997. Regions with higher proportions of Maori population tended to have higher rates of preventable hospitalisations. The young and old have higher rates than others. It is argued that the increase in avoidable hospitalisation in New Zealand coincided with the major health reforms, economic restructuring, and welfare reforms of the 1980s and early 1990s.

Information Technology systems in general practice medicine in New Zealand
R Didham, I Martin, R Wood, K Harrison

A nationwide postal survey was conducted to describe the current state of information technology in general practice medicine in New Zealand. It was found that 99% of general practices were using a patient management system for full or partial electronic storage of patient notes and clinical details—this rate of computerisation is superior to that of many other countries. The main concerns of general practitioners are the ongoing costs and time involved in meeting the IT requirements expected of them.
Complaints and quality: handle with care!

Ron Paterson

The articles in this complaints-and-quality theme Issue of the NZMJ offer some valuable insights into the complex nature of complaints and quality. Ten years ago, the New Zealand Parliament legislated for a Health and Disability Commissioner (HDC)—an independent agency designed to ‘facilitate the fair, simple, speedy, and efficient resolution’ of complaints about the quality of healthcare and disability services.¹

Most complaints are resolved swiftly and with minimal intervention, and the minority of complaints that proceed to a formal investigation are used to promote systems learning or to instigate remedial steps, if necessary.²

Complaints offer a window of opportunity to improve health services.³ However, emerging evidence shows that complaints are not necessarily the treasure trove that quality improvement gurus would have us believe. Instead of providing reconciliation and closure, complaints can have toxic effects on patients and doctors, and may perhaps more accurately be described as ‘toxic treasure’.

The first major review of the HDC complaints system, by Cull in 2001, reported that injured patients found the process ‘confusing, cumbersome, difficult-to-access, and costly—both financially and emotionally’.⁴ HDC’s 2004 survey of complainants using its investigation services shows that only 46% were satisfied overall with the fairness of the process (in contrast to 80% of providers). It is perhaps not surprising that a system that upholds (by breach finding) only 43% of investigated complaints leaves complainants dissatisfied,⁵—but the results indicate a failure to meet complainant expectations.

Research reported in this Issue of the NZMJ suggests that doctors (although usually vindicated and rarely ‘named and blamed’) also have a very negative view of the complaints process. Cunningham (whose survey included ‘complaints’ to ACC or directly to the provider) reports significant immediate emotional impact on doctors and long-term reduction of trust in their patients.⁶

Doctors’ attitudes towards complaints are also revealing.⁷ Like children asked if they like Brussels sprouts, most (72.8%) doctors in the survey did not view the complaint as a ‘good thing’. A disturbing 31.5% of respondents did not agree that ‘most complainants are normal people’—a figure strongly at variance with my own experience of the sort of people who complain to HDC (who include many health professionals). In a more targeted survey of surgeons subject to a complaint to HDC, Tapper (et al) report that only 34% felt they learnt from the complaint.⁸

Clearly, complaints need to be handled with care, to minimise the risk of toxic effects on patients and doctors, and to maximise the potential for learning. Arguably, the very notion of complaint is unhelpful—conjuring up images of whingeing consumers. In practice, many complainants simply have questions about their care and/or are
unhappy about poor communication, and the ‘right to an explanation’ would be a more apt (and less pejorative) description.

It is encouraging that 95% of Cunningham’s respondents agreed it is important that society can complain about doctors, and only 4.5% thought medical complaints should be resolved in a court of law. Whatever the pitfalls of the current system, doctors rightly perceive that patients need a voice for their concerns, and that the alternative of malpractice suits would be far worse. Interestingly, only 43% of surgeons involved a lawyer in the complaints process, which is consistent with my own observation that lawyers are generally unnecessary (given the low risks involved in medical complaints in New Zealand) and often unhelpful (tending to prolong the process and to hinder resolution).

Perhaps the most significant finding is that 93.6% of Cunningham’s respondents considered it important that there be a sense of completion at the end of the complaints process (for both the doctor and the complainant). Effective complaints resolution provides closure and, if possible, healing of the patient–doctor bond. In addition, complaint-handling techniques (such as the use of advocacy or mediation, with the opportunity for facilitated face-to-face meetings of the parties) can enable healing that is denied by paper investigations.9

The good news is that a combination of pending reforms and changing practices at HDC will achieve most of the suggestions for change from local doctors. The system already achieves rapid resolution of most complaints at the lowest appropriate level.

From 18 September 2004, HDC will become the single point of entry of all complaints about patient care (except confidentiality), with increased flexibility to refer complaints back to the provider to resolve, or to refer immediately for mediation.10

Furthermore, if planned accident compensation reforms11 are enacted in 2005, the fault element of compensation for injured patients will be removed—resulting in abolition of the current ‘medical error’ (negligence) category of cover and a shift to broader, ‘no-fault’ cover for treatment injuries. This will remove the principal area of ‘double jeopardy’ for doctors involved in investigations of adverse events by external agencies.

I share Cunningham’s view that the complaints process must be transparently fair, aware of the limitations of medicine and the fallibility of doctors, independent of the media, and focused on improving the quality of care.12 New Zealand’s health and disability complaints system is well on the way to achieving these goals, consistent with HDC’s motto of ‘resolution, not retribution; learning, not lynching’. Readers should be heartened by Gillett’s assessment that ‘we have … nothing to fear from the complaints process, where common sense and a sharp eye for the clinical reality are very much in evidence in recent cases’.13

Encouraging progress towards developing a ‘quality culture’ in New Zealand’s health system is also reported by Barnett (et al) in this Issue of the NZMJ.14 A constructive policy environment and clinical leadership in healthcare organisations may herald a ‘new professionalism’ that facilitates quality improvement. However, Buetow and Coster caution that New Zealand may be placing too much emphasis on continuous quality improvement in healthcare, and that radical interventions (such as major
process re-engineering) are sometimes needed to achieve quality breakthroughs.\textsuperscript{15}

There is no shortage of quality initiatives, but monitoring and evaluation are needed to ensure that benefits are being achieved and quality improved.

Patients and doctors have a shared interest in the provision of good quality care. But doctors are fallible and work in complex systems where mistakes are inevitable and miscommunication is rife. Patients are remarkably forgiving when things go wrong or communication is inadequate, but when sufficiently aroused will voice their complaints. As noted by Milton long ago, ‘When complaints are freely heard, deeply considered, and speedily reformed, then this is the utmost bound of civil liberty attained that wise men look for.’\textsuperscript{16}

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**References:**


2. 59.5\% of all complaints are resolved within three months and fewer than 4\% of investigations exceed 18 months (compared with 20\% four years ago). HDC data, 30 June 2004.


Quality improvement—from policy to action

Mary Seddon, John Buchanan

Healthcare quality and its improvement are firmly on the agenda in New Zealand. A policy document, Improving Quality (IQ): A Systems Approach for the New Zealand Health and Disability Sector, was released by the Ministry of Health in September 2003 and, in this Issue of the Journal, Buetow and Coster review that policy and look at different strategies for improving healthcare quality.

A quality healthcare system would be characterised by:

- Providing safe care (minimising harm from diagnostic tests and clinical management),
- Ensuring timely and equitable access to care,
- Being patient-centred (recognising that patient’s values and satisfaction are important),
- Providing effective care (using the best evidence to improve the patient’s condition), and
- Being efficient (using resources for the greatest good).

Why is healthcare quality now attracting such attention? Firstly, there have been several high-profile healthcare failures. Secondly, it is recognised that ‘poor quality’ costs money in terms of wasted resources. Thirdly, there is a culture of accountability and transparency, which means people question the quality of their care to a greater degree than previously (supported by the Patient Bill of Rights). And, fourthly, there is growing evidence that healthcare quality is not as good as we would like.

What is the evidence that healthcare quality is sub-optimal? Studies highlight poor quality by documenting variation in practice and patient outcomes, which cannot be explained on the basis of differences in patient characteristics. Further evidence comes from studies of medical error rates. Such studies have been done in the US, UK, Australia, and New Zealand, and while they may differ in the magnitude of adverse events found, they are consistent in demonstrating that medical management can harm patients.

Then there are studies that directly measure the quality of healthcare received. A study by McGlynn et al, reviewing care provided to patients with a range of conditions (30 in all), found that on average, patients received only 53% of recommended care. McGlynn et al identified greater problems with under-use of effective care (eg, only 45% of patients with an acute myocardial infarction received beta-blockers), however more than 11% of patients received care that was not recommended and potentially harmful. Indeed, the accumulated evidence suggests that poor healthcare quality poses a threat to patients and that effective strategies are needed to improve care.
The strategy of the healthcare professions to ensure quality has until recently been largely implicit. It has been assumed that quality will be adequate if attention is paid to who is accepted into medical and nursing schools, how long and rigorous the training is; and an apprenticeship model is used to transfer the values of professionalism. It has ‘succeeded’ to date only because of the dedication of the people that work in the healthcare system. However, healthcare workers are increasingly stressed and frustrated—morale is low. Therefore, this implicit strategy (trading on professionalism) is neither effective nor sustainable.

‘Inspecting for defects’ is another strategy employed in an effort to assure quality. Using this paradigm, quality is defined as an absence of defects (as judged by external assessors). The strategy is based on the assumption that there is one way to perform a task and the focus is still on the individual. Much effort has gone into setting standards and improving inspection methods. However, inspecting for defects leads to a defensive approach where defects are hidden, and the minimalist ‘pass or fail’ standards neglect the complexity of medical endeavour and do not encourage improvement beyond the benchmark. Therefore, the Quality Assurance (QA) approach is also not likely to lead to sustainable improvements.

Two more promising strategies are reviewed in the paper by Buetow and Coster: continuous quality improvement (CQI), and process re-engineering. Both strategies come from the manufacturing industry where they have resulted in dramatic quality improvements. They focus on the process of care (that is, how care is delivered) and acknowledge that focusing on individual providers is unlikely to result in improved care. Where they differ is in their loci of effort, the rapidity of proposed change, and the potential risks if improvement efforts go wrong.

CQI focuses on the ‘customer’s (patient’s) needs’—using multidisciplinary teams to collect and analyse data on performance at the level of care provision. CQI seeks to use the expertise of frontline staff to identify the cause of problems in the processes of care, and then suggest solutions. As it recognises and uses this expertise, it is sometimes called a ‘bottom-up’ approach. It aims to incrementally improve care through small-scale changes in practice. The risks of such an approach are small, especially as a core concept in CQI is the measurement of the effect of any such changes.

Process re-engineering, in contrast, focuses on the macro healthcare system, and looks at fundamental, rapid revolutionary change. It can be considered a more ‘top-down’ approach. While this can produce large efficiency gains, the risks can also be high—particularly if health professionals are not an integral part of the process. Indeed, without sufficient clinical input and long-term institutional knowledge, erroneous assumptions about the causes of poor quality (and the best solutions) can be made.

Both strategies (CQI and process re-engineering) have their place—depending on the analysis of the underlying problems. CQI is used when the system is sound but not working properly, whereas process re-engineering looks to build a totally different system. However, more effort must be spent on measuring the effect of either strategy. The example of Kaitaia Hospital process re-engineering (cited in the Buetow and Coster paper) does not provide any evidence that answers the basic question: How will we know that the changes have brought about an improvement in patient care and outcomes?
Investment in electronic medical information systems is required to make such measurement commonplace. New Zealand is fortunate to have unique National Health Index (NHI) numbers to allow tracking of health outcomes—but it needs funding and resolve to organise this at a national level, rather than letting each District Health Board (DHB) devise priorities as their budgets allow. Information on processes and outcomes of care will inform the sector on the quality of care provided, and indicate where quality improvement efforts need to be directed.

Doctors and other healthcare professionals have a prime role in quality improvement, but to fulfil this role they will need to acquire new skills—being able to work in multidisciplinary teams, the ability to understand the process of care (particularly from the patients perspective), and crucially, the correct interpretation of data. To achieve these goals, investment in leadership, allocation of time for staff participation in quality improvement work, and commitment from the DHB organisations is required.

The Ministry of Health has made a good start with their Improving Quality policy, but the healthcare sector must now press on.

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References:


The immediate and long-term impact on New Zealand doctors who receive patient complaints

Wayne Cunningham

Abstract

Aim To analyse the impact of receiving a medical complaint on doctors in New Zealand.

Methods A questionnaire was sent to New Zealand doctors—randomly selected to include vocationally registered general practitioners, vocationally registered hospital-based specialists, and general registrants.

Results 221 doctors (who had received a medical complaint) completed the questionnaire. They indicated that, in the immediate period after receiving a complaint, they experienced emotions including anger, depression, shame, guilt, and reduced enjoyment of the practice of medicine. Around one in three doctors reported reduced trust and sense of goodwill towards patients (other than the complainant), and reduction in tolerance of uncertainty and of confidence in clinical practice. In the long-term, the impact of a complaint softened—but feelings of persisting anger, reduction in trust of patients, and of reduced feelings of goodwill toward patients was reported. No differences were found between doctors practising in different vocational groups.

Conclusions This study indicates that receiving a medical complaint has a significant negative impact on the doctor, and on important components of the doctor-patient relationship. It suggests that in the first few days and weeks after receiving a complaint, a doctor may need emotional and practising support. This study finds no evidence that the receipt of a complaint improves the delivery of patient care.

The rate of complaint against doctors in New Zealand has risen dramatically in the last 20 years. Recent data suggests that one in every 17 New Zealand doctors can expect to receive a complaint each year if they decide to continue in practice, and it is reasonable to expect that there will be some impact of a complaint on doctors and on the way that they practise medicine.

The purposes of a complaints system include:

- Maintaining trust between society and the medical profession.
- Acting as a voice for patients.
- Providing the opportunity for reconciliation and closure between doctor and complainant.
- Maintaining standards of professional practice.

To maintain or improve standards of professional practice, a complaint should effect change in the behaviour of individual doctors and the profession in a way that is of
benefit to society. Put simply, complaints should lead to improved medical practice—this assumption has never been tested, however.

The only published data about the effect of complaints on New Zealand doctors comes from a qualitative study of general practitioners, which suggested that there were immediate and long-term effects on the doctor and on the way in which the doctor practises. Immediate effects included an intense negative emotional response (indicating the impact of a complaint on the person of the doctor); reduced ability to consult with speed and confidence and to tolerate uncertainty (indicating an impact on the doctor’s ability to practice medicine); and hostility towards the complainant and loss of trust in other patients (indicating an impact on the doctor-patient relationship).

In the long-term, some of that study’s respondents held persisting emotional responses (such as depression or anger), some had an altered perception of themselves as doctors, and some indicated an erosion of goodwill towards patients. The implication of that study was that complaints might reduce (rather than improve) the delivery of patient care.

American literature suggests that a complaint represents an assault on the recipient doctor’s sense of self and personal integrity, Canadian literature indicates that complaints can cause an increase in both positive and negative defensive medicine, and British and European literature suggests that complaints cause changes in doctor’s behaviours that are predicated by concern for the doctor-patient relationship.

The vehicle for the delivery of patient care is the doctor-patient relationship. If receiving a complaint damages the person of the doctor, their contribution to the relationship (their therapeutic effectiveness) may be diminished, and receiving a complaint could impact negatively on patient care. The doctor’s emotional state, their attitude towards their work and patients, and their ability to cope with the stresses of practice may all impact on their ability to deliver high quality care. This study seeks to document the extent of the impact of a complaint on doctors in New Zealand, and (by implication) the possible impact that complaints may have on patient care.

The aims of this study are to:

- Document the range of doctors’ responses to receiving a complaint.
- Consider whether there is a shift in the impact of a complaint over time.
- Consider whether there are differences between vocational groups of doctors.
- Inform discussion on proposals for change in the complaints and disciplinary process.

**Method**

The methodology has previously been reported, and can be summarised as follows.

In June 2001, 1200 questionnaires were mailed to doctors on the New Zealand medical register using a stratified systematic sampling technique. From each of the alphabetically ordered lists of (1) vocationally registered general practitioners, (2) hospital-based specialists, and (3) general registrants (junior hospital doctors, medical officers of special scale [MOSS], and general practitioners not on the indicative vocational register), every seventh name was selected until each group contained 400 potential participants. The medical discipline of each respondent was taken as that indicated on the medical register at June 2001.
Each selected doctor received: (1) a mailed invitation to participate; (2) an information sheet; (3) a consent form; and (4) two sealed envelopes (one to be opened by those who had *ever* received a complaint, and the other for those who had *never* received a complaint). Participants were asked to indicate to which body a complaint had gone (the HDC, the [former] Medical Practitioners Disciplinary Committee [MPDC], the ACC, ‘in-house’, or ‘other’).

All questionnaires requested demographic data—including age, gender, place and year of graduation, years in practice in New Zealand, and post-graduate qualification.

Doctors who had *ever* received a complaint completed additional sections about the complaint’s short and long-term impact on themselves and their practice of medicine. Respondents were asked to recall their early response to having received a complaint, to consider their current response to a series of paired statements, and to indicate their level of disagreement or agreement on a five point Likert scale.

Chi-squared tests were used to test associations between respondents in different vocational groups, and ‘Wilcoxon matched pairs signed rank sum tests’ were used to examine the difference between the immediate and long-term response data sets. The level of significance chosen for this study was $p<0.01$. Doctors who had *never* received a complaint were asked a limited number of matching questions about themselves and their practice to provide a control group data set.

Non-respondents to the initial mailing were re-surveyed by post via a questionnaire asking only if they had *ever* or *never* received a complaint (to determine if the doctors who completed the survey were representative of the wider population of New Zealand doctors).

The questions were developed from my previous research on the effect of medical disciplinary complaints on general practitioners, and were piloted in the Department of General Practice, Dunedin School of Medicine. Ethical approval was obtained from the University of Otago Ethics Committee.

**Results**

The characteristics of the respondents to this study have been previously reported, and can be summarised as follows.

Of the 1200 doctors surveyed, 34% of 971 doctors (11% of the registered medical workforce) indicated that had *ever* received a complaint, and 66% of those 971 doctors had *never* received a complaint.

598 (49.8%) doctors completed the full questionnaire. Of these 598 doctors, 201 respondents (33.6%) had *ever*, and 397 (66.4%) had *never* received a complaint. There were 373 replies from the 602 non-respondents who were re-surveyed and, of these, 129 (34.6%) had received a complaint, and 244 (65.4%) had not received a complaint. Of the complaints that had been resolved, 83.4% were dismissed.

Table 1 shows the responses to the statements (grouped to indicate emotional responses, respondents’ attitudes towards themselves and patients, and about aspects of their practice of medicine). The ‘Wilcoxon matched pairs signed rank sum test’ level of significance indicates differences between the immediate and long-term responses.

There was no difference between respondents in different vocational groups to any item, either in the immediate or long-term.

**Immediate response to receiving a complaint**—The results indicate an impact on the emotional state of doctors, their attitudes toward themselves and patients, and on their practice of medicine in the first few days, and up to 6 weeks, after receiving a complaint.
Table 1. Questionnaire results

<table>
<thead>
<tr>
<th>Statement (n)</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong feelings</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Wilcoxon signed rank sum test</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
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<tr>
<td><strong>Emotional responses</strong></td>
<td></td>
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<tr>
<td>I felt/feel angry (n=197)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>6 (3%)</td>
<td>19 (9.6%)</td>
<td>29 (14.7%)</td>
<td>84 (42.6%)</td>
<td>59 (29.9%)</td>
<td>p&lt;0.0001</td>
</tr>
<tr>
<td>Long-term</td>
<td>22 (11.2%)</td>
<td>37 (18.8%)</td>
<td>66 (33.9%)</td>
<td>48 (24.4%)</td>
<td>24 (12.2%)</td>
<td></td>
</tr>
<tr>
<td>I felt/feel depressed (n=198)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>20 (10.1%)</td>
<td>25 (12.6%)</td>
<td>24 (12.1%)</td>
<td>86 (43.4%)</td>
<td>43 (21.7%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>57 (28.8%)</td>
<td>67 (33.8%)</td>
<td>50 (25.3%)</td>
<td>20 (10.1%)</td>
<td>4 (2.0%)</td>
<td></td>
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<tr>
<td>I felt/feel guilty (n=200)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>63 (31.5%)</td>
<td>54 (27.0%)</td>
<td>18 (9.0%)</td>
<td>44 (22.0%)</td>
<td>21 (10.5%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>84 (42.0%)</td>
<td>70 (35.0%)</td>
<td>29 (14.5%)</td>
<td>16 (8.0%)</td>
<td>1 (0.5%)</td>
<td></td>
</tr>
<tr>
<td>I felt/feel ashamed (n=198)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>52 (26.3%)</td>
<td>43 (21.7%)</td>
<td>31 (15.7%)</td>
<td>53 (26.8%)</td>
<td>19 (9.6%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>75 (37.9%)</td>
<td>66 (33.3%)</td>
<td>34 (17.2%)</td>
<td>19 (9.6%)</td>
<td>4 (2.0%)</td>
<td></td>
</tr>
<tr>
<td>I derived/derive a sense of joy from practising medicine (n=198)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>30 (15.2%)</td>
<td>46 (23.2%)</td>
<td>23 (11.6%)</td>
<td>61 (30.8%)</td>
<td>38 (19.2%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>3 (1.5%)</td>
<td>16 (8.1%)</td>
<td>33 (16.7%)</td>
<td>90 (45.9%)</td>
<td>56 (28.3%)</td>
<td></td>
</tr>
<tr>
<td><strong>Attitudes towards self, patients and complainants</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I felt/feel that I was/am a good doctor (n=200)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>7 (3.5%)</td>
<td>26 (13.0%)</td>
<td>15 (7.5%)</td>
<td>100 (50.0%)</td>
<td>52 (26.0%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>1 (0.5%)</td>
<td>4 (2.0%)</td>
<td>15 (7.5%)</td>
<td>110 (55.0%)</td>
<td>70 (35.0%)</td>
<td></td>
</tr>
<tr>
<td>I felt/feel that I was/am a good person (n=198)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>8 (4.0%)</td>
<td>20 (10.1%)</td>
<td>21 (10.6%)</td>
<td>97 (49.0%)</td>
<td>52 (26.3%)</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Long-term</td>
<td>1 (0.5%)</td>
<td>1 (0.5%)</td>
<td>17 (8.6%)</td>
<td>109 (55.1%)</td>
<td>70 (35.3%)</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Immediate</td>
<td>Long-term</td>
<td>Immediate</td>
<td>Long-term</td>
<td>Immediate</td>
<td>Long-term</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
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<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>I wanted/want to keep on practising medicine (n=196)</td>
<td>14 (7.1%)</td>
<td>6 (3.1%)</td>
<td>33 (16.8%)</td>
<td>12 (6.1%)</td>
<td>19 (9.7%)</td>
<td>20 (10.2%)</td>
</tr>
<tr>
<td>I held/hold the same sense of commitment to the patient (complainant)</td>
<td>14 (7.1%)</td>
<td>6 (3.1%)</td>
<td>6 (3.1%)</td>
<td>3 (1.6%)</td>
<td>34 (20.1%)</td>
<td>29 (17.2%)</td>
</tr>
<tr>
<td>I held/hold the same sense of commitment to other patients (n=198)</td>
<td>3 (1.5%)</td>
<td>1 (0.5%)</td>
<td>16 (8.1%)</td>
<td>13 (6.6%)</td>
<td>15 (7.6%)</td>
<td>20 (10.1%)</td>
</tr>
<tr>
<td>I continued to trust/trust patients as before (n=199)</td>
<td>3 (1.5%)</td>
<td>1 (0.5%)</td>
<td>16 (8.1%)</td>
<td>13 (6.6%)</td>
<td>15 (7.6%)</td>
<td>20 (10.1%)</td>
</tr>
<tr>
<td>I put at least the same effort into my patients (n=199)</td>
<td>4 (2.0%)</td>
<td>2 (1.0%)</td>
<td>9 (4.5%)</td>
<td>7 (3.5%)</td>
<td>9 (4.5%)</td>
<td>10 (5.0%)</td>
</tr>
<tr>
<td>I felt/feel at least the same sense of goodwill towards patients (n=199)</td>
<td>4 (2.0%)</td>
<td>2 (1.0%)</td>
<td>9 (4.5%)</td>
<td>7 (3.5%)</td>
<td>9 (4.5%)</td>
<td>10 (5.0%)</td>
</tr>
<tr>
<td>Practice of medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was/am able to consult as well as before the complaint (n=198)</td>
<td>8 (4.0%)</td>
<td>1 (0.5%)</td>
<td>48 (24.2%)</td>
<td>16 (8.1%)</td>
<td>30 (15.2%)</td>
<td>12 (6.1%)</td>
</tr>
<tr>
<td>I was/am able to perform technical tasks as well as before the complaint(n=197)</td>
<td>2 (1.0%)</td>
<td>1 (0.5%)</td>
<td>19 (9.6%)</td>
<td>3 (1.5%)</td>
<td>40 (20.3%)</td>
<td>13 (6.6%)</td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------</td>
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<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>I was/am able to tolerate uncertainty in my practice of medicine</td>
<td>20</td>
<td>63</td>
<td>27</td>
<td>66</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>(n=196)</td>
<td>(10.2%)</td>
<td>(32.1%)</td>
<td>(13.8%)</td>
<td>(33.7%)</td>
<td>(10.2%)</td>
<td>p&lt;0.0001</td>
</tr>
<tr>
<td>Long-term</td>
<td>8</td>
<td>40</td>
<td>21</td>
<td>91</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.1%)</td>
<td>(20.4%)</td>
<td>(10.7%)</td>
<td>(46.4%)</td>
<td>(18.4%)</td>
<td></td>
</tr>
<tr>
<td>I was/am confident in my clinical judgment</td>
<td>10</td>
<td>49</td>
<td>15</td>
<td>91</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>(n=198)</td>
<td>(5.1%)</td>
<td>(24.7%)</td>
<td>(7.6%)</td>
<td>(46.0%)</td>
<td>(16.7%)</td>
<td>p&lt;0.0001</td>
</tr>
<tr>
<td>Long-term</td>
<td>1</td>
<td>29</td>
<td>13</td>
<td>102</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.5%)</td>
<td>(14.6%)</td>
<td>(6.6%)</td>
<td>(51.5%)</td>
<td>(26.8%)</td>
<td></td>
</tr>
<tr>
<td>I continued to provide/provide the same range of services to my patients</td>
<td>8</td>
<td>16</td>
<td>12</td>
<td>112</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>(n=197)</td>
<td>(4.1%)</td>
<td>(8.1%)</td>
<td>(6.1%)</td>
<td>(56.9%)</td>
<td>(24.9%)</td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td>8</td>
<td>28</td>
<td>10</td>
<td>96</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.1%)</td>
<td>(14.2%)</td>
<td>(5.1%)</td>
<td>(48.7%)</td>
<td>(27.9%)</td>
<td>p=0.194</td>
</tr>
<tr>
<td>I viewed/view the complaint as being a good thing</td>
<td>107</td>
<td>64</td>
<td>17</td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>(n=199)</td>
<td>(53.8%)</td>
<td>(32.2%)</td>
<td>(8.5%)</td>
<td>(4.5%)</td>
<td>(1.0%)</td>
<td>p&lt;0.0001</td>
</tr>
<tr>
<td>Long-term</td>
<td>90</td>
<td>55</td>
<td>28</td>
<td>24</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(45.2%)</td>
<td>(27.6%)</td>
<td>(14.1%)</td>
<td>(12.1%)</td>
<td>(1.0%)</td>
<td></td>
</tr>
</tbody>
</table>
72.5% of respondents indicated feelings of anger and 65.1% indicated feelings of depression. 38.4% indicated that they had reduced levels of enjoyment of the practice of medicine, and feelings of guilt and being shamed were indicated by 32.5% and 36.4% respectively.

Respondents indicated reduction in both trust of patients (38.2%) and sense of goodwill to patients (28.6%). Between 14% and 24% of respondents indicated a negative impact of a complaint on their view of themselves and their desire to keep on practising. 82.8% and 89.0% of respondents preserved a sense of commitment and of effort into patient care, respectively—but commitment to the complainant was preserved in only 29.6% of cases, and reduced in 50.3% of cases.

86% of respondents did not indicate that the complaint was a good thing.

42.3% of respondents indicated that their ability to tolerate uncertainty in their practice of medicine was reduced, and 29.8% indicated reduced confidence in their clinical judgment. Only 56.6% felt that they were able to consult well, although most respondents felt that they continued to perform technical tasks well and continued to provide the same range of services.

**Long-term response to receiving a complaint**—The results show that the impact of a complaint softened in the long-term for most of the items studied.

36.6% of respondents indicated feelings of anger—but feelings of depression, guilt, shame, and loss of joy of practice fell to around 10%. All emotion items showed a significant difference between the immediate and long-term responses, and (compared with those who had never had a complaint) more ever had respondents indicated that they felt depressed (p=0.009).

In the long-term, trust and sense of goodwill toward patients returned, but 31.6% of respondents indicated reduction of trust, and 18.1% indicated reduction of goodwill.

Only 2.5% of respondents felt badly about themselves as a doctor in the long-term, but this was still significantly different from those who had never had a complaint (p=0.007).

9.2% indicated that they did not wish to keep on practising medicine. There was no change in the reduction of commitment to the complainant or of the preservation of effort and commitment to other patients, although 10.6% of respondents still indicated a long-term reduction in their sense of commitment to other patients.

Only 27.2% of respondents indicated that the complaint was ‘a good thing’.

24.5% of respondents indicated reduction in their tolerance of uncertainty, which was not significantly different from the respondents who had never had a complaint (p=0.229); and 15.1% indicated a reduction in confidence in their clinical judgment.

8.6% of respondents indicated a reduction in their ability to consult well, but the negative impact of a complaint on the ability to perform technical tasks fell to only 2%, and there was no change from the immediate to the long-term in the range of services offered.
Discussion

This report documents the self-reported impact of the receipt of a complaint on a cohort of New Zealand doctors. It raises concern about the impact of complaints on individual doctors and the profession, and the impact of complaints systems on the delivery of healthcare in New Zealand’s society.

This study indicates a wide range of responses to receiving a complaint between individual doctors—but no difference appears between vocational groups (in terms of their emotional, attitudinal, or practising responses). This finding is significant in terms of understanding the similarities between doctors when considered as a group, despite practising in different fields.

The findings of anger, depression, shame, and experiencing ‘loss of joy of practice’ in the immediate time period, indicate that a complaint has a significant emotional impact on the person of the doctor receiving a complaint. These responses, by falling along a shame-rage or shame-depression axis may indicate a shame response. These are powerful emotions, and (if present) need to be recognised by the doctor, their colleagues, and by the work institution. For some doctors, time away from work may be necessary. The finding that about 1 in 10 doctors have persisting negative emotional responses after receiving a complaint suggests that (although emotions tend to return to normal) some individuals may be deeply hurt by the experience.

This study suggests that complaints may damage trust and goodwill toward patients. These are important components of the doctor-patient relationship. Around 1 in 3 doctors (in receipt of a complaint) indicated reduced trust, and around 1 in 5 doctors indicated reduced sense of goodwill toward patients in the long-term. This suggests that complaints have the potential to damage the doctor-patient relationship with patients who may have played no role in the preceding complaint.

For the medical profession, as well as individual doctors, the findings that a complaint may adversely impact on the doctor’s ability to practice medicine in a day-to-day setting is important. The feeling that doctors can consult well is essential for safe and efficient practice, and for the effective delivery of health care to society. There is no evidence from this study that the delivery of patient care is actually improved by the receipt of a complaint, and these results suggest that complaints against doctors have the potential to impact negatively upon patient care.

This study confirms the findings of local and overseas research on the impact of a complaint, and suggests that New Zealand society should consider whether the current complaints system is actually leading to improved medical practice.

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References:


New Zealand doctors’ attitudes towards the complaints and disciplinary process

Wayne Cunningham

Abstract

Aim To examine attitudes held by doctors in New Zealand towards the complaints and disciplinary process.

Method A questionnaire was sent to New Zealand doctors randomly selected to include vocationally registered general practitioners, vocationally registered hospital-based specialists, and general registrants.

Results 598 respondents (33.6% having ever and 66.4% having never received a medical complaint) indicated that New Zealand doctors strongly support society’s right to complain, having lay input, a sense of completion, and appropriate advice provided to the complaints process. Doctors also support society’s notions of rights and responsibilities, and believe that the medical profession is capable of self-regulation. Fifty percent of doctors do not believe that complaints are a useful tool to improve medical practice. Doctor’s attitudes diverge about how they believe society interacts with the profession through the complaints process. They are divided in their opinion as to whether complaints are warranted, whether complainants are normal people, and whether complaints are judged by appropriate standards.

Conclusion Doctor’s attitudes towards the complaints and disciplinary system fall on a continuum between being consistent and divergent. Their attitudes are consistent with notions of professionalism, but suggest that using the complaints system to improve the delivery of medical care may be problematic.

New Zealand doctors have a special and privileged position within society, which is based around notions of professionalism. These notions include the idea that society places its trust in the profession to hold special areas of knowledge and skill and that (in turn) members of the profession are expected to act virtuously to use that knowledge and skill for the benefit of society.1–4 Notions of professionalism also include the relationship that exists between doctors and society, and (analogous to the doctor-patient relationship) there may be situations in which each party’s particular values and beliefs need to be made explicit for the relationship to succeed.

The complaints and disciplinary system represents one way in which society interacts with the medical profession; and being able to complain about individual doctors is a right that society is unlikely to relinquish. This right is enshrined in legislation,5 and is presumably based on a societal belief that being able to complain about doctors is desirable and important.

For the relationship between the profession and society to be functional, both parties should hold a core set of values and beliefs in common. If New Zealand doctors do not agree with the values underlying the complaints process, or with the mechanism of the process, then the relationship between the profession and society may be
damaged—with the risk that the profession ceases to function in the way that it should for the benefit of society.

Previous qualitative research has identified disquiet with aspects of the way in which society interacts with the medical profession through the complaints and disciplinary process, and with the structure and process of that system. Because any suggested change to the process should consider where doctors stand on some of the underlying values that are ultimately expressed as society’s right to complain, it is important to consider if attitudes held by the respondents in that study are representative of the wider profession, or represent polarised or extreme opinions.

This study aims to:

• Document the attitudes of New Zealand doctors towards the purpose and process of the complaints system.
• Examine whether the experience of having ever received a complaint creates a group of doctors with a significantly different attitude from those who have never received one.
• Consider whether different vocational groups within medicine hold different attitudes.

Method

The methodology has previously been reported, and can be summarised as follows.

In June 2001, 1200 questionnaires were mailed to doctors on the New Zealand medical register using a stratified systematic sampling technique. From each of the alphabetically ordered lists of (1) vocationally registered general practitioners, (2) hospital-based specialists, and (3) general registrants (junior hospital doctors, medical officers of special scale [MOSS], and general practitioners not on the indicative vocational register), every seventh name was selected until each group contained 400 potential participants. The medical discipline of each respondent was taken as that indicated on the medical register at June 2001.

Each selected doctor received: (1) a mailed invitation to participate; (2) an information sheet; (3) a consent form; and (4) two sealed envelopes (one to be opened by those who had never received a complaint, and the other for those who had ever received a complaint). Participants were asked to indicate to which body a complaint had gone (the HDC, the [former] Medical Practitioners Disciplinary Committee [MPDC], the ACC, ‘in-house’, or ‘other’).

All questionnaires requested demographic data—including age, gender, place and year of graduation, years in practice in New Zealand, and post-graduate qualification.

Non-respondents to the initial mailing were re-surveyed by post with a questionnaire asking only if they had ever or never received a complaint, to determine if the doctors who completed the survey were representative of the wider population of New Zealand doctors.

One section of the questionnaire contained attitudinal statements to which the respondents were asked to indicate on a Likert scale their level of disagreement or agreement. Chi-squared tests were used to test associations between doctors’ experience of a complaint and demographic variables. The level of significance was set at $p<0.01$

The questions were developed from my previous research on the effect of medical disciplinary complaints on general practitioners, and were piloted in the Department of General Practice, Dunedin School of Medicine. Ethical approval was obtained from the University of Otago Ethics Committee.
Results

The characteristics of the respondents to this study have been previously reported, and can be summarised as follows.

Of the 1200 doctors surveyed, 34% of 971 doctors (11% of the registered medical workforce) indicated that had ever received a complaint, and 66% of those 971 doctors had never received a complaint.

598 (49.8%) doctors completed the full questionnaire. Of these 598 doctors, 201 respondents (33.6%) had ever, and 397 (66.4%) had never received a complaint.

Table 1 presents the responses to the statements. The statements relate to society’s interaction with the profession through the complaints system, and to its structure and process.

The Table presents the overall attitude of the respondents towards the statement; the percentage responses on the five-point Likert scale for all respondents combined; the percentage responses for those who have never or ever had a complaint; the level of significance of difference between those who have never or ever had a complaint; and whether those who have ever had a complaint are more or less supportive of the statement.

The three vocational groups did not respond significantly differently to any of the statements, although general registrants appeared to disagree more than the vocationally registered general practitioners and hospital-based specialists with the statement ‘most disciplinary complaints against doctors are warranted’ (p=0.019).

Analysis within each of the three vocational groups showed no difference between those who had ever or never received a complaint to all statements except ‘most disciplinary complaints against doctors are warranted’, where vocationally registered general practitioners who had ever had a complaint were significantly more likely to disagree with that statement than if they had never received one (p=0.001).

To the statements ‘most complaints...are warranted’; ‘most complainants are normal people’; and ‘...doctors are judged by appropriate standards’, respondents who had ever had a complaint disagreed more than those who had never had a complaint. These three statements had the widest range of responses.
### Table 1. Questionnaire results

<table>
<thead>
<tr>
<th>Statement</th>
<th>Overall attitude towards statement</th>
<th>All respondents</th>
<th>Never had Complaint</th>
<th>Ever had Complaint</th>
<th>Ever vs Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important that society can complain about doctors n=596 N=596 E=201</td>
<td>95% Agree</td>
<td>SD 0.7</td>
<td>0.5</td>
<td>1.0</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>D 1.2</td>
<td>0.5</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N 3.1</td>
<td>2.3</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A 63.6</td>
<td>61.3</td>
<td>68.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA 31.4</td>
<td>35.4</td>
<td>23.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The rights of patients and the responsibilities of doctors are the best starting point to initiate and judge a complaint n=594 N=394 E=200</td>
<td>62.8% Agree</td>
<td>SD 1.7</td>
<td>1.3</td>
<td>2.5</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>D 16.3</td>
<td>14.2</td>
<td>20.5</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>N 19.2</td>
<td>17.0</td>
<td>23.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A 57.7</td>
<td>62.4</td>
<td>48.5</td>
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</tr>
<tr>
<td></td>
<td>SA 5.1</td>
<td>5.1</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The medical profession is capable of self regulation n=594 N=393 E=201</td>
<td>68.3% Agree</td>
<td>SD 1.0</td>
<td>0.3</td>
<td>2.5</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>D 14.3</td>
<td>15.3</td>
<td>12.5</td>
<td></td>
<td>More support</td>
</tr>
<tr>
<td></td>
<td>N 16.4</td>
<td>18.0</td>
<td>12.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A 58.2</td>
<td>59.5</td>
<td>55.7</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>SA 10.1</td>
<td>6.9</td>
<td>16.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most complaints against doctors are warranted n=592 N=395 E=197</td>
<td>39.5% Disagree</td>
<td>SD 3.4</td>
<td>5.6</td>
<td>2.3</td>
<td>ns</td>
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<tr>
<td></td>
<td>D 36.1</td>
<td>41.1</td>
<td>33.7</td>
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<td></td>
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<td>52.9</td>
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<tr>
<td></td>
<td>A 11.0</td>
<td>10.7</td>
<td>11.1</td>
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<td></td>
<td>SA 0.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Most complaints are about errors and actual wrong-doings n=586 N=389 E=197</td>
<td>51.5% Disagree</td>
<td>SD 4.1</td>
<td>2.6</td>
<td>7.1</td>
<td>P=0.007</td>
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<td></td>
<td>D 47.4</td>
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<td>44.2</td>
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<td>Less support</td>
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<td>33.0</td>
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<td>A 20.3</td>
<td>22.8</td>
<td>15.2</td>
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<td></td>
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<tr>
<td></td>
<td>SA 0.3</td>
<td>0.3</td>
<td>0.5</td>
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<td>--------</td>
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</tr>
<tr>
<td>Most complainants are trying to</td>
<td>49.2%</td>
<td>6.3</td>
<td>11.1</td>
<td>ns</td>
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<tr>
<td>make sure a bad event does not</td>
<td>Disagree</td>
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<td>happen again to someone else</td>
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<td>N=396 E=199</td>
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<td>E=200</td>
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<td>Most complainants are normal</td>
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<td>P&lt;0.001 Less support</td>
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<td>It is important to have lay input</td>
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<td></td>
<td>SA 15.1</td>
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<td>Medical complaints should be</td>
<td>88.5%</td>
<td>28.0</td>
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<td>resolved in a court of law</td>
<td>Disagree</td>
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<td>(n=596 N=396 E=200)</td>
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<td>D 29.9</td>
<td>61.6</td>
<td>52.5</td>
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<td>7.5</td>
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<td></td>
<td>A 3.0</td>
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<td></td>
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<td>The doctors best positioned to</td>
<td>85.4%</td>
<td>0.0</td>
<td>0.5</td>
<td>ns</td>
<td></td>
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<tr>
<td>advise the Health and Disability</td>
<td>Agree</td>
<td></td>
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<tr>
<td>Commissioner are to be found within</td>
<td>n=597</td>
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<td>the same specialty (as that</td>
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<td>involved in the complaint)</td>
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<td>A 57.6</td>
<td>25.0</td>
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<td></td>
<td>SA 27.8</td>
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<tr>
<td>Doctors are the group best able to</td>
<td>68.5%</td>
<td>0.3</td>
<td>2.0</td>
<td>P=0.007 More support</td>
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<td>judge a complaint</td>
<td>Agree</td>
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Within the process, doctors are judged by appropriate standards $n=588 \ N=394 \ E=194$

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<td>58.0</td>
<td>15.0</td>
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24% Disagree
32.7% Neutral
43.3% Agree

SD2.2  D21.8  N32.7  A41.3  SA 2.0
0.5  0.5  20.1  36.3  40.9  2.2
5.6  25.3  25.3  42.3  1.5

P<0.001 Less support

It is important that at the end of the complaints procedure there is a sense of completion for both the doctor and the complainant $n=598 \ N=397 \ E=201$

<table>
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<tr>
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<td>3.0</td>
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<td>40.8</td>
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93.6% Agree

P=0.005 Less support

It is important that the complainant and the doctor are reconciled $n=593 \ N=393 \ E=200$

<table>
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<td>10.7</td>
<td>17.5</td>
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<td>15.5</td>
<td>17.5</td>
<td>48.5</td>
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</table>

69% Agree

ns
Discussion

This survey indicates that doctors’ attitudes towards the complaints and disciplinary system fall along a continuum from being internally consistent through to being divergent. It suggests that there may also be a continuum of consistency between the medical profession’s attitude and that of society, and this may have implications for how society interacts with the profession and for any proposed changes to the current system.

The study indicates that doctors strongly support society’s right to complain, having lay input into the process, achieving a sense of completion for both parties, and having those responsible for making decisions about complaints advised in an appropriate manner. Similarly, respondents did not indicate support for using a court-based system to resolve complaints. These findings indicate that the profession’s attitudes toward these issues are internally consistent, and suggest that they are consistent with those of society.

Respondents indicated support for the notions that the ‘rights of patients and the responsibilities of doctors are the best starting point to initiate and judge a complaint, and that the medical profession is capable of self-regulation’. This is consistent with society’s expectation of having rights in its interaction with doctors, and is consistent with the notion of self-regulation as an indicator of professionalism. Taken together with support for the statement that ‘doctors are the group best able to judge a complaint’, these responses suggest that attempts by society to increase regulation without concomitant input from doctors may be met with resistance by the profession.

Respondents were less internally consistent but still indicative in their responses to three statements related to the purpose of the complaints system. Around 50% of respondents believe that most complaints are not about errors and actual wrongdoings, that complainants are not acting to reduce the risk of a bad event happening to someone else, and that making complaints is not a useful tool to improve medical practice. These results suggest disquiet with some of the important beliefs that society holds—as to why it reserves the right to complain about doctors, especially with respect to the maintenance of professional standards.

It appears that New Zealand doctors are by no means sure that the quality of medical care delivered to patients is necessarily improved by the current complaints system.

Divergent responses (with increased negativity from respondents who had ever had a complaint) were elicited to some statements related to how society interacts with doctors through the complaints process. Nearly 40% of respondents did not think that ‘most complaints against doctors were warranted’ and nearly 50% of respondents were neutral with regard to the statement. For society to relate to the medical profession appropriately, the right to complain must be exercised in a responsible way. Indeed, if most complaints are not warranted, then the continued misuse of the right to complain risks damaging the relationship between the medical profession and society.

Only one-third of these respondents believe that complainants ‘are normal people’—with one-third being neutral towards that statement and one-third disagreeing. This
finding has important implications for the process of managing a complaint. If these respondents are correct, care of the complainant (especially if they are themselves a patient) must be taken into account, and the process of the complaint must minimise potential harm for the doctor concerned.

Complainants are the vehicle through which society exercises its right to complain about doctors, and if the 42% of respondents who had ever had a complaint and felt that complainants were not normal people are making a valid assessment (and are not disgruntled or being derogatory), then society’s use of complainants in its interaction with the medical profession may need to be re-considered.

Although 41.3% of respondents agreed that ‘…doctors are judged by appropriate standards’, nearly 1 in 4 respondents disagreed with the statement, and a third were neutral. Respondents who had ever had a complaint disagreed more with the statement, despite the standards used resulting in over 80% of complaints not being upheld. The findings suggest dissatisfaction with the standards that society judges complaints.

The consistency of responses from the three vocational groups suggests that doctors are capable of representing themselves as a single professional body within our society. Although the range of responses demonstrates that an individual doctor may hold a polarised view, no particular vocational group holds an extreme view. Similarly, respondents who have ever received a complaint hold beliefs that are largely consistent with those who have never had a complaint.

The results indicate that New Zealand doctors hold attitudes and beliefs towards the complaints system consistent with the notion that professionalism involves a relationship with the society in which it functions. Doctors believe that there should be a complaints system, that there should be appropriate input from both the profession and society, and that there should be a point of conclusion for both parties.

Doctors are supportive of notions of responsibility and self-regulation. However, the results suggest that the use of the complaints system (to identify problems in practice) prevents the perpetuation of poor practice; and to improve practice, may be problematic.

The divergent responses to whether a complaint is warranted, whether complainants are normal people, and whether the standards of judgement are appropriate, raise concern about how doctors believe that New Zealand society interacts with them as a profession.

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References:


The medical complaints and disciplinary process in New Zealand: doctors’ suggestions for change

Wayne Cunningham

Abstract

<table>
<thead>
<tr>
<th><strong>Aim</strong></th>
<th>To document New Zealand doctors’ opinions about the complaints and disciplinary process, and to develop a proposal for change.</th>
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<tbody>
<tr>
<td><strong>Method</strong></td>
<td>A cross-sectional survey of New Zealand doctors randomly selected to include vocationally registered general practitioners, vocationally registered hospital-based specialists, and general registrants. Qualitative (thematic) analysis of written responses was used to categorise doctors’ ideas about the complaints system, and to develop a proposal for change.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>453 doctors responded to the survey. Respondents were aware of the complexity of medicine, the fallibility of doctors, and of tension between societal expectations of care and their ability to meet those expectations. They perceived a societal culture of blame, and indicated that complaints should provide an opportunity for learning (for both complainants and doctors to be heard), and for a satisfactory outcome to be achieved for both doctors and complainants. They indicated that complaints should be resolved rapidly, that frivolous and vexatious complaints should be identified early in the process, and that the role of the media should be minimised. They indicated that the complaints process should be transparent, with complaints tribunals using appropriate advisors and standards of judgment. The proposal for change was a single point of entry for all complaints.</td>
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<tr>
<td><strong>Conclusion</strong></td>
<td>New Zealand doctors are aware of the nature of the practice of medicine, and the sociopolitical context of the delivery of care. They support the notion of a Complaints Tribunal providing a single point of entry for all complaints, and which uses a process that is transparently appropriate for both doctors and complainants. Although jokingly referred to as ‘death by a thousand arrows’ (Figure 1), the multiple pathways of the complaints and disciplinary process in New Zealand are unlikely to be found amusing by most doctors (personal communication: Gaelene Phipps, Barrister, Medical Protection Society, 2004). Society, however, seeks to maintain accountability of the medical profession by being able to complain about individual doctors and is unlikely to relinquish that right. The complaints process should seek to benefit both patients and society (although that assumption has never been tested). For patients, potential benefits include the maintenance of safety and boundaries, the opportunity to seek explanation, and the potential for compensation. The complaints process may also act to maintain trust between society and the medical profession, and standards of professional practice. It is possible, however, that the delivery of patient care may be impaired if the complaints process has a negative impact on the self of the doctor and on the doctor-patient relationship.</td>
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1. The complaints process may also act to maintain trust between society and the medical profession, and standards of professional practice. It is possible, however, that the delivery of patient care may be impaired if the complaints process has a negative impact on the self of the doctor and on the doctor-patient relationship.
Despite very few complaints ultimately leading to disciplinary proceedings, doctors may feel threatened by the complaints process and the potential that it holds for disciplinary action.

This journal has published the report of a workshop that included proposals for change within the complaints and disciplinary process. There are, however, no other published data on the views of New Zealand doctors about the complaints process, or suggestions for how it could be improved. This study aimed to seek the opinion of New Zealand doctors about the complaints and disciplinary process and develop ideas for potential change.

Figure 1. Death by 1000 arrows: the multiple pathways of the current complaints system in New Zealand

Method
The methodology has previously been reported, and can be summarised as follows.
In June 2001, 1200 questionnaires were mailed to doctors on the New Zealand medical register using a stratified systematic sampling technique. From each of the alphabetically ordered lists of (1) vocationally registered general practitioners, (2) hospital-based specialists, and (3) general registrants (junior hospital doctors, medical officers of special scale [MOSS], and general practitioners not on the vocational register), every seventh name was selected until each group contained 400 potential participants.
The medical discipline of each respondent was taken as that indicated on the medical register at June 2001. Each selected doctor received: (1) a mailed invitation to participate; (2) an information sheet; (3) a consent form; and (4) two sealed envelopes (one to be opened by those doctors who had never received a complaint and the other for those who doctors had ever received a complaint).

Participants were asked to indicate to which body a complaint had gone (the HDC, the [former] Medical Practitioners Disciplinary Committee [MPDC], the ACC, ‘in-house’, or ‘other’). All questionnaires requested demographic data including age, gender, place and year of graduation, years in practice in New Zealand, and post-graduate qualification.

The question ‘how do you think that the medical disciplinary complaints system could be improved in this country?’ was put to all participants, and the answers were provided in handwritten form on the returned questionnaires. Although the complaints process is distinct from the disciplinary process, the term ‘disciplinary complaints process’ is widely understood by doctors in New Zealand. Responses were transcribed and analysed using line-by-line inductive analysis as described by Strauss and Corbin. Emergent themes and sub-themes were analysed with the aim of developing ideas for potential change in the complaints and disciplinary process and developing theories about respondents’ perceptions of the nature of the practice of medicine.

Non-respondents to the initial mailing were re-surveyed by post with a questionnaire asking only if they had ever or never received a complaint, to determine if the doctors who completed the survey were representative of the wider population of New Zealand doctors.

Ethical approval was obtained from the University of Otago Ethics Committee. Research of bias was considered prior to study commencement. Pre-existing biases included a sense that the existing processes were unpleasant for the doctor, that the process was not always seen to be fair and transparent, and that the outcome for patients and complainants was not always satisfactory.

Results

The characteristics of the respondents to this study have been previously reported, and can be summarised as follows.

Of the 1200 surveyed, 971 replies (11% of the 8715 doctors registered in New Zealand in April 2001) indicated that 34% had ever received a complaint, and 66% had never received one. 598 (49.8%) doctors completed the full questionnaire. Of these, 201 respondents (33.6%) had ever received a complaint and 397 (66.4%) had never received a complaint.

There were 373 replies from the 602 non-respondents who were re-surveyed and, of these, 129 (34.6%) had received a complaint, and 244 (65.4%) had not received a complaint.

453 respondents provided a written answer suggesting improvements to the complaints and disciplinary process. Of these, 158 (35%) had ever received a complaint and 295 (65%) had never received a complaint.

Analysis revealed three thematic categories:

- **The nature of medical practice in contemporary New Zealand society**
- **Notions about the current complaints system**
- **A single complaints body as a suggestion for change**
The nature of medical practice in contemporary New Zealand society

Respondents indicated awareness of the complexity of practising, of tensions between the limitations of medicine and the expectations of society, and of tensions between the rights and responsibilities of doctors and patients.

**Complexity and fallibility**—Respondents noted that doctors were not infallible, and that mistakes will happen:

‘Recognise that doctors are human and that decision making always carries the possibility of being wrong. The more decisions the greater the inevitability of an error. All doctors will be wrong sometimes, albeit rarely’

(Hospital-based specialist, no complaint, #066)

How a patient reacts to an error and to the outcome of care was seen as being important in the genesis of a complaint, and respondents felt that the complaints process also reflected a societal need to apportion blame:

‘How the patient reacts to an error may be the deciding factor in whether there is a disciplinary complaint rather than the nature of the error itself’

(Hospital-based specialist, no complaint, #066)

‘Stop treating complaints like mistakes for which there must be a responsible person who must be hunted down and punished’

(General registrant, no complaint, #145)

Several respondents noted that doctors practised within complex systems, but that individual doctors were held responsible for the delivery of care:

‘Judgment is based on idealistic practice where everyone does things where there are clearly defined rights and wrongs – like a soap opera. Not enough attention to the complex backdrop against which we work full of strange pressures and perverse incentives’

(General practitioner, complaint, #321)

**Societal expectations**—Respondents noted conflict between societal issues and the ability of doctors to deliver care. They were aware of the limitations of the health-care system, and felt that society’s expectations were not always realistic:

‘We cannot have a Rolls Royce system on a Japanese import budget’

(General registrant, complaint, #085)

‘Time and resource constraints need to be considered rather than comparing us to some abstract best practice standard which may not be attainable in New Zealand’

(General practitioner, no complaint, #200)

‘It seems increasingly we are whipping boys for a pervasive sense of societal inequity or malaise. I think we need clearer guidelines on how much individual responsibility any doctor can be expected to take for societal problems of injustice or iniquity. The patients’ primary right is to safe and appropriate clinical care, there is a limit to how much we can prop up a sick system’

(General practitioner, no complaint, #057)

**Rights and responsibilities**—Respondents felt that patients had responsibility for their own health, and that doctors had rights that appeared to be overlooked:
‘Doctors and their staff have rights – not to have to put up with rude or abusive patients and to be treated courteously, and to have time off, i.e. when I’m shopping, out with the kids or at home, I do not expect to be molested by people asking me about their health problems’

(General practitioner, no complaint, #035)

‘The rights of doctors have been progressively diminished concurrently with an ineffective delineation of the responsibilities of patients’

(General practitioner, complaint, #043)

Notions about the current complaints system

The need for complaints to be resolved as rapidly as possible—to recognise when complaints were unwarranted, and to minimise the adverse impact of the media—were seen as practical and problematic issues. Respondents also commented on what they thought the system should achieve for both doctors and complainants, and on who should sit in judgment.

The need for rapid resolution of complaints—148 respondents mentioned the need for rapid resolution. The most poignant quote was:

‘Speed: In my situation I was devastated by the length of time it took to resolve. I contemplated suicide, leaving the profession, leaving New Zealand, etc. It was a very terrible time of my life and for years it was very difficult to talk about it’

(General practitioner, complaint, #048)

The purpose of a complaints system—Respondents indicated that a complaints system should improve medical practice and provide a forum for complainants to be heard and appropriately compensated. The opportunity for a complaint to become a learning opportunity for the doctor was contrasted with the perceived culture of blame, and respondents noted the need for a shift in societal attitudes to allow this to happen:

‘The emphasis should be on correcting/improving a doctors practice and systems of failure rather than being vindictive, i.e. emphasis on improvement and prevention rather than disciplinary actions’

(General practitioner, no complaint, #248)

Respondents felt that complainants needed to be both heard and appropriately compensated:

‘Complaints should be heard promptly for the benefit of all involved. Reasonable compensation should be available to patients who have suffered injury from medical error – the lack of this compounds complainants’ feelings of injustice’

(General practitioner, no complaint, #200)

Frivolous, vexatious, and malicious complaints—Respondents used these phrases to define complaints that should not reasonably be made (frivolous), or where the complainant had malicious intent towards the doctor; and linked recognition of these complaints with the need for rapid resolution. They noted that some complainants were psychiatrically unwell and were in need of support:
‘Complaints which clearly have no foundation (where complainants clearly have been disadvantaged but where the doctor could not have altered or was not responsible for the problem) should be sifted out early and discharged’
(Hospital-based specialist, no complaint, #301)

Respondents differentiated between a hierarchy of complaints, and some wanted doctors to be able to take action against complainants where the complaint was seen to be unjustified:

‘Doctors should also be allowed to make complaints against patients. They should be allowed to document harassment in the clinic and some disciplinary action taken’
(General practitioner, no complaint, #268)

Dialogue, mediation, and complaint resolution—Respondents indicated that facilitated dialogue with the complainant, taking the opportunity to explore both sides of the issue might reduce the need for higher-level complaint procedures. They linked this notion to complainants’ needs to feel heard and to seek explanation about what had happened, and to doctors’ needs for fairness and transparency of process:

‘Mediate reconciliation prior to hearing since many complaints arise because there has not been an opportunity to air feelings and explain. The disciplinary proceedings should follow this if needed’
(General practitioner, no complaint, #032)

‘It may be better to have a mediation process which is transparent, i.e. doctor and team versus patient and team, mediated by external agency’
(General practitioner, no complaint, #147)

The role of the media—Respondents felt that the media had a negative influence on the complaints process. They were aware of the influence of the media on society’s attitudes towards doctors. Several respondents commented on ‘trial by press’, and wanted media coverage restricted to after the complaint process had been completed.

‘Media coverage probably the most destructive aspect in view of the sensational type of reporting and doctor bashing culture. Reporters do not appear on the whole to have a good, intelligent grasp of the issues, and try and exploit the emotive angle’
(General registrant, no complaint, #025)

Who should judge?—Respondents indicated that only transparently appropriate people should provide expert advice and sit on complaints tribunals. They felt that tribunal members should be in touch with the reality of medical practice, and that tribunals must include competent practitioners from the same field of practice as the doctor involved:

‘In deciding merits of a complaint – input from respected peers in the same field e.g. rural GPs for complaints against rural GPs’
(General practitioner, complaint, #244)

Respondents were also aware of the burden of responsibility placed on tribunal members, of the personal qualities required, and of the need for lay input:

‘People paid to do the work not ad hoc trying to do it in addition to their current workload. However need training in it and also the medical people
need a background of working in the area being challenged’
(General practitioner, no complaint, #371)

‘They can start by being humane, caring and kind—the very qualities that brought most of us into medicine’
(General practitioner, complaint, #267)

‘Doctors provide the basic understanding of assessing doctors. Lay input is essential to keep doctors on track and responsive to the community’
(General practitioner, no complaint, #241)

A single complaints body as a suggestion for change

Not all respondents had ideas about how the complaints process might be improved. Some were unaware of the complaints process and some felt that their lack of personal experience precluded them from commenting. There was no suggestion that there should not be a complaints or disciplinary process. Several respondents commented that a court-based system (as used in the United States) either did not work well or was inappropriate for New Zealand. Some respondents, who had sat on complaints assessment committees, commented positively on the process, whilst others related examples where the process had been used inappropriately or destructively towards the doctor.

Many respondents suggested that a Complaints Tribunal should be the single point of entry into the complaints process. Some respondents suggested that the doctor or complainant should have access to a Court of Appeal, after the Complaints Tribunal hearing.

Discussion

This study aimed to get New Zealand doctors’ suggestions for change (if any) to the complaints and disciplinary system. The respondents not only provided suggestions for change, but they also showed insight into the nature of the practice of medicine and the sociopolitical context of the delivery of medical care. They indicated a mismatch between societal expectations of medicine and doctors’ ability to deliver that care, and a mismatch between the complaint system’s process and its ability to achieve a desirable outcome for both doctors and complainants.

The results suggest tension between idealised and real-life practice. One idealisation is the theoretical or ‘best possible’ delivery of medical care, which is the standard by which these respondents fear they will be judged in the event of a complaint. Being human and fallible, they are aware that even the ‘best doctors’ will make errors in the practice of medicine. They see this standard of judgment as being unrealistic, and suggest that a complaints system needs to be able to account for differences between what is theoretically ideal, and what doctors are capable of delivering.

A second idealisation is the standard of care that doctors would like to be able to provide, but which they struggle to achieve because of constraints in the healthcare system over which they have no control—they feel that this exposes them to the risk of a complaint.
The results suggest that society’s attitude needs to shift towards better understanding of the limitations of medicine, better definition of the rights and responsibilities of doctors and patients, and away from the prevailing culture of blame. However, there were no constructive notions offered as to how this societal shift could be facilitated.

Respondents did not mention the purpose of a complaints system as contributing to the maintenance of professional standards, professional accountability, or the desire to maintain a relationship of trust between the profession and society. Instead, they focused on the opportunity for learning from mistakes and errors, providing a mediated forum in which both the doctor and complainant could be heard, and achieving a satisfactory outcome for both parties.

This study suggests significant support within the medical profession for change to the structure of the complaints and disciplinary process. Respondents were clear on the attributes of a system that would provide rapid resolution of a complaint using a process that was transparently fair to both parties. A single point of entry for all complaints is suggested, and the characteristics of a Complaints Tribunal are summarised in Table 1.

Table 1. Desirable characteristics of a Complaints Tribunal

<table>
<thead>
<tr>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Be the point of entry for all complaints</td>
</tr>
<tr>
<td>• Be capable of rapid response to a complaint</td>
</tr>
<tr>
<td>• Provide a safe environment for dialogue and mediation between complainants (and their advocates) and doctors (and their advocates)</td>
</tr>
<tr>
<td>• Be based on rights and responsibilities of both parties</td>
</tr>
<tr>
<td>• Be capable of rapidly resolving complaints lacking in substance, or malicious or vexatious complaints</td>
</tr>
<tr>
<td>• Seek to improve the delivery of healthcare, being able to discriminate between failings attributable to medical (healthcare) systems, error in the practice of medicine, or of wrong-doing</td>
</tr>
<tr>
<td>• Be aware of the limitations of medicine</td>
</tr>
<tr>
<td>• Consist of members or appointees who are properly trained and funded, appropriately experienced, and whose judgments are seen as being fair and appropriate</td>
</tr>
<tr>
<td>• Not composed ad hoc</td>
</tr>
<tr>
<td>• Be grounded and competent in the field in question</td>
</tr>
<tr>
<td>• Be capable of seeking improved outcome for the patient</td>
</tr>
<tr>
<td>• Be independent of the influence of the media</td>
</tr>
</tbody>
</table>

At a practical level, the Complaints Tribunal should be centrally organised and locally delivered—in order to provide consistent judgment and remain responsive to the wide range of issues that complainants may bring before it. In the author’s opinion, it is unlikely that impetus for change will come from outside the profession, and the responsibility for considering these proposals lies with the profession itself.
‘Being able to complain about doctors’ is a fundamental societal right in New Zealand. By focusing on doctors’ education, and improving systems of delivery of care, the complaints process has the potential to improve the wellbeing of society.

A process is needed—which is transparently fair to doctors and complainants, which recognises the complexity of medicine and healthcare systems, which recognises the fallibility of doctors, and which has the potential to improve the outcome for patients who’s care has been sub-standard.

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**References:**


Surgeons’ experiences of complaints to the Health and Disability Commissioner

Richard Tapper, Laurence Malcolm, Frank Frizelle

Abstract

Aims To investigate details of patient complaints to the Health and Disability Commissioner about surgeons—to identify factors in the patient-surgeon interaction that might make a complaint more likely, and to consider ways of improving the complaints environment.

Methods A questionnaire was developed asking specific questions about surgeons and their practice, number of complaints since 1996 and specific questions about their last Health and Disability Commissioner complaint. The questionnaire was mailed to surgeons on the mailing lists of the New Zealand Orthopaedic Association and The New Zealand Association of General Surgeons. Anonymous responses were entered into an Microsoft Access database.

Results Responses were received from 280 (86%) of the 325 people contacted. Of these 280 replies, 259 were eligible for analysis. 149 (58%) of these 259 responses were from doctors who had received a complaint. There were 282 complaints, which gives an annual rate of complaints per person (inclusive of all respondents) of 0.16 over the 7 years: 1996 to 2002—but during 2000 to 2002 this rate was 0.34. The peak of complaints was in 2000. Those in mid-career (ie, 10–15 years of practice) and in private practice were at increased risk.

Patients who complained were more likely to be female (58%) and in older ages. Respondents presented a very negative impression of their experience of the complaints process. In 91.1% of cases, either no action was taken or the surgeon was not in breach. Only 2.2% of cases were referred for disciplinary proceedings.

Conclusion Complaints against surgeons are common. The ‘highest-risk surgeon’ is a subspeciality general surgeon in private practice. The most likely people to complain are middle-class, white females aged 35–70 years. It would appear likely that the present system does not resolve issues for the patient or the surgeon. Radical changes are needed, and are beginning to occur, in the complaints environment. Especially needed is acceptance and disclosure of harm and error (away from a culture of blame and discipline).

Therefore, if medical practitioners are to move with confidence into this more open environment, a more supportive political/media/organisational culture is needed, with a focus on valuing disclosure and learning from mistakes.

The medicolegal climate in New Zealand is unique by World standards in that (following the Woodhouse Commission report in 1972) doctors have worked under what is largely a ‘no-fault’ system where medical misadventure compensation has been covered by the government through the Accident Compensation Corporation (ACC).
Since 1996, patient complaints regarding medical treatment have been separated from the New Zealand Medical Council, and have been handled by the Office of the Health and Disability Commissioner (HDC). Discipline has been handled by the independent Medical Practitioners Disciplinary Tribunal (MPDT). Medical indemnity insurance costs for New Zealand doctors (at about $1200 annually) are trivial compared with the major (and increasing) indemnity costs facing doctors in other comparable developed countries.

Despite this, there is a widespread concern among doctors that New Zealand is a hostile and litigious environment for medical practice. The profound effect of a patient complaint on the personal and professional self-worth of a medical practitioner has been documented by Cunningham and Dovey (from a study based on interviews with general practitioners who experienced unsustained complaints under the old system of the Medical Practitioner’s Disciplinary Committee). They state that ‘the most pervasive finding about the disciplinary process was a ‘feeling of being engulfed by a system about which the respondents had no experience and no control’. For the participants in that study, there was a profound, negative, and sustained impact on the doctor-patient relationship, and on the doctor’s practice of medicine’.

Cunningham et al, in a 2001 study of 971 doctors on the medical register, found that 34% doctors had received a complaint; they also found a dramatic increase in the level of complaints over the past decade. Furthermore, Cunningham et al concluded that there was a high risk of doctors receiving complaints in New Zealand, which (in the year 2000) reached 5.7% of doctors. And they raised questions about the role of the complaints system and its effectiveness in promoting better quality.

However, the view that New Zealand doctors face a hostile disciplinary environment is challenged by the Health and Disability Commissioner (HDC). In his Annual Report to June 2003, the HDC states that there has been a four-fold decline in the numbers of doctors facing disciplinary charges since 1994—a time when complaints were handled by the MPDC. In addition, he stresses the need to learn from complaints, as well as the need for a modern understanding of error and disclosure to improve patient safety.

Although general and orthopaedic surgeons receive 10%–12% of medical practitioner complaints to the HDC, they make up only 6% of the medical community. This study was undertaken to:

- Investigate further the risk of and trends in complaints sustained by surgeons,
- Identify discriminating factors in the patient-surgeon interaction, which might make a complaint more likely,
- Assess how surgeons dealt with the complaints, and whether the surgeon thought that the process was beneficial to the patient or the surgeon, and to
- Determine what might be learnt from this experience—which could subsequently lead to improvements in the complaints system.
Methods

We designed a questionnaire to investigate aspects of the HDC complaints process, which we based upon our review of the literature on complaints and concerns discussed with us by surgeons. The questionnaire asked about the surgeons’ practice, how many HDC complaints they had, and the details about their last HDC compliant (including issues about resolution). The questionnaire was mailed on two occasions to the 214 orthopaedic surgeons on the New Zealand Orthopaedic Association mailing, and to 111 general surgeons on the New Zealand Association of General Surgeons mailing list. The surgeons were clearly instructed not to reply twice, and a review of the raw data revealed no identical responses. All responses were treated anonymously and entered into a Microsoft Access database, which was used for our initial analysis.

Results

General—Responses were received from 280 (86%) of the 325 people contacted. From those 280 responses, 15 were eliminated due to retirement, 2 were eliminated as they were currently overseas, 1 questionnaire was filled out incorrectly, and 1 respondent was not a surgeon. Two responses were received too late to be included in the analysis. Overall, there were 259 responses from 304 eligible respondents (Table 1); a final response rate of 85%.

The surgeons—Of the 259 respondents, 149 (58%) had received a total of 282 HDC complaints since 1996 (Table 1). The highest percentage rate of complaints was in the ‘subspecialty general surgeon’ and ‘unspecified’ group (66% and 72% respectively). Table 1 summarises responses received, and the number of complaints related to all respondents, including those who had not received complaints.

Table 1 Summary of respondents (by type and years of practice), and the rate of HDC complaints per year (by type from 1996 to 2002) inclusive of all respondents

<table>
<thead>
<tr>
<th>Practice type</th>
<th>Total by type of practice</th>
<th>Total who received complaints (%)</th>
<th>Mean years of practice</th>
<th>Total complaints (by practice type)</th>
<th>Complaints per year since 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>General surgeon</td>
<td>41</td>
<td>29 (71)</td>
<td>18.8</td>
<td>47</td>
<td>0.13</td>
</tr>
<tr>
<td>General orthopaedic</td>
<td>104</td>
<td>51 (49)</td>
<td>13.3</td>
<td>34</td>
<td>0.31</td>
</tr>
<tr>
<td>Subspecialty orthopaedic</td>
<td>47</td>
<td>23 (49)</td>
<td>13.5</td>
<td>14</td>
<td>0.26</td>
</tr>
<tr>
<td>Subspecialty general surgeon</td>
<td>35</td>
<td>23 (66)</td>
<td>15.6</td>
<td>47</td>
<td>0.34</td>
</tr>
<tr>
<td>Unspecified</td>
<td>32</td>
<td>23 (72)</td>
<td>19.2</td>
<td>41</td>
<td>0.45</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>149 (58)</td>
<td>15.4</td>
<td>282</td>
<td>0.33</td>
</tr>
</tbody>
</table>

When trends in HDC complaints over the period 1996 to 2002 were analysed, the numbers of complaints jumped dramatically—from 5 in 1996 to 79 in 2000, 60 in 2001, and 69 in 2002. Possible reasons for this increase in complaints are discussed below. We felt it was important to analyse complaints in more detail (taking into account only the last 3 years—2000 to 2002, inclusive).
Table 2 shows the number of complaints received according to respondents’ years in practice, as well as the rate of HDC complaints per year of practice for all respondents (including those who had not received a complaint). It is apparent that the rate of complaints rises markedly to 0.38 per year for those in the mid-career range (11–15 years of practice), and subsequently falls off for later years.

### Table 2 Number and rate of HDC complaints by year of practice for the three years 2000 to 2002 for all respondents

<table>
<thead>
<tr>
<th>Years of practice</th>
<th>Number of complaints</th>
<th>Complaints per year of practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–5</td>
<td>30</td>
<td>0.07</td>
</tr>
<tr>
<td>6–10</td>
<td>40</td>
<td>0.24</td>
</tr>
<tr>
<td>11–15</td>
<td>36</td>
<td>0.38</td>
</tr>
<tr>
<td>16–20</td>
<td>35</td>
<td>0.28</td>
</tr>
<tr>
<td>&gt;20</td>
<td>67</td>
<td>0.29</td>
</tr>
<tr>
<td>Total</td>
<td>208</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Other factors, which appeared to increase the risk of HDC complaints, were working on an entirely private basis and having a larger number of consultations per year. The number of procedures performed per year did not appear to be a factor.

**Patients who complained**—The HDC complaint was laid by the patient in 70% of cases, by the patient’s family or whanau in 27% of cases, and by other doctors in 1.4% of cases. Interestingly, 2 (1.4%) complaints were laid by the Minister of Health. People who laid complaints (whether from the patient, family/whanau, and other sources) were more likely to be female (58%) than male (42%); p<0.05. If the complaint was made directly by the patient themselves, then this increased to 65% female compared with 35% male (p<0.05). If the complaint was laid by the family/whanau, then the patients were equally likely to be male (54%) or female (46%).

The patients were predominantly in the 36–50 and 51–70 year age ranges; making up 34% and 32% of complaints, respectively. There were very few complaints laid regarding children; making up only 2% of complaints. The patients tended to be older if the complaint was laid by the family; and if the patient complained directly themselves, they were more commonly in the 36–50 year age bracket.

The ethnic background of complainants reveal a relative over-representation of Caucasian patients and a relative under-representation of the Maori/Pacific Island and Asian populations.

**The HDC complaints**—The HDC complaints were more likely to be about a failure of duty of care (55%) rather than about a procedure (35%) or consent (4%). Although not included specifically in our questionnaire, 6% of complaints were about ACC reports by orthopaedic surgeons (to which the patients took exception).

In 91% of cases, either no action was taken or the surgeon was found not to be in breach of the code. In 7% of cases, the surgeon was found in breach—but in only 2% of cases was the case referred for disciplinary proceedings.
Table 3 summarises the outcomes of the event related to the complaint and perceptions of the outcomes from respondents. In only 26% of cases was there felt to be an adverse outcome for the patient, with 13% being stated as severe. The majority of respondents indicated that they had discussed concerns prior to the complaint with the patient. A much smaller proportion continued to look after the patient after the event.

Clearly, the complaint (and process) was felt to be a negative experience for both respondents and patients. However, 34% of complainants indicated they had learnt from the complaint; although their comments did not clarify what specifically had been learnt. A minority (40%) of surgeons indicated that they had apologised to the patient.

The complaint process took a median of 10 hours (mean of 16 hours) of the surgeon’s time, although the further the complaint proceeded the greater the time spent by the surgeon. Complaints (which reached disciplinary proceedings) took a mean of 63 hours.

Only 43% of surgeons involved a lawyer in the complaints process. This percentage increased for those who had had more than one complaint, and the further the complaint proceeded. For public patients, respondents stated that hospital management were supportive in only 34% of cases, neutral in 52% of cases, and difficult in 14% of cases.

### Table 3. Summary of outcomes of event and complaints (as stated/perceived by respondents)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Not stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse outcome</td>
<td>48 (26)</td>
<td>95 (52)</td>
<td>39 (21)</td>
</tr>
<tr>
<td>Severe</td>
<td>18 (13)</td>
<td>40 (28)</td>
<td>84 (59)</td>
</tr>
<tr>
<td>Discussed concerns prior to complaint</td>
<td>62 (42)</td>
<td>48 (32)</td>
<td>39 (26)</td>
</tr>
<tr>
<td>Initiated discussion of problem with patient</td>
<td>57 (38)</td>
<td>60 (40)</td>
<td>32 (21)</td>
</tr>
<tr>
<td>Continued to look after patient</td>
<td>43 (32)</td>
<td>79 (59)</td>
<td>13 (10)</td>
</tr>
<tr>
<td>Patient gained from complaint</td>
<td>17 (11)</td>
<td>103 (69)</td>
<td>29 (19)</td>
</tr>
<tr>
<td>Respondent gained from complaint</td>
<td>15 (10)</td>
<td>113 (76)</td>
<td>21 (14)</td>
</tr>
<tr>
<td>Respondent learnt from complaint</td>
<td>51 (34)</td>
<td>77 (52)</td>
<td>21 (14)</td>
</tr>
<tr>
<td>Apologise</td>
<td>59 (40)</td>
<td>68 (46)</td>
<td>22 (15)</td>
</tr>
</tbody>
</table>

### Discussion

**Quality of the data**—The final response rate (85%) is remarkably high for this kind of survey, and perhaps reflects the depth of feeling and concern among surgeons about the risk of suffering a complaint. The remarkable rise in reported complaints (from years 1996 to 2000–2002) is puzzling, and does not correspond to trends in complaints as reported by the HDC (see below). However, it is similar to trends in
complaints reported by Cunningham et al. Given the concern generated by a complaint, it is unlikely that this would be due to a failure of recall a compliant.

**Trends in HDC complaints**—Table 4 summarises general trends in complaints against surgeons and medical practitioners—as derived from the Annual Reports of the HDC (from 1997 to 2003) and the Medical Practitioners Disciplinary Tribunal.

Table 4. Summary of trends over time in complaints to the HDC, as well as findings against surgeons and all medical practitioners (from the Annual Reports of the HDC)

<table>
<thead>
<tr>
<th>Type of complaint or finding</th>
<th>Year when complaints/findings were reported</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1997</td>
</tr>
<tr>
<td>Complaints re surgeons</td>
<td>71</td>
</tr>
<tr>
<td>Complaints re all medical practitioners</td>
<td>516</td>
</tr>
<tr>
<td>Breech found re surgeons</td>
<td>1</td>
</tr>
<tr>
<td>Breech found re all medical practitioners</td>
<td>17</td>
</tr>
<tr>
<td>Percentage breech re surgeons</td>
<td>5.9</td>
</tr>
<tr>
<td>Percentage breech of complaints re all practitioners</td>
<td>3.3</td>
</tr>
<tr>
<td>Practitioner found guilty</td>
<td>9</td>
</tr>
<tr>
<td>All complaints</td>
<td>1000</td>
</tr>
</tbody>
</table>

*Number to date; HDC=Health and Disability Commissioner; re=regarding.

According to the Health Workforce Committee report entitled ‘The New Zealand Health Workforce’, there were 750 surgeons out of a total of 7721 medical practitioners in the year 2000. Thus, according to the total figures of Table 7, this gives a rate of complaints per practitioner per year of 0.10 for surgeons, and 0.07 for all practitioners, over the period 1997 to 2003. This is somewhat less that the rate of 0.16 complaints per year recorded from respondents. General surgeons and orthopaedic surgeons, however, are the high-risk surgical specialities.

The Medical Council Registrar tends to over-estimate the number of general surgeons, in that although some surgeons have dual qualifications, they only practice their non-general surgical speciality. Other surgeons have no speciality register for their type of practice, and are therefore included as general surgeons by the Medical Council for their statistics.

From a direct count of full-time practising surgeons in New Zealand, there are between 140 and 160 general surgeons and between 220 and 240 orthopaedic surgeons (excluding locum positions). The number of complaints per surgeon suggested by the HDC figures differ from our study, which focused on the high-risk groups: general surgeons and orthopaedic surgeons. The following comments are relevant regarding the trends in the HDC figures.
There was an upward trend in the number of complaints after 1997 (peaking in the year 2000) towards both surgeons and all practitioners. Since then, there has been a notable fall. These HDC trends vary from trends in complaints reported by respondents, which are much lower for the earlier period but much higher for the latter period. The percentage of complaints (in which a breech was found by the HDC) varies widely over the period in both groups, but surgeons (overall) appear to have only a slightly higher rate than all practitioners.

Only a very small proportion of complaints (less than 0.02%) resulted in a guilty finding by the MDPT. The rate of complaints (in relation to the total workforce) shows that surgeons have a somewhat higher rate: 0.10 per year compared with 0.07. However these rates are lower than those reported by respondents (which ranged up to 0.38). The reasons for the higher rate recorded from respondents are suggested above.

An important consideration in regard to the HDC figures is that they relate to the year when the complaint was received and a subsequent decision was made. However, complaints may reach the HDC years after the event from which they arose. Furthermore, once a complaint has reached the HDC, it may take up to 1 or 2 years to reach a decision. Much more reliable trend data would attribute all statistics back to the year of the event of concern. This may explain possible discrepancies between respondent and HDC data.

Factors leading to a higher risk of a complaint—This study identified both surgeon and patient factors associated with an increased rate of complaints. Surgeons in full-time private practice had more than twice as many complaints per surgeon compared to surgeons in full-time public practice—this could be due to higher patient expectations in private practice. Furthermore, the consultant/registrar/house surgeon structure in the public sector may lead to potential complaints being dealt with at an earlier stage.

Surgeons in the middle of their careers tended to be at greater risk of receiving complaints. This finding initially surprised us. However in a study in New South Wales doctors by Daniel et al those in the 40–49 year age bracket were almost twice as frequently involved in complaints as those in the 30–39 and 50–59 year age brackets. ‘Subspecialty general surgeons’ also were at greater risk for complaints, although the cause for this was not explored in our study. Almost 70% of complaints by patients are from women; a figure reported in other studies as well.

Overview of the complaint experience of respondents—The overall impression of the complaint experience (as presented by respondents) is generally negative, and the relationship between an adverse event and a complaint appeared to be an insignificant. Moreover, discussion of patient concerns appeared to make little difference to the risk of a complaint. Only a small minority of respondents felt that they or the patient had gained anything from the complaint. Only 40% of respondents had apologised to the patient. Hospital management was felt to be supportive in only a third of public cases. However, further reasons for the negative impressions presented were not further explored in the questionnaire.

The changing quality culture—The experience of respondents reported here may have been typical of practices, which may now be passing. Until recently (in at least one large DHB), the Quality and Risk Manager reported to the board's solicitor who managed all communications with patients (regarding adverse events and complaints).
as commercial rather than clinical issues. Adverse events were seen as risks, which (along with apologies) could lead to adverse media publicity and formal complaints. Open disclosure was discouraged—the consequence for doctors is a sense of disempowerment and shame as noted by Cunningham et al and others. However, in New Zealand and other countries, marked (and even dramatic) steps towards building a new quality culture have been made in recent years. In part, this has been in response to professional, political, and public concern going back to the Cartwright Cervical Cancer Inquiry of 1988 (in New Zealand), and more recently the Bristol Royal Infirmary Inquiry (in Britain). Clinical leadership has played a key role in this development in New Zealand.

Research by Davis et al and others has highlighted the fact that adverse events are common (associated with 12.9% of hospital admissions in New Zealand). Indeed, there is increasing professional and public awareness and acceptance that healthcare is associated with such events, and that open disclosure and learning from mistakes is a much more constructive way of resolving both doctor and patient concerns highlighted in this and other studies.

There is now increasing evidence that a more open system does not lead to more complaints; indeed, the reverse may be more likely. The evidence suggests that patients complain because of failed expectations to be heard, insufficient explanation and apology, and of assurances that action will be taken to prevent such events occurring in the future to other patients. This appears to be the case with complaints made at lower levels. However, there is doubt about this correlation when complaints become more formal, and where there is increased evidence that patients want compensation or disciplinary action taken. Indeed, the level of claims and complaints is closely linked to media publicity about clinical failings, and may bear little relationship to actual harm. For example, it is almost certain that the peaking of the complaints to the HDC in 2000 (Table 7) was linked to the publicity at the time relating to the Parry and Bottrill cases.

Many examples can be given of recent progress towards building a quality culture in the New Zealand health system—for example, the 2002 report of the National Health Committee and the September 2003 release of the Government’s national quality strategy by the Minister of Health. The Medical Council of New Zealand has released the ‘Disclosure of Harm Draft Statement for Consultation, March 2004’ document, which recommends open disclosure. It states that open disclosure contributes to a more trusting doctor-patient relationship, is a right under the HDC code, is necessary for informed consent, contributes to public awareness about the reality of medical treatment, and provides an environment that enables doctors to learn from other’s mistakes because harm can be discussed openly. It stresses that it is not about attributing blame.

Furthermore, there is increasing recognition that adverse events and errors are as much system-related as individually related. The ACC recently stated:

‘Multiple studies have shown that the overwhelming majority of errors are made by well-trained, conscientious people who are trying to do a good job, but are caught in a faulty system that set them up to make a mistake’
In the year ending June 2003, the HDC identified an organisational breach of the Code in over 50% of breach reports involving public hospitals.

Associated with the changing culture in the health system, ACC recently undertook a review of medical misadventure. Submissions strongly supporting the proposed changes. Medical error, which required finding a practitioner to be at fault, will be removed from in a new system of compensation for patient injury.

The need for a supportive environment for disclosure — Berwick, one of the world's key leaders in promoting clinical quality and a more open environment, recently stated:

Hospitals' understanding causes of injuries remains scientifically Neanderthal. They cling to unsound but deeply entrenched beliefs. They believe that bad people cause bad errors even though in reality most bad errors are committed by competent caring people doing what competent caring people would do.

He further states:

‘When health care leaders and boards cling to unscientific theories, they foster counterproductive responses to the problem such as naive investigations, reprisals and secrecy. They reinforce the fear, the shame and a sense of insult that makes people shut their eyes and mouths even tighter and confound progress towards safer care.’

A corporate culture is needed (including in New Zealand) which supports and applauds openness and disclosure as an important learning experience for the organisation as a whole. Indeed, recent studies have shown a more supportive corporate culture is emerging in New Zealand, and that the main barrier to disclosure remains clinician fear of the HDC complaints process. Action is needed at national and local levels to address what appears to be a major gap in the perceptions of clinical leaders and grass roots clinicians.

Conclusion — The findings of this and similar studies have shown that the complaints process (of past regimes) was perceived as a negative, disempowering, and damaging process for both medical practitioner and patient. In New Zealand, this has in part been associated with the failed commercialisation strategies of the 1990s. However, there are clear signs that constructive policies and strategies are being implemented which recognise that harm related to patient care is inevitable. Also being recognised is the importance of open disclosure, improved communication, expressions of regret and an apology (where appropriate), and developing supportive and learning organisations.

However, a convergence between two sets of (at present, apparently conflicting) cultures is needed for this to be achieved. Political, media, and organisational cultures need to move away from the current focus upon blame and discipline. On the other hand, doctors will have greater confidence in moving from a past culture of defensiveness towards disclosure — if they can have confidence in a supportive organisational and political environment, which values adverse events and errors as important learning experiences.

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Acknowledgement: Some funding for this study was received from the Christchurch Colorectal Research Fund.

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References:


Arunachalam Dharmalingam, Ian Pool, Sandra Baxendine, Janet Sceats

Abstract

Aims To describe and analyse the trends in (and pattern of) hospitalisations for medical conditions that could be avoided by adequate primary care.

Methods Using public hospital inpatient discharges data, avoidable hospitalisation rates are derived for each of the four time points around the 1981, 1986, 1991, and 1996 censuses (for 29 geographical regions, 7 functional age groups, and 12 medical conditions). All rates are standardised for age compositional differences, using the 1996 New Zealand age-composition as the standard. Relative avoidable hospitalisation rates are derived using North Shore as the reference region.

Results Avoidable hospitalisation rate increased during the 1980–97 period. Regional variations narrowed during 1980–97 because some regions experienced greater increases in avoidable hospitalisations than others. Regions with higher avoidable hospitalisations tended to have greater proportion of sole Maori populations. The young and old had higher rates than other age groups. Avoidable hospitalisation increased for all medical conditions but asthma and immunisable conditions.

Conclusions The increase in avoidable hospitalisation in New Zealand between 1980 and 1997 coincided with the major health reforms, economic restructuring, and welfare reforms of the 1980s and early 1990s.

New Zealand’s health system has gone through major reforms over the last two decades, particularly in the 1990s. The health reforms have occurred in the context of major restructuring of the economy and the social sectors. The direct impact of the health reforms is on the supply of health services: availability of (and accessibility to) primary care. The reforms can influence the level of avoidable hospitalisations by limiting the availability and affordability of primary care.

Evidence from both overseas and New Zealand suggests that there is a strong link between avoidable hospitalisations and the underutilisation of primary care, and that underutilisation is associated with lower socioeconomic status.

Several studies have shown that (with timely and adequate primary care) it is possible to prevent the onset of illness and control an acute episode; chronic conditions can also be monitored and managed with access to appropriate primary care. In this paper, we describe the trends in (and pattern of) hospitalisations for conditions that could potentially be taken care of by the provision of (and access to) adequate primary care. We describe the regional differentials, age patterns, and disease patterns in avoidable hospitalisations between 1980 and 1997. We then discuss the findings in the context of the changing health sectors of the 1980s and early 1990s.
Data and methods

We use public hospital inpatient discharges data obtained from the New Zealand Health Information Service for the calendar years 1980–1997. To allow for time series analysis, the data were adjusted for changes to data collection and coding procedures and health policy. Katzenellenbogen et al.20 have recently documented that a number of health policy and other changes have affected the comparability of discharge data for the period since 1980. They also ‘filtered’ the data by excluding a number of categories, so that valid comparisons could be made over time.21 We have adopted Katzenellenbogen et al’s suggestions, and (accordingly) excluded several categories (including day-patients, as definitions differed over time) from the discharge data set used here.

Several overlapping lists of avoidable hospitalisations are available in the literature. In general, avoidable hospitalisations are defined as those resulting from medical conditions that can be prevented, controlled, monitored, and managed by timely and effective primary care.6,8,13,19 Following Jackson et al.10,11 in this paper we consider the hospitalisations for medical conditions given in Table 1, as avoidable.

### Table 1. Avoidable hospitalisation (AH) conditions with ICD-9-CM codes

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<th>AH category label</th>
<th>Condition description</th>
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We derived avoidable hospitalisation rates for each of the four time points around the 1981, 1986, 1991, and 1996 censuses. We first computed a 3-year moving average for the number of avoidable hospitalisations and then divided this figure by the census population to obtain the rates for the four periods: 1980–82, 1985–87, 1990–92, and 1995-97. We computed avoidable hospitalisation rates by gender, functional age groups, and medical condition for New Zealand (as a whole and for 29 geographic regions).

The most recent health reforms have reorganised the New Zealand health sector into 21 District Health Boards (DHB). As some DHBs have a much bigger population or geographical spread than others, for the purpose this paper we divided the bigger ones into smaller units to give a total of 29 regions. Of the 29 regions, 12 regions had a population of less than 100,000 in 1996, 14 regions had a population between 100,000 and 200,000, and 3 regions had a population over 200,000 people in 1996.

All the rates presented here are standardised for age compositional differences, using the 1996 New Zealand age-composition as the standard. This is important because the demographic composition of a population can not only change over time but can also differ between various geographic regions.

To study the regional differences in avoidable hospitalisations, we derived relative hospitalisation rates for each region by using North Shore as the reference population. North Shore was chosen as it had one of the lowest avoidable hospitalisation rates among the 29 regions. North Shore is also a region that has fared well in many socioeconomic indicators. Relative avoidable hospitalisation rate is obtained by dividing the age-standardised avoidable hospitalisation rate for a given region and year by the age-standardised avoidable hospitalisation rate for North Shore for the same year.

We use the proportion of sole Maori population (the indigenous people of New Zealand) in a region as a proxy for socioeconomic status. There is a large body of empirical literature that shows that Maori ethnicity is strongly associated with poor socioeconomic status.\(^{22-27}\)

In New Zealand censuses since 1986, the ethnicity question has been based on self-identification, and individuals can report more than one ethnicity. Sole Maori are those who identify Maori as their only ethnic group. Until the 1981 census, ethnicity classification was based on a biological criterion: all those with half or more Maori blood were classified as Maori. Moreover, until 1996 people could report only one ethnicity in hospitalisation records. The inconsistencies, in the definition and collection of ethnicity data between the censuses (that provide the denominator data) and hospitalisation records, could lead to underestimation or overestimation of hospitalisation rates among the Maori—depending on whether sole Maori or mixed Maori population is used in the denominator.\(^{28-30}\) Thus we decided not to derive hospitalisation rates by ethnicity.

We also considered the proportion of population receiving welfare benefits in a region and the proportions without any educational qualifications as regional level socioeconomic indicators. But this information was not comparable over the time period under consideration. For instance, ACC was only included in the benefit data from 1991; ‘no educational qualifications’ data was also problematic because there was a ‘still at school category’ in 1981, 1986, and 1991 censuses—but not in the 1996 census.

We did not have access to the NZdep data (aggregate area level composite measure of deprivation derived from the census based on a number of socioeconomic indicators) but again they are available only for 1991 and 1996 censuses. Thus we decided to use the proportion of sole Maori as an indicator for the relative socioeconomic position of a region. The correlation analysis (results not given) showed that the proportion of sole Maori in a region was strongly associated with the proportion on welfare benefits (for all but 1980–82 period) and the proportion with no educational qualifications.

Although the ethnicity questions in the census have changed over time, data on sole Maori obtained since the 1986 census (based on sociocultural definition) are comparable with the data from the 1981 census (based on blood-fraction definition).\(^{28,29}\)

**Results**

Age standardised avoidable hospitalisation rates (AHR) are given in Table 2 for the period 1980–97 by geographic regions. For New Zealand (as a whole), the rate increased from 73 per 10,000 people in 1980–82, to 83 in 1985–87, and to 96 in 1995–97.
Table 2. Age-standardised avoidable hospitalisation rates per 10,000 population in New Zealand

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<td>81</td>
<td>76</td>
<td>95</td>
<td>3.6</td>
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<td>84</td>
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<td>51</td>
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<td>62</td>
<td>69</td>
<td>64</td>
<td>74</td>
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<td>72</td>
<td>94</td>
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<tr>
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<td>82</td>
<td>86</td>
<td>58</td>
<td>69</td>
<td>60</td>
<td>63</td>
<td>66</td>
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<td>104</td>
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<td>76</td>
<td>69</td>
<td>90</td>
<td>73</td>
<td>83</td>
<td>75</td>
<td>96</td>
<td>9.6</td>
</tr>
</tbody>
</table>
This amounts to an increase of about 32% between 1980 and 1997. This increase was punctuated by a decline between 1985–87 and 1990–92. The rates for males and females followed a similar trend. Males have a higher AHR than females, and the male-female difference seems to have narrowed: the difference declined from about 16 per 10,000 people in the 1980s to about 14 in 1995–97. There was a substantial geographical variation in the level of avoidable hospitalisation—over the 1980–97 period, some regions experienced greater increases in AHRs than others.

While most regions showed decline in the rate of hospitalisations between 1985–87 and 1990–92, nine regions showed monotonic increase during 1980–97. These regions are: Northland, Central Waikato, Eastern Bay of Plenty, Lakes, Tairawhiti, Wanganui, Southland, Rodney, and Waitakere. Incidentally, all but Southland, Rodney and Waitakere have a significant rural and sole Maori population. Tairawhiti, a region with over one-third of its population in 1991 being sole Maori, had the highest rate of avoidable hospitalisations since the mid-1980s.

The relative avoidable hospitalisation rates (RAHR) for the 29 regions are given in Table 3. As North Shore had one of the lowest avoidable hospitalisation rates since 1980, it was chosen as the reference region to derive the RAHRs. The pattern and trends in the relative rates help illustrate how the different regions have experienced avoidable hospitalisations relative to a relatively better off region, North Shore.

It is clear from Table 3 that in 1980–82 there were about 13 regions whose rates were over two times as much as the rate observed for North Shore. This declined to six regions in 1985–87, to four regions in 1990–92, and to only one region in 1995–97. This underscores the fact that (over time) the various regions have tended to converge towards the rates observed in North Shore.

There is also a strong socioeconomic gradient to the regional pattern in avoidable hospitalisations. In general, regions with higher avoidable hospitalisation rates have tended to have a greater proportion of sole Maori populations. In 1995-97, Eastern Bay of Plenty and Tairawhiti were the only regions that had rates about twice the rate observed in North Shore. These two regions also had the highest proportion of sole Maori population (about 35% in 1991 census). This is further supported by the simple regression estimates given in Table 4: the proportion of Sole Maori population in a region is a powerful predictor of the avoidable hospitalisation rates.

In the 1990s, over 80% of the regional variations in avoidable hospitalisation rate is explained by the regional variations in the proportion of sole Maori populations. We also considered including two additional variables in the regression model: proportion of population on benefits (unemployment, domestic purposes benefit (DPB), and sickness/invalid benefit) and proportion with no educational qualifications. But we did not include them because, as discussed above, the data on these two indicators were not comparable for the periods. Moreover, these two variables were very strongly associated with proportion of sole Maori population. This association suggests that ethnicity is probably a reliable marker of socioeconomic deprivation, including inequalities in education and employment.
Table 3. Relative avoidable hospitalisations in New Zealand (relative to North Shore region)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Males</th>
<th>Females</th>
<th>Total (males + females)</th>
<th>% Sole Maori (1991)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Bay of Plenty</td>
<td>2.72</td>
<td>2.08</td>
<td>2.35</td>
<td>1.74</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>2.94</td>
<td>2.49</td>
<td>2.76</td>
<td>2.04</td>
</tr>
<tr>
<td>Lakes</td>
<td>2.55</td>
<td>1.91</td>
<td>1.96</td>
<td>1.41</td>
</tr>
<tr>
<td>South Waikato</td>
<td>2.60</td>
<td>2.06</td>
<td>1.59</td>
<td>1.46</td>
</tr>
<tr>
<td>Northland</td>
<td>2.77</td>
<td>1.89</td>
<td>2.05</td>
<td>1.54</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>3.02</td>
<td>2.19</td>
<td>2.17</td>
<td>1.49</td>
</tr>
<tr>
<td>Wanganui</td>
<td>2.03</td>
<td>1.61</td>
<td>1.79</td>
<td>1.40</td>
</tr>
<tr>
<td>Papakura/Franklin</td>
<td>1.49</td>
<td>1.21</td>
<td>1.03</td>
<td>1.07</td>
</tr>
<tr>
<td>Central Waikato</td>
<td>1.76</td>
<td>1.41</td>
<td>1.48</td>
<td>1.39</td>
</tr>
<tr>
<td>Manakau</td>
<td>1.84</td>
<td>1.60</td>
<td>1.42</td>
<td>1.48</td>
</tr>
<tr>
<td>Western Bay of Plenty</td>
<td>1.97</td>
<td>1.46</td>
<td>1.39</td>
<td>1.38</td>
</tr>
<tr>
<td>Kapiti/Porirua</td>
<td>2.21</td>
<td>2.27</td>
<td>1.88</td>
<td>1.33</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>3.06</td>
<td>2.40</td>
<td>1.91</td>
<td>1.59</td>
</tr>
<tr>
<td>Manawatu</td>
<td>2.26</td>
<td>1.54</td>
<td>1.42</td>
<td>1.17</td>
</tr>
<tr>
<td>North East Waikato</td>
<td>1.69</td>
<td>1.48</td>
<td>1.38</td>
<td>1.01</td>
</tr>
<tr>
<td>Hutt Valley</td>
<td>2.47</td>
<td>1.99</td>
<td>1.42</td>
<td>1.15</td>
</tr>
<tr>
<td>Taranaki</td>
<td>2.43</td>
<td>1.81</td>
<td>1.46</td>
<td>1.11</td>
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<tr>
<td>Waikakere</td>
<td>1.40</td>
<td>1.08</td>
<td>1.23</td>
<td>1.26</td>
</tr>
<tr>
<td>Auckland City</td>
<td>1.86</td>
<td>1.40</td>
<td>1.16</td>
<td>1.25</td>
</tr>
<tr>
<td>Southland</td>
<td>1.93</td>
<td>1.47</td>
<td>1.52</td>
<td>1.09</td>
</tr>
<tr>
<td>Wellington City</td>
<td>2.39</td>
<td>2.00</td>
<td>1.49</td>
<td>1.14</td>
</tr>
<tr>
<td>West Coast</td>
<td>3.16</td>
<td>2.29</td>
<td>1.73</td>
<td>1.24</td>
</tr>
<tr>
<td>Rodney</td>
<td>1.01</td>
<td>0.88</td>
<td>0.80</td>
<td>0.74</td>
</tr>
<tr>
<td>Nelson/Marlborough</td>
<td>1.47</td>
<td>1.16</td>
<td>0.92</td>
<td>0.81</td>
</tr>
<tr>
<td>Christchurch City</td>
<td>1.85</td>
<td>1.60</td>
<td>1.53</td>
<td>1.26</td>
</tr>
<tr>
<td>North Shore</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Location</td>
<td>1.66</td>
<td>1.29</td>
<td>1.27</td>
<td>0.94</td>
</tr>
<tr>
<td>-------------------</td>
<td>------</td>
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<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Rural Canterbury</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otago</td>
<td>1.97</td>
<td>1.60</td>
<td>1.27</td>
<td>1.13</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>1.86</td>
<td>1.47</td>
<td>1.44</td>
<td>1.02</td>
</tr>
</tbody>
</table>
Age-standardised total hospitalisation rates (including avoidable and non-avoidable hospitalisations) showed that (tables not included) there was an overall decline between 1980–82 and 1995–97—although there was a slight increase between 1990–92 and 1995–97. The time trend in total hospitalisation rates is similar to that of avoidable hospitalisation rates given in Tables 2 and 3, but in the opposite direction. Again there was some regional variation.

Table 4. Parameter estimates from a simple regression model for four periods in New Zealand

<table>
<thead>
<tr>
<th>Period</th>
<th>R²</th>
<th>P-value</th>
<th>Number of observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-82</td>
<td>58</td>
<td>.001</td>
<td>29</td>
</tr>
<tr>
<td>1985-87</td>
<td>59</td>
<td>.001</td>
<td>29</td>
</tr>
<tr>
<td>1990-92</td>
<td>80</td>
<td>.001</td>
<td>29</td>
</tr>
<tr>
<td>1995-97</td>
<td>85</td>
<td>.001</td>
<td>29</td>
</tr>
</tbody>
</table>

Note: Age-standardised avoidable hospitalisation rate is the dependent variable; proportion Sole Maori is the independent variable.

Although almost all regions (see Table 2) had experienced an increase in avoidable hospitalisations between 1980–82 and 1995–97, all but ten regions had a decrease in total hospitalisation rates during the same period. Thus overall, the avoidable hospitalisation rates and total hospitalisation rates moved in the opposite direction during 1980–97. As with the relative avoidable hospitalisation rates, the variations in relative total hospitalisation rates have tended to narrow over time. Thus a major change in the level of total and avoidable hospitalisation rates is for regional variations to narrow.

In Table 5, we provide the avoidable hospitalisation rates as a percent of total hospitalisation rates for various regions. In 1995–97, about 1 in 10 hospitalisations were avoidable. For New Zealand (as a whole), the avoidable as a percent of total hospitalisations has increased from 7% in 1980–82 to 10% in 1995-97. Interestingly, there is no clear socioeconomic gradient to the observed pattern in Table 4. This is likely to be related to the regional variation in the direction of change in total and avoidable hospitalisation rates over the time period (1980–97).

Rates of avoidable hospitalisations for seven broad age groups are given in Table 6. The highest rate is observed for those aged 75+, followed by the youngest population aged under 5 years. In 1995–97, the avoidable hospitalisation rates were 409 per 10,000 population in the 75+ age group, 228 in the under 5 age group, 180 in the 65–74 age group, and between 45 and 75 in the 5–64 age groups.

As with the overall avoidable hospitalisation rates, age-specific rates also showed an increase between 1980–82 and 1995–97. However, the rate of increase differed by age. While the rate increased by 31% between 1980–82 and 1995–97 for the under 5 age group, it did so by 51% among those aged 75 and over. The smallest increase (2%) was observed for the 5–14 age group.
Table 5. Percentage of total hospitalisations that are avoidable in New Zealand (for various regions)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Percentage of avoidable hospitalisations</th>
<th>% Sole Maori (1991)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Bay of Plenty</td>
<td>7.3 8.1 8.7 11.0</td>
<td>6.5 7.8 8.2 10.8</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>8.9 10.3 8.9 9.6</td>
<td>7.0 8.6 9.2 10.3</td>
</tr>
<tr>
<td>Lakes</td>
<td>6.3 8.2 7.7 8.8</td>
<td>5.7 7.8 7.1 8.4</td>
</tr>
<tr>
<td>South Waikato</td>
<td>8.4 11.9 11.4 10.8</td>
<td>8.6 12.5 11.5 11.4</td>
</tr>
<tr>
<td>Northland</td>
<td>9.4 10.2 10.6 11.7</td>
<td>8.7 10.6 10.3 13.2</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>8.7 9.2 8.2 10.9</td>
<td>7.3 9.1 8.8 11.4</td>
</tr>
<tr>
<td>Wanganui</td>
<td>7.2 8.8 10.3 11.0</td>
<td>6.6 8.1 9.3 10.5</td>
</tr>
<tr>
<td>Papakura/Franklin</td>
<td>7.4 8.0 6.8 7.9</td>
<td>6.6 7.9 7.0 9.1</td>
</tr>
<tr>
<td>Central Waikato</td>
<td>6.1 7.5 6.2 7.9</td>
<td>4.9 5.7 6.8 8.1</td>
</tr>
<tr>
<td>Manakau</td>
<td>7.4 8.7 8.8 11.0</td>
<td>6.4 7.7 8.7 10.7</td>
</tr>
<tr>
<td>Western Bay of Plenty</td>
<td>6.2 7.2 7.8 8.0</td>
<td>5.5 6.1 6.8 7.4</td>
</tr>
<tr>
<td>Kapiti/Porirua</td>
<td>6.8 8.3 7.3 9.4</td>
<td>5.9 7.7 7.1 9.9</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>7.6 7.9 7.1 7.8</td>
<td>7.4 7.4 6.8 7.5</td>
</tr>
<tr>
<td>Manawatu</td>
<td>7.4 9.0 7.7 11.1</td>
<td>6.4 8.0 7.9 10.9</td>
</tr>
<tr>
<td>North East Waikato</td>
<td>7.5 8.4 8.9 9.6</td>
<td>7.5 8.8 8.3 11.0</td>
</tr>
<tr>
<td>Hutt Valley</td>
<td>8.3 10.6 9.3 11.5</td>
<td>8.5 10.4 9.2 12.6</td>
</tr>
<tr>
<td>Taranaki</td>
<td>5.2 6.0 5.8 8.1</td>
<td>5.3 5.1 5.9 7.7</td>
</tr>
<tr>
<td>Waitakere</td>
<td>6.6 7.6 8.8 8.8</td>
<td>6.5 7.6 8.1 8.9</td>
</tr>
<tr>
<td>Auckland City</td>
<td>7.9 8.1 9.7 10.9</td>
<td>6.8 7.6 9.3 11.4</td>
</tr>
<tr>
<td>Southland</td>
<td>9.6 11.8 9.9 10.4</td>
<td>8.8 10.7 10.0 10.4</td>
</tr>
<tr>
<td>Region</td>
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<td>West Coast</td>
</tr>
<tr>
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<td>-----------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>5.9</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
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<td>8.0</td>
</tr>
<tr>
<td></td>
<td>8.0</td>
<td>8.3</td>
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<tr>
<td></td>
<td>8.4</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
<td>8.4</td>
</tr>
</tbody>
</table>
Socioeconomic variations are also evident in the age-specific rates for all the periods under consideration. But socioeconomic differences seem to vary by age. For instance, in 1995-97, children aged under 5 years in regions with over 15% sole Maori population were about 37% more likely to experience avoidable hospitalisations compared to children in regions with less than 10% sole Maori population (see Figure 1). But among those aged 75+, they were only 17% more likely to experience avoidable hospitalisation if they lived in a region with over 15% sole Maori population than those living in a region with under 10% sole Maori population.

Table 6. Age-specific avoidable hospitalisation rates in New Zealand (per 10,000 people)

<table>
<thead>
<tr>
<th>Period</th>
<th>&lt;5yrs</th>
<th>5-14yrs</th>
<th>15-24yrs</th>
<th>25-44yrs</th>
<th>45-64yrs</th>
<th>65-74yrs</th>
<th>75+yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-82</td>
<td>174</td>
<td>60</td>
<td>41</td>
<td>32</td>
<td>60</td>
<td>132</td>
<td>271</td>
</tr>
<tr>
<td>1985-87</td>
<td>257</td>
<td>73</td>
<td>44</td>
<td>33</td>
<td>61</td>
<td>136</td>
<td>289</td>
</tr>
<tr>
<td>1990-92</td>
<td>219</td>
<td>56</td>
<td>41</td>
<td>31</td>
<td>56</td>
<td>131</td>
<td>295</td>
</tr>
<tr>
<td>1995-97</td>
<td>228</td>
<td>62</td>
<td>55</td>
<td>45</td>
<td>74</td>
<td>180</td>
<td>409</td>
</tr>
</tbody>
</table>

Percentage change between 1980-82 and 1995-97

- 31%
- 2%
- 36%
- 41%
- 24%
- 37%
- 51%

The avoidable hospitalisation rates as a proportion of total hospitalisation rates for different age groups are given in Table 7. It is interesting that the two youngest age groups (under 5, and 5–14) had the highest levels: over 12% of all hospitalisations was avoidable. The 75+ age group was the next highest. Thus not only that the level of avoidable hospitalisation was one of the highest among children aged under 5 years, but also the rate was higher in relation to total hospitalisation.

Table 7. Percent of total hospitalisations that are avoidable in New Zealand (for various age groups)

<table>
<thead>
<tr>
<th>Age group (yrs)</th>
<th>Percentage of avoidable hospitalisations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5</td>
<td>12.3</td>
</tr>
<tr>
<td>5-14</td>
<td>10.8</td>
</tr>
<tr>
<td>15-24</td>
<td>5.6</td>
</tr>
<tr>
<td>25-44</td>
<td>4.2</td>
</tr>
<tr>
<td>45-64</td>
<td>5.3</td>
</tr>
<tr>
<td>65-74</td>
<td>6.9</td>
</tr>
<tr>
<td>75+</td>
<td>6.9</td>
</tr>
</tbody>
</table>

In Table 8 we present the avoidable hospitalisation rates for a number of primary care conditions (see Table 1 for a list of conditions). We have followed Jackson et al.\(^6\) in classifying various diagnoses into a number of primary conditions.\(^8\) It is clear from Table 8 that people were more likely to be hospitalised for asthma, pneumonia, congestive heart failure, and cellulitis than for any other avoidable conditions.
Table 8. Age-standardised avoidable hospitalisation rates for various primary care conditions in New Zealand

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>287</td>
<td>361</td>
<td>263</td>
<td>256</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>62</td>
<td>72</td>
<td>91</td>
<td>155</td>
</tr>
<tr>
<td>Congestive heart failure</td>
<td>133</td>
<td>141</td>
<td>144</td>
<td>174</td>
</tr>
<tr>
<td>Diabetes</td>
<td>19</td>
<td>19</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Gangrene</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Kypokalemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Immunisable condition</td>
<td>14</td>
<td>15</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Kidney infections</td>
<td>12</td>
<td>14</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>Malignant hypertension</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Perforated or bleeding ulcer</td>
<td>34</td>
<td>36</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>140</td>
<td>154</td>
<td>155</td>
<td>252</td>
</tr>
<tr>
<td>Ruptured appendix</td>
<td>19</td>
<td>18</td>
<td>16</td>
<td>26</td>
</tr>
</tbody>
</table>

In 1995–97, the avoidable hospitalisation rates for asthma and pneumonia were the highest (over 250 per 100,000 people), followed by congestive heart failure (173), and cellulitis (155). In terms of time trend, of the four leading conditions of avoidable hospitalisation, all but asthma showed a consistent increase between 1980–82 and 1995–97. In fact, the increase was particularly dramatic between 1990–92 and 1995–96: avoidable hospitalisation rate for cellulitis (a predominantly adult condition) increased by 70%, by 62% for pneumonia and by 21% for congestive heart failure.

On the other hand, the rate for asthma decreased by 29% between 1985-97 and 1995-97; as did the rate for immunisable conditions (by 34% between 1985–87 and 1995–97), which (along with asthma) occur predominantly among children.

Figure 2 shows the pattern of avoidable hospitalisation for selected primary care conditions for three groups of regions—those with under 10% sole Maori, between 10% and 14%, and those with over 15% sole Maori.

In general, for the four conditions shown in Figure 2, the higher concentration of sole Maori populations is associated with higher likelihood of avoidable hospitalisation. This was true for all the four time points. What is also interesting to note from Figure 2 is that when we compare the rates for asthma and pneumonia for the periods 1990–92 and 1995–97, while the socioeconomic differential seemed to narrow for asthma between 1990-92 and 1995-97, it seems to have increased for pneumonia.
Figure 1. Age standardised avoidable hospitalisation rates for four major conditions for three groups of regions in New Zealand (Sole Maori under 10%, 10-14%, and 15+%).
Figure 2. Age standardised avoidable hospitalisation rates for four major conditions for three groups of regions in New Zealand (sole Maori under 10%, 10-14%, and 15+%).
Discussion

The analysis has shown that the rate of avoidable hospitalisations has increased between the early 1980s and mid-1990s. But there was a decline in avoidable hospitalisations between the mid- and late-1980s. This period coincided with the first major health reforms (1983–1991). Fourteen locally elected Area Health Boards were formed during this period with the aim of improving efficiency and accountability. The boards were given the responsibilities for health promotion, disease prevention, and provision of personal treatment and caring services.\(^2,3^1\)

Although, it was criticised that there was no incentive for the health boards to be efficient and that they suffered from weak accountability,\(^3^2\) some area health boards did make efforts to strengthen the primary care system. In order to improve access to primary care, subsidies to general practitioner services were increased.\(^3\) The decrease in avoidable hospitalisation between 1985–87 and 1990–92 might have been partly due to the changes effected by primary care initiatives of the area health boards.

The increase in avoidable hospitalisations between 1990–92 and 1995–97 is likely to be associated with the radical health reforms introduced in 1991 but came into effect in 1993.\(^1-3,11,33-36\) The main features of the 1993 reforms included: the separation of the funding, purchasing and provision of health services with a view to encourage competition, and market behaviour in the health sector.

Although there was no formal evaluation of the impact of the reforms on the utilisation of health services, it has been argued that the reforms were likely to have had the deleterious effect of severely limiting access to primary care. This was not only due to the increases in fees for general practitioner services but also due to welfare cuts which affected the ability to access health services.\(^3^7,3^8\) This was the case at least until the end of 1996 when the new Coalition Government significantly modified the 1993 reforms.\(^3^3,3^9-4^1\)

Although community service cards were introduced for low-income groups as part of the health reforms to enable access to healthcare, recent studies showed that the disadvantaged groups are still likely to underutilise primary care.\(^4^2-4^7\)

Another interesting result was the narrowing of the regional disparities in avoidable hospitalisations between 1980 and 1997. Perhaps this is linked to the change over to population-based funding for the provision of health services beginning with the introduction of area health boards in the mid-1980s. This formula is based on the age/gender composition of a health area and is adjusted for the proportion of low-income households.\(^4^8\) The reduction in regional inequalities in the levels of hospitalisations (both avoidable and non-avoidable) could be one of the beneficial impacts of the health reforms.

Although the proportion of sole Maori population in a region is not necessarily a perfect measure of relative deprivation of a region (as a reviewer pointed out, this factor is likely to be confounded in the analysis with the number of GPs in a region), our analysis has shown that it is a good predictor of the level of avoidable hospitalisations. It is well established that regions with high Maori population are more likely to have higher proportion with no educational qualification, higher level of unemployment, poor housing, higher proportion of sole parents, and higher proportion on welfare benefits.\(^4^9\)
Several studies have also shown that poor socioeconomic status is associated with underutilisation of primary care.\textsuperscript{1,10,11,16,47,50-53} Although financial barriers are critical, non-monetary factors such as transport and geography may also play a role in the poor utilisation of primary care.\textsuperscript{17}

It is suggested that the ‘lack of purpose in life’ among the less educated and unemployed could be a factor for poor utilisation.\textsuperscript{54,17} It may be necessary for the primary health care professionals to develop trusting relationships with the patients to motivate those who have lost purpose in life. However, developing a trusting relationship is difficult when faced with a higher patient to doctor ratio.\textsuperscript{54,43}

Moreover, it is argued that the primary care clinicians ‘do not use community-based information to organise the content of the medical care they deliver’; rather ‘they often use practice-based data to plan for the delivery of services’.\textsuperscript{46} Access to primary care is also limited by the uneven distribution of general practitioners across the geographical regions. Despite substantial increases in the number of general practitioners in New Zealand, maldistribution continues to be a perennial issue.\textsuperscript{42}

Since the 1993 reforms, there have been two re-reforms in 1996 and 1999.\textsuperscript{2} The late 1990s reforms have tried to allow greater community participation in health sector decision-making and replace ‘competition’ with ‘collaboration’.\textsuperscript{1,2,33,34,39-41} The ‘re-reforms’ (underpinned by greater emphasis on equity, social justice, and community voice in decision-making) have the potential to reduce the cost of healthcare and improve the quality of life by increasing access to good primary care and reducing avoidable hospitalisations.

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**References:**


Information Technology systems in general practice medicine in New Zealand

Rebecca Didham, Isobel Martin, Richelle Wood, Ken Harrison

Abstract

Aims Until recently, very little national and international information has existed on the level of computerisation in general practice medicine. This study was undertaken to describe the current state of information technology (IT) systems in general practice medicine in New Zealand.

Methods A questionnaire detailing many aspects of computerisation and information technology was sent to all currently operating general practices (a total of 1188) in New Zealand, as identified from public directories.

Results A high response rate was achieved (80%), including (without any geographical bias) a representative proportion of rural, urban, sole-GP, and multiple GP practices. A large proportion of general practices currently have computer and IT systems that are potentially adequate to support the functions required of them. Almost all practices (99.0%) are using a Patient Management System (PMS) and 99.8% have at least one computer in their practice. Most practices (93.7%) connect to Healthlink, so have the capability of transferring data electronically.

Conclusions General practices in New Zealand have a very high rate (superior to several other countries) of computerisation and a high level of IT. The main concerns of general practitioners are the ongoing costs and time involved in meeting the IT requirements expected of them.

Information technology (IT) has become an integral part of communication in the 21st century. In general practice medicine, a certain level of IT is required to support aspects such as clinical care, health services, administration, and research. Several countries, such as the United Kingdom (UK), have implemented government policy to ensure that 100% of GPs are computerised. The UK Government launched a strategy in October 1998 (Information for Health) and yearly targets were set for advances in IT.¹

New Zealand does not have any specific healthcare policy regarding IT in General Practice. The main reasons for adopting IT in a practice are time efficiency, better access to services, linking to other healthcare services (such as electronic transfer of pathology results), and also the public expectation of a modern healthcare facility. Because the use of IT allows a greater level of data capture, GPs are also pressured to become computerised to meet the obligations imposed on them from the Ministry of Health (MoH), District Health Boards (DHBs), and Primary Health Organisations (PHOs). There has to be a balance between the value to medical practice of these IT advances, and the cost in time and money to the general practitioner.

There is a paucity of national and international published data on IT capabilities in general practice. The aim of the present study was to ascertain the current state of IT
in general practice in New Zealand—focusing on the level of computerisation, the use of patient management systems (for electronic medical records and other functions), and the use of other electronic communication such as the Internet and Healthlink (a web-based network for downloading and transferring health information between providers). This information can then be compared and contrasted with international figures to show where New Zealand general practices rank globally. The elicited information can also be used to inform policy, so impossible requests are not made of general practices.

**Methods**

A pilot questionnaire was developed—including the use of specifically designed patient management system (PMS) software, other uses of computers, and communication systems in general. The questionnaire was posted to an initial group of 100 general practices in New Zealand (selected alphabetically from a list compiled from public directories—Telecom white pages and Internet listings). Completed questionnaires were assessed and some refinements were made to increase response rate and understanding of certain questions. The final copy of the questionnaire (see Appendix 1) was then sent to the 1088 remaining general practices (therefore a total of 1188). After approximately 1 month, practices who had not responded were sent a follow-up letter and a further copy of the questionnaire. Questionnaires returned with incorrect addresses were also redirected where possible. Completed questionnaires were all received by September 2003.

Questionnaires were entered into a Microsoft Access software database (Microsoft Corporation). Answers and comments were directly entered as recorded on survey forms. Results were quantified and analysed using Microsoft Access. Percentages were expressed as a result of the number of responses to each specific question.

**Results**

**General**—A response rate of 80.0% was achieved, comprising 938 responses from a total of 1188 eligible practices (after identifying merged or terminated practices). Of the practices that responded, 73.9% (690 out of 934 responses) were urban, 25.6% (239) were rural or semi-rural, and 0.5% (5) were unknown (ie, unable to be classified into either category from information given). Practices ranged from 0.1 to 12.5 full-time equivalent (FTE) general practitioners, with a mean (SD) of 2.6 (2.5) FTE GPs per practice. However, 64.0% of practices had 2 FTE GPs or less (Figure 1). Some practices noted that they employed several part-time GPs to make up each FTE.

Almost two thirds of the practices (65.2% or 608 out of 933) have a practice manager, employed at mean (SD) of 0.93 (0.6) FTEs—with 82% (467 out of 569) of these practices employing their manager between 0.5 and 1.0 FTEs. Several practices noted that their practice nurse, general practitioner, or receptionist also undertook practice manager duties.
Figure 1: General practice staffing (n=910)

![Bar chart showing general practice staffing](chart)

Practice hardware—Only two (0.2%) of the surveyed respondents did not have a computer in their practice. The number of computers per practice ranged from 1 to 50, with a mean (SD) of 7.3 (6.1). Figure 2 shows the distribution of the number of computers per practice.

Figure 2. Number of computers per practice (n=923)

![Bar chart showing number of computers per practice](chart)

Practice software—Almost all practices (99.0%, or 920 out of 929) use specifically designed PMS software to assist with recording of patient and clinical consultation details and to help with the daily running of their business. Figure 3 shows the proportion of practices using software from each of the main PMS vendors. Table 1 shows the percentage of practices using each specific PMS type. Most practices (80.9%, or 744 out of 920) are using one of three PMS software packages (for PC or Mac)—Healthtech Medtech 32, Houston GP, or Intrahealth Profile. Almost half of the respondents (48.0%, or 430 out of 895) have experienced problems with their PMS after it has been updated to a newer version.
Figure 3. Proportion of market share of main Patient Management System (PMS) software vendors (n=920)

Note: Healthtech Medtech includes editions 16 and 32; Intrahealth includes MMAS; Profile for Mac and Profile for PC; Houston includes GP professional and VIP 2000.

Table 1. Types of Patient Management System (PMS) software used in general practice (n=920)

<table>
<thead>
<tr>
<th>PMS</th>
<th>Number using PMS</th>
<th>%</th>
<th>Most common version of software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthtech Medtech 32&lt;sup&gt;1&lt;/sup&gt;</td>
<td>552</td>
<td>60.0%</td>
<td>9.5</td>
</tr>
<tr>
<td>Houston GP&lt;sup&gt;2&lt;/sup&gt;</td>
<td>82</td>
<td>8.9%</td>
<td>2.48</td>
</tr>
<tr>
<td>Intrahealth Profile for Mac&lt;sup&gt;3&lt;/sup&gt;</td>
<td>55</td>
<td>6.0%</td>
<td>1.5.5</td>
</tr>
<tr>
<td>Intrahealth Profile for PC&lt;sup&gt;3&lt;/sup&gt;</td>
<td>55</td>
<td>6.0%</td>
<td>4.1</td>
</tr>
<tr>
<td>‘Taylor Made Software’ Medcen</td>
<td>35</td>
<td>3.8%</td>
<td>5.8</td>
</tr>
<tr>
<td>Next Generation&lt;sup&gt;4&lt;/sup&gt;</td>
<td>29</td>
<td>3.2%</td>
<td>–</td>
</tr>
<tr>
<td>Mana Systems GPDAT&lt;sup&gt;3&lt;/sup&gt;</td>
<td>28</td>
<td>3.0%</td>
<td>7.4.4</td>
</tr>
<tr>
<td>Houston VIP&lt;sup&gt;2&lt;/sup&gt;</td>
<td>21</td>
<td>2.3%</td>
<td>6.58</td>
</tr>
<tr>
<td>Alumni 32</td>
<td>15</td>
<td>1.6%</td>
<td>–</td>
</tr>
<tr>
<td>Healthtech Medtech 16&lt;sup&gt;1&lt;/sup&gt;</td>
<td>14</td>
<td>1.5%</td>
<td>17F</td>
</tr>
<tr>
<td>Advanced Clinical Records&lt;sup&gt;4&lt;/sup&gt;</td>
<td>12</td>
<td>1.3%</td>
<td>4.0</td>
</tr>
<tr>
<td>Other (independently developed)</td>
<td>12</td>
<td>1.3%</td>
<td>–</td>
</tr>
<tr>
<td>Intrahealth MMAS&lt;sup&gt;3&lt;/sup&gt;</td>
<td>6</td>
<td>0.7%</td>
<td>2.4.11</td>
</tr>
<tr>
<td>Medata Good Practice II</td>
<td>2</td>
<td>0.2%</td>
<td>–</td>
</tr>
<tr>
<td>Yield Systems</td>
<td>2</td>
<td>0.2%</td>
<td>–</td>
</tr>
</tbody>
</table>

*Company =<sup>1</sup> MEDtech NZ, <sup>2</sup>Houston Medical, <sup>3</sup>Intrahealth System Ltd, <sup>4</sup>Developed by Ashwin Patel.

The proportion of practices who reported that their GPs use their PMS to store full clinical notes was 71.8% (670 out of 933). Of these practices, 19.3% (127 out of 659) store full clinical notes on paper as well as electronically. Of the practices that do not use their PMS to store full clinical notes (or if not all GPs within the practice use the PMS), 89.6% (216 out of 241) use their PMS to record that the consultation occurred. Most practices utilise additional functions of their PMS. Electronic laboratory
request/results are used by 81.3% (752 out of 925) of practices, 89.7% (838 out of 934) use their PMS to record prescriptions, 97.3% (907 out of 932) record immunisations, 85.9% (795 out of 925) record allergy information, 92.9% (858 out of 924) record vaccination events, and 93.3% (867 out of 929) record ACC details (government accident compensation).

Most practices (94.6% or 883 out of 933) record screening information or keep disease registers on their PMS, however it is not known how in-depth, or complete, these registers are. Almost all of these practices record cervical screening (97.8%), and most keep a diabetes register (86.4%), record breast screening (83.1%), keep an asthma register (64.6%), or record blood pressure (60.4%). An additional 31.6% of practices indicated that they also record other parameters.

Consultation diagnoses are medically coded in 64.7% (597 out of 923) of practices, however 24.6% of these practices voluntarily indicated that they only ‘sometimes’ or ‘occasionally’ use codes, or only code for ACC purposes. Of the practices that code, 94.5% use Read Codes, 2.3% use custom-designed codes, 1.9% use ICD-9 or ICD-10, and 1.2% use ICPC.

Internet, electronic and general communication—A large proportion of practices (80.3% or 749 out of 933) connect to the Internet; 93.7% (868 out of 926) connect to Healthlink, and 35.8% (307 out of 858) connect to the Health Intranet.

To connect to these services, 47.6% (411 out of 864) of practices have a permanent high-speed link (of which an ADSL connection is the most common), and 80.6% (696 out of 864) have a dial-up modem (with 56 Kbps being the most frequently used connection speed). Of these practices, 19.6% (169) have both a high-speed link and a dial-up modem.

Email is used in 77.6% (699 out of 901) of practices for at least one purpose. Of these practices, 93.7% use email for external purposes, and 6.3% use email for internal use only. The reasons indicated for email use were: communications (83.4%), health information (72.5%), administration (70.4%), personal (59.0%), education (51.8%) and other (9.4%).

In general, 62.4% (570 out of 913) of practices are satisfied with their communication systems (including telephone, network, and Internet). The majority (63.1% or 571 out of 905) of respondents reported that their communication systems are reliable. Just over three-quarters of practices (78.4% or 687 out of 876) claim to have a ‘disaster recovery plan’ for their computerised information.

Research and education—Of the practices that responded to this portion of the questionnaire, 96.0% (838 out of 873) contribute to at least one data collection: 79.7% (684 out of 858) send electronic age/sex registers for HealthPAC-claiming, 60.8% (508 out of 836) send anonymous clinical data to an IPA (independent practitioners association), 38.6% (323 out of 837) contribute data to a research group, and 35.1% (299 out of 851) send clinical data to a PHO. It should be noted that some of these organisations may undertake only minimal research and education at present.

Discussion

The results of this study show that general practices in New Zealand have an almost 100% rate of computerisation, and that the current levels of IT appear to be adequate
to support the functions required of a modern healthcare professional. The response rate in this study was excellent (80%), compared with similar studies in other countries that experienced a much lower rate of response—20% in a Canadian study and 55.5% in an Australian study.

This response rate ensures that the sample is representative of all New Zealand GPs, without any geographical or other biases. The computerisation rate (99.8%) is very favourable compared to that of other countries, and New Zealand GPs appear to have a good history of use of computer technology—in a 1996 study conducted on a random selection of GPs in New Zealand, it was found that computers were used for at least one task by 84% of doctors.

A similar study in Canada showed that only 81% of practices were computerised in 2002, a number which may be further biased by the low response rate. Australian practices were slightly better in a 2003 study, which reported that 86% of respondents had at least one computer, and at least 98% of UK respondents in 2003 were using a computer.

New Zealand has achieved its high level of computerisation without specific government legislation or policy dictating standards. In the UK, the reason for the recently high rate of computerisation is due mostly to the implementation of a government strategy from 1998. The USA tried to follow a similar strategy with a national campaign implemented in 2001 to increase the level of computerisation, with the aim to eliminate most of the handwritten clinical data by the end of the decade; however, it hasn’t been as successful so far (although the plan is still in its early stages).

Almost all New Zealand GPs use a PMS software application (99%), with the majority (61.5%) of these practices using a system from one major software vendor (see Table 1). Domination of the market by one or two software vendors is a phenomenon also experienced in the UK and likely to be seen in many other countries. Interestingly, it was reported in New Zealand (in 2001) that MedTech 32 held the market share (with 42% of practices using MedTech 32). Its closest rivals were GPDAT and Houston, which had 17% and 15% of the market respectively. These numbers were drawn from a sample of 2650 GPs with a 90% response rate. In the 2 years since that study, Medtech has strengthened its hold on the PMS market in New Zealand.

Of the practices that use a PMS system, almost three-quarters (71.8%) used it for storing full clinical notes (electronic medical records). This figure is an improvement on a previous small geographical subset of GPs in New Zealand in 1999, of whom 61.8% were recording patient notes using a PMS system.

Most practices that have a PMS use it for several other clinical functions such as electronic request and receipt of lab (pathology) results (81.3%), prescriptions (89.7%), and recording screening parameters (94.6%). This can be compared to the Canadian study conducted in 2000, which found that approximately 75% of practices have a PMS system, however just over 12% are using it for storing full clinical notes, 10% are using it for lab results and 5% for prescriptions. These are much lower figures than New Zealand, however the Canadian study occurred over 3 years ago, and utilisation may have since increased. In the USA in 2002, 17% of US primary
care physicians used a PMS system for storage of full clinical notes, once again, a very low percentage.

In Australian general practices, there are no exact figures for the use of a PMS to store full clinical notes, however 71% use computers for writing scripts and 54% use them for receiving or storing pathology results. The UK has comparable figures to New Zealand—with the claim that most practices are paper-less in relation to patient registrations, claims, prescribing and some pathology results. Latest UK statistics (in May 2002) showed that 89% of prescriptions were computer generated. There are several other countries such as Sweden that are likely to have similar high rates of computerisation, based on previous figures.

Almost two-thirds of practices (64.7%) claimed to use a coding system for clinical diagnoses, and of these, almost all used the Read Code system. As indicated by several respondents, it is likely that only a small proportion of the practices are consistently coding each consultation, and it is more likely that codes are only used for claiming purposes or for a specific range of conditions. For research purposes and national/international collaborations, it would be of great benefit to have a standardised and consistently used coding system. As part of the UK strategy, it is planned to standardise clinical terminology using SNOMED CT.

The high rate of use of the Internet and Healthlink in New Zealand, indicates that most practices are equipped for electronic transfer of health information between providers. To use these functions, almost half have a permanent high-speed link (mostly ADSL), which is a relatively high figure—latest figures showed that only 0.02% of general practices in the UK had a broadband internet connection. Email is used in more than three-quarters of New Zealand practices compared to the Canadian study in which only half were using an email address.

A main disadvantage seen in email communication are the security issues involved with the transfer of confidential information and the question of whether patients would actually desire to communicate in this way. A recent New Zealand study found that a sample of patients accessing Internet-based laboratory results were satisfied with the service, and accepted it as a favourable progress in communication. Not surprisingly, the older participants (over 60 years) did not find the system as user-friendly as the younger age groups, and this is a reflection on technological awareness. This is an important point to consider as general practice populations are often made up of a larger proportion of elderly patients as their high users.

Other negative issues related to adopting new technologies include the fact that electronic communication with patients may not attract a patient fee and would not be presently covered by ACC, insurance companies, or government levies. Information technology is also very expensive in terms of initial outlay, and ongoing software development and upgrading costs.

Many practices feel that their IT is adequate for their own needs—but they also feel that they are forced into expensive systems to satisfy requirements of PMS vendors (eg, requiring certain hardware to support their software packages) and the Ministry of Health (with requests for national data registries and other information). In the proposed new UK GP contract (February 2003), primary care trusts will be responsible for funding the purchase, maintenance, and upgrade of IT systems, telecommunications, and other National Health Service infrastructure and services.
is possible that many Primary Health Organisations in New Zealand will follow this example.

Using electronic technology can often be very time-consuming, and (with constant pressures on a GP’s time) the use of IT may actually detract from their time spent with a patient. In a 1996 study involving GPs in New Zealand, significant concerns were reported by respondents regarding the perceived interference of computers with the doctor/patient relationship and privacy issues.4

In a 1995 review of findings from international studies on the influence of desktop computers on general practitioner consultations, it was concluded that although using a computer during the consultation may help improve clinician performance it may also increase the length of time of the consultation.9 Hence, there must be great caution in not adopting technology at a level which compromises the face-to-face nature of the patient/doctor relationship.

A possible limitation of the present study is the accuracy of data collected by postal survey, which is often called into question. A recent study performed among diabetologists in Germany found that 10% of responses in a postal survey were found to be inaccurate.10 Another major problem in such surveys is the low response rate (which leads to bias),10 however the response rate in the present survey was very high (80%), thus reducing this source of bias considerably. Other such sources of bias include the tendency towards socially desired responses,10 which in this case would actually be more likely to skew responses towards a negative perception of information technology, and this was not seen.

Interestingly, a recent study in the US compared the paediatrician response to a survey presented by three different communication modes—email, fax, and postal survey.11 It found that email surveys generated the most satisfactory, complete, and timely response;11 therefore, email surveys should be used more with studies (such as the present one) in the future. There are also considerations that should be taken into account with questionnaire design and how this affects responses.

Questions with a ‘yes’ or ‘no’ answer are likely to be more accurately answered than questions which require a perceived answer; for example, indicating whether a practice uses a certain process, as compared to estimating how often that process is used. These factors were taken into account when designing the questionnaire used in this study, however improvements can always be made.

Technologies are constantly advancing as new ways are found for attempting to make tasks more efficient. There are many areas of future development—including issues such as reliability of connection to electronic services, and costs involved in adopting technology. For example, a solo rural GP might gain the most benefit from linkage to computerised services, however these providers are the least able to meet the initial and ongoing costs involved with adopting a PMS system.

Other future technology advances may include online patient/doctor groups, emailing lab test results directly to patients, online consultations, patients booking own appointments, and reviewing own notes and direct links between primary and secondary care, pharmacies (although an electronic prescription is not currently legally valid in New Zealand), and related healthcare providers. Some of these
functions are likely to be already in place in practices around the country that have taken these initiatives in technology.

In summary, New Zealand general practices can be proud of the fact that they rank amongst the best in the world in terms of the adoption and use of IT.

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1. Royal College of General Practitioners. General Practice Computerisation. RCGP Information Sheet No. 7; 2003.
Appendix 1. Questionnaire (sent to general practices in New Zealand)

Section 1: Practice profile

1. Is your practice
   - Rural
   - Urban
   - Other, please specify ________________________________

2. How many general practitioner FTEs (full-time equivalents) are at your practice?
   ____________________________________________________________________

3. Do you have a practice manager?
   - Yes
   - No

   If yes, how many practice manager FTEs are at your practice?
   ____________________________________________________________________

Section 2: Your practice’s software environment

Many practices and general practitioners have software to help them with the daily running of their business. These systems are often referred to as Practice Management Systems (PMS). PMS vary in scope and functionality and the use of the system’s functions can vary from one practice to the next.

1. Please select from the following list the PMS that your practice uses. Please include a version or release number if you have that information. (The version can be typically found by going to the help menu of your system and choosing the ‘about’ menu option. Sometimes the version number is mentioned at the time of loading in a window which pops up momentarily.)

   - Healthtech Medtech 16 Version: _____________
   - Healthtech Medtech 32 Version: _____________
   - Houston GP Professional Version: _____________
   - Houston VIP 2000 Version: _____________
   - Intrahealth MMAS Version: _____________
Intrahealth Profile for Mac Version: _______________
Intrahealth Profile for PC Version: _______________
Mana Systems GPDAT Version: _______________
Medata Good Practice
Medata Good Practice II
Taylor Made Software Medcen Version: _______________
Advanced Clinical Records Version: _______________
Other ____________________________
This practice does not use a PMS.

If your practice does not use a PMS but still records patient details and/or clinical data electronically, what software, if any, do you use for this purpose?
____________________________________

2. Occasionally practices will just use their practice management system to record patient demographics and transactions and will record their clinical notes only on paper. Does your practice fit this profile?

   Yes [ ] No [ ]

3. i) Does your practice’s PMS have built in Laboratory Request/Results functions?

   Yes [ ] No [ ]

   ii) If yes, do you make use of them?

   Yes [ ] No [ ]

4. Does your practice use its PMS to store full clinical notes?

   Yes [ ] No [ ]

   If yes, does your practice store full clinical notes on paper as well as electronically? If no, does your practice nevertheless use its PMS to record that the consultation occurred?
5. i) Do doctors at your practice code their consultation diagnoses?

   Yes  ☐ No  ☐

   ii) If yes, please specify the coding system used.

   ☐ Read Codes
   ☐ ICPC
   ☐ ICD-9 or ICD-10
   ☐ Other, please specify ____________________________________________

6. Do you record prescriptions on your PMS?

   Yes  ☐ No  ☐

7. Do you record immunisations on your PMS?

   Yes  ☐ No  ☐

8. Do you record allergy information on your PMS?

   Yes  ☐ No  ☐

9. Do you record vaccination events on your PMS?

   Yes  ☐ No  ☐

10. Do you record screening information or keep disease registers on your PMS?

    Yes  ☐ No  ☐

    If yes, please specify:
    ☐ Cervical screening
    ☐ Breast screening
    ☐ Diabetes Register
    ☐ Asthma Register
    ☐ Blood Pressure
    ☐ Other parameters chosen by your practice (please specify)

   ________________________________________________________________
11. Do you record ACC details on your PMS?

Yes ☐  No ☐

Section 3: Your practice’s general hardware and operating system environment

1. How many computers does your practice have? ________________

2. What operating systems do your computers run? Please select from the following list and enter the number of computers running on each operating system:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>No. Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOS (including MS-DOS, PC-DOS etc.)</td>
<td></td>
</tr>
<tr>
<td>Windows 3.11</td>
<td></td>
</tr>
<tr>
<td>Windows 95</td>
<td></td>
</tr>
<tr>
<td>Windows 98 (include Windows 98 Second Edition)</td>
<td></td>
</tr>
<tr>
<td>Windows Me (Windows Millenium edition)</td>
<td></td>
</tr>
<tr>
<td>Windows NT 4 Professional</td>
<td></td>
</tr>
<tr>
<td>Windows 2000 Professional</td>
<td></td>
</tr>
<tr>
<td>Windows XP Home Edition</td>
<td></td>
</tr>
<tr>
<td>Windows XP Professional Edition</td>
<td></td>
</tr>
<tr>
<td>Mac OS (Pre Version 9)</td>
<td></td>
</tr>
<tr>
<td>Mac OS 9</td>
<td></td>
</tr>
<tr>
<td>Mac OS X</td>
<td></td>
</tr>
<tr>
<td>Linux (all Linux versions)</td>
<td></td>
</tr>
<tr>
<td>Other, please specify</td>
<td></td>
</tr>
</tbody>
</table>

Section 4: Your practice’s connection to the internet and external electronic communications

1. Is your practice connected to the internet?

Yes ☐  No ☐

2. Does your practice connect to Healthlink?

Yes ☐  No ☐

3. Does your practice access the Health Intranet?

Yes ☐  No ☐
4. To use the above services, your practice will probably fall into one of several internet access configurations. Please select which configuration applies to your practice.

   a. **Permanent High-Speed Internet Link**
      
      Your practice has a high speed link to the internet. This high speed connection is then shared through the practice network so that most, if not all, of your practice PCs have dedicated internet access. If this is the case what sort of modem do you use?

      - [ ] ISDN
      - [ ] ADSL (jetstart, jetstream etc)
      - [ ] Frame link relay
      - [ ] Satellite service (ihug)
      - [ ] Wireless
      - [ ] Other, please specify ____________________________

   b. **Dial-Up Modem**
      
      Your practice has a single computer, usually the server, connected to the internet via dial-up modem to obtain lab results and to submit patient registers electronically etc. If this is the case, how fast is your dial up modem? (Your practice may also have another computer attached through another dial up modem or may be sharing the same modem for connecting to the internet to make medical queries, checking email etc.). If you are unsure where to find this information, it should be written on the modem itself. If not, please write down the make and model number of the modem below

      - [ ] 9.6Kbps
      - [ ] 14.4Kbps
      - [ ] 28.8Kbps
      - [ ] 33.6Kbps
      - [ ] 56Kbps
      - [ ] Other, please specify ____________________________
      - [ ] Unsure, but modem make and model is….____________________
Section 5: Your practice’s email configuration

1. For what purposes is email used in your practice?

☐ Internal use only
☐ External use (and if so, please select from the options below – you may tick more than one option)
☐ Administration
☐ Communications
☐ Health information
☐ Education
☐ Personal
☐ Other, please specify____________________________________
☐ Email not used

Section 6: Support arrangements for hardware and software

1. Does your practice have a disaster recovery plan for its computerised information? A disaster recovery plan is a plan to enable timely recovery from any hardware/software faults your practice endures.

Yes ☐ No ☐

2. How often in the last twelve months has your practice experienced hardware faults such as malfunctioning hard drives, floppy drives which no longer function and monitors that do not work?

☐ Never
☐ Rarely
☐ Often
☐ Daily
☐ Other, please specify____________________________________

3. How often in the last twelve months has your practice software malfunctioned to the point of complete failure? (This is when you have to resort to manual paper records.)

☐ Never
☐ Rarely
☐ Often
☐ Daily
☐ Other, please specify____________________________________
4. What is the longest period of time during the last twelve months that you can remember, that
your practice computer(s) have been out of operation?

☐ Never
☐ 1 Hour
☐ 1 Day
☐ 1 Week
☐ Other (please write how long)________________________________________

5. Have you experienced problems with your PMS after it has been updated to a new version?

Yes ☐ No ☐

Section 7: Practice communication system

1. How satisfied are you with your practice communication system (including telephone, network, internet)?

☐ Very satisfied
☐ Satisfied
☐ Unsatisfied
☐ Not at all satisfied

2. How reliable is your practice communication system?

☐ Very reliable
☐ Reliable
☐ Unreliable
☐ Not at all reliable

Please elaborate:

Section 8: Research and Continuing Medical Education

1. Does your practice currently contribute data to a research group?

Yes ☐ No ☐

2. Does your practice send age/sex registers in electronically for HealthPAC claiming purposes?

Yes ☐ No ☐
3. Does your practice send clinical data to a PHO?
   
   Yes ☐ No ☐

4. Does your practice contribute anonymous clinical data to an IPA?
   
   Yes ☐ No ☐
Professional leadership and organisational change: progress towards developing a quality culture in New Zealand’s health system

Pauline Barnett, Laurence Malcolm, Lyn Wright, Christine Hendry

Background

International experience shows that professional clinical leadership and organisational systems are critical for quality healthcare. This paper presents research from New Zealand highlighting these themes. Professional leadership has emerged from both primary and secondary care organisations. In primary care, extensive quality systems have developed based on professional leadership in governance and management. In secondary care, progress has been impeded (in some settings) with the conflicts of the market experiment of the 1990s.

The most recent reforms, facilitated by the new integrated district health board structure and guidance from the New Zealand Health Strategy, have led to important quality progress in secondary care. This is associated with a ‘convergence’ of managerial and clinical cultures. The role of the ‘centre’ emerged only recently, providing support and resources to assist rather than exert leadership for quality. New Zealand appears to be adopting Freidson’s preferred model of clinical organisation—a ‘new professionalism’ that recognises the importance of professional leadership and the organisational context for collective accountability for both health services quality and cost.

Introduction

The last decade has seen intense international interest in the issue of quality in healthcare. This has been fuelled partly by research from several countries on adverse events and medical error\(^1\)–\(^4\) and partly by more spectacular system failures that exposed health services to public and media scrutiny.\(^5\)–\(^7\) Reports and initiatives in response to these issues have focused less on the problems of individual failure and more on the need to create safe, supportive systems of care. For example, the need for systems change has been identified in the NHS,\(^8\) in the US,\(^9\) in Australia,\(^10\) and New Zealand.\(^11\)

Two recurrent themes emerge from a review of these reports: the need to engage clinicians in leadership for quality; and the need to provide a supportive organisational environment for the pursuit of quality care. These ideas are neatly embraced within the concept of clinical governance. Described as the ‘exercise of collective, or organisational accountability for the management of clinical performance’ clinical governance gives emphasis to both professional leadership and organisational systems\(^12\) and legitimacy to both clinician and manager involvement.\(^13\)

Both official reports\(^8\)–\(^11\) and other commentators recognise the barriers to engaging clinicians—including the failure to reconcile clinician ‘values and needs’ with appropriate incentives\(^14\) or to mobilise clinician leadership.\(^15\) Organisations
characterised by poor quality and resistance to change often have mistrustful and unhappy environments with a defensive attitude towards outsiders and patients and systems that disregard international best practice.\textsuperscript{16}

The aim of this paper is to analyse the recent experiences of developing a quality culture in New Zealand through clinician leadership and organisational change, and consider the relevance of that experience for other countries. Specifically, the objectives are: to describe the policy and organisational context in New Zealand relevant to healthcare quality and the research framework for assessing approaches to quality; to report on leadership and organisational initiatives significant in promoting quality in both primary and secondary care settings; to provide examples of quality achievements; and, finally, to reflect on lessons of wider relevance.

The context for research

Over the last two decades, New Zealand, with a national per capita income some 20\% below the mean for OECD countries, has faced difficult choices about health priorities. In this environment of constrained resources, market experimentation in healthcare during the 1990s undermined prior efforts to build collaboration between clinicians and management.\textsuperscript{17} High levels of conflict significantly impeded progress towards a quality culture.\textsuperscript{18} Indeed, the legacy of conflict between clinicians and managers, from which recovery is still incomplete, had some serious consequences for quality.\textsuperscript{19}

The new, more-integrated health system of 21 population-based district health boards (DHBs) has the potential to provide the more collaborative environment needed to build a quality culture. Although still undergoing stressful implementation, DHBs are required (in their contract with the Minister of Health) to achieve health goals as set out in the New Zealand Health Strategy\textsuperscript{20} and the Primary Healthcare Strategy.\textsuperscript{21} The Government is required by the New Zealand Public Health and Disability Act (2000) to develop a quality strategy—this was launched by the Minister of Health at the 3\textsuperscript{rd} Asia-Pacific Quality Forum in Auckland in September 2003.

The research reported below represents a synthesis of the findings of three interrelated projects funded by the Ministry of Health via the Clinical Leaders Association of New Zealand (CLANZ). The first project was a review of published and unpublished documents relating to quality policy from 1997–2001 in New Zealand.\textsuperscript{22} The second project involved key informant interviews and analysis of documents from 12 primary care organisations (PCOs).\textsuperscript{23} Of these projects, nine were GP-led, one was community-led, and two were associations of health professionals (midwives and physiotherapists). Interviews explored quality initiatives and achievements, resources for quality and the role of clinical leadership.

The third project\textsuperscript{24} was an analysis of documents and key informant interviews with chief executives and selected senior staff in a sample of 10 out of 21 DHBs—including the six major tertiary service providers and four smaller provincial boards. Both document analysis and interviews explored the role of clinical and other leadership, organisational arrangements and resources for quality, and quality initiatives and achievements.
Leadership for quality

Leadership for quality emerged from disparate sources. The first model came from primary care, where (from the mid-1990s) professional and community initiatives led to the formation of primary care organisations, with approaches to quality and resource management consistent with clinical governance experience from elsewhere. The success of these ventures, with minimal policy direction, can be attributed to health professionals assuming both managerial and clinical leadership roles within these organisations. An indication of the extent of this involvement is the high proportions of individual practitioners reported in professional and governing groups within GP-led PCOs.

A second model emerged from the National Health Committee (NHC). Although it is a statutory committee set up to provide advice to the Minister of Health, the NHC (with its broadly-based membership of academic, clinical and lay people) is noted for innovation, independence, and willingness to address contentious issues. Indeed, in the mid-1990s, the NHC embarked on a national programme of capacity building for quality. This included clinical guidelines development, with a fellowship training programme for clinicians and others. A cadre of clinicians emerged with a commitment to quality, evidence-based practice, scrutiny, and accountability. In 1998, a group from this programme formed the Clinical Leaders Association of New Zealand (CLANZ).

The NHC also played a key leadership role in quality improvement by promoting a broadly-based discussion on quality improvement. This culminated in the publication of its document ‘Safe Systems Promoting Safe Care’ in 2002, which recognised the importance of leadership for quality. This led directly to the formulation of Government's quality strategy ‘Improving Quality (IQ): a Systems Approach for the New Zealand Health and Disability Sector,’ which was published in 2003.

The CLANZ initiative represents a third model of leadership for quality, based on a community of clinical leaders with a shared commitment to improved services and population health. CLANZ founder, Dr Robin Youngson, believed that ‘New Zealand had many people of outstanding talent and commitment working in relative isolation in an environment, which had disenfranchised clinicians from both management and governance roles’ (see http://www.CLANZ.org.nz). With financial support from the Minister of Health, CLANZ undertook research into the learning needs of clinicians for leadership roles, and developed programmes to meet these needs.

The New Zealand Public Health and Disability Act 2000 provided the framework for a fourth model of quality, policy leadership. The Ministry of Health (MOH) became more active in quality with work on credentialling proposals; an adverse event reporting system; and papers addressing technical issues of quality improvement in hospitals, clinical audit, and peer review. The MOH also underwrote the 3rd Asia Pacific Quality Forum in Auckland in 2003, an important occasion for fostering what has now become recognised as the ‘quality movement’.

These initiatives were fostered by previous work on quality from Government and non-Government sources. Of special importance has been the Office of the Health and Disability Commissioner established in 1995 following the Cartwright Inquiry of 1988. Further commitment by Government to quality has come from the Health Practitioners Competence Assurance Act (2003).
Another contribution has been from the almost ‘no-fault’ (ie, litigation-free) compensation for medical misadventure universally available from the Accident Compensation Corporation. The recent review of medical misadventure has proposed a move to a fully no-fault system (with the removal of medical error in compensation for patient injury). Beyond Government, national policy on quality improvement has also been encouraged by several national organisations (including the clinical colleges, the Medical and Nursing Councils, and Quality Health New Zealand—responsible for health services’ accreditation).

Mobilising organisations for quality

A summary of quality developments within ‘primary care (PCO)’ and ‘district health board (DHB)’ organisations is set out in Table 1. This is based on a detailed study of 12 PCOs and 10 DHBs.23,24

Table 1. Summary of the findings of the study of 10 DHBs (including the 6 major tertiary centres) and 12 PCOs on the organisation and management of clinical quality and reported achievements

<table>
<thead>
<tr>
<th>Feature</th>
<th>District health boards (DHBs)</th>
<th>Primary care organisations (PCOs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical leadership</td>
<td>Chief medical and nursing advisors at top executive level, clinical directors/heads at service level</td>
<td>Clinical leaders at governance and executive level, the critical factor in driving the quality programme. High levels of practitioner involvement in professional issues</td>
</tr>
<tr>
<td>Organisation and accountability for quality</td>
<td>Clinical boards/groups, clinical improvement committees, quality managers/co-ordinators at executive and service level. 'At service level' joint partnership between clinicians and managers for quality</td>
<td>Most PCOs had a well organised quality infrastructure with quality committees, quality managers, quality facilitators for prescribing and other services, quality focused information systems</td>
</tr>
<tr>
<td>Quality initiatives</td>
<td>Accreditation, credentialling of senior medical staff, clinical audit, quality and risk management programmes, developing quality frameworks</td>
<td>Screening programmes, better prescribing, disease management, sexual health, patient satisfaction, well organised recall systems, measuring quality in practices</td>
</tr>
<tr>
<td>Quality achievements</td>
<td>Greater openness and moves towards a culture of safety, growing partnership between clinical leaders and management, integration of previously disparate quality efforts into a coherent system, reporting of adverse events</td>
<td>High levels of child and influenza immunisation coverage, better management of chronic disease (eg, diabetes), increasing screening rates for cervical and breast cancer, advanced information systems for managing and monitoring quality</td>
</tr>
<tr>
<td>Facilitating factors</td>
<td>Increasing commitment to accreditation, dedicated quality staff, integration of clinical and financial management, strategies to identify and address adverse events</td>
<td>Clinical leadership, national primary care strategy, education programmes, information systems</td>
</tr>
<tr>
<td>Limiting factors</td>
<td>Resource constraints, pressures on time, shortage of leadership skills, past conflicts leading to mistrust between clinicians and management</td>
<td>Lack of funding, poor quality data, low GP morale, lack of recognition of achievement by funders</td>
</tr>
<tr>
<td>Clinical governance</td>
<td>Formal in three DHBs but being practised widely, driven by clinical leadership and clinical values</td>
<td>Widely discussed and largely practised, clinical leadership at governance level a key factor</td>
</tr>
</tbody>
</table>
PCOs have emphasised the development of infrastructure to support improved quality and clinical performance. Such infrastructure includes quality committees, facilitators, co-ordinators, and information systems—as well as encouraging the involvement of clinicians in the governance and management of their organisations.

The upskilling of practitioners to participate in these and other extended roles has been an important task for PCOs. For example, liaison arrangements with secondary care providers (Table 2) have promoted joint primary-secondary care decision-making and the development of protocols for effective community management. Increasing attention is also being paid to developing quality measures and rating practices via quality scores (using financial and other incentives to reward performance).

The Pinnacle Quality Score (Table 2) provides a system of rating individual practices which has been agreed to by all Pinnacle members and which encourages improved performance in key areas of strategic health policy (such as screening, diabetes management and immunisation). The organisational development of PCOs has enabled the dramatic recent development of primary health organisations (PHOs) further supporting the broad-based promotion of quality in primary care.

Table 2. Examples of quality initiatives initiated by clinical leaders

<table>
<thead>
<tr>
<th>Pegasus Health and the acute admissions project&lt;sup&gt;23&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pegasus Health is a PCO based in Christchurch, with 230 GP members. In 2000, Pegasus leaders established an acute admissions project to provide community alternatives to hospital care, now widely accepted by patients. The result has been a significant fall-off in referrals to the Christchurch Hospital Emergency Department and a decline in acute admissions. The project has been so successful that it is being replicated in other DHBs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GP secondary care liaison&lt;sup&gt;23&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 1999 leaders from a number of PCOs (in collaboration with clinical leaders from DHBs, especially emergency departments) initiated the placement of GPs within several secondary care settings to promote joint primary/secondary care clinical decision-making. The outcomes have included better communications and relationships between primary and secondary care, the development of management protocols, and reduction of inappropriate attendances at emergency departments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Pinnacle PCO Quality Score&lt;sup&gt;23&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 1996 clinical leaders in Pinnacle, a PCO based in Hamilton with a membership of 200 GPs, developed a scoring system to measure and improve quality in its practices. This included indicators such as immunisation and cervical screening levels, practice register improvements such as disease coding, and practice organisation. A small financial incentive was given to recognise improvements. Pinnacle report that the scoring and incentive system has been successful in improving performance levels on key indicators. Similar quality measuring systems are being implemented in other PCOs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Midwifery and Maternity Provider Organisation (MMPO)&lt;sup&gt;23&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 1997 the New Zealand College of Midwives (NZCOM) established a new organisation (the MMPO) as a mechanism for promoting and monitoring the quality of care provided by its self-employed members. MMPO membership requires participation in a wide range of specific quality initiatives, including an open patient complaints resolution process. The MMPO has established a comprehensive midwifery care outcome database to monitor quality. There is evidence that MMPO members, comprising 50% of independent midwives, are achieving better quality outcomes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Waitakere Hospital theatre fire accident</th>
</tr>
</thead>
</table>
| On the 17 August 2002, a patient undergoing caesarean section in Waitakere Hospital (Auckland) received 16% body burns from diathermy-ignited, alcohol-based disinfectant. Clinical leaders, together with management, initiated an immediate open and systems-based inquiry. This fully involved the patient and family—who were
given an apology and full support, including assistance with compensation. The DHB accepted organisational accountability. The widely available results of the investigation provided an important regional and national learning experience in building a safety culture. This much more open approach is now becoming normal practice in DHBs.

**Counties-Manukau DHB quality initiatives and achievements**

In 1993, clinical leaders (in partnership with management) established a broadly representative Clinical Board responsible for the organisation-wide planning and implementation of continuous quality improvement. Significant quality achievements have been: accreditation of all services; development a comprehensive set of clinical indicators for all services; credentialling of all senior medical, nursing, and allied health staff, well established handling of adverse events including openness, offering an immediate apology and working with patients and families; complaints handling and resolution; and developing a learning organisation. This DHB, in the forefront of promoting a quality culture, has provided a model being adopted elsewhere.

Additional information is available in referenced reports on the Ministry of Health and other websites. For example:


Within DHBs, there have been the significant organisational changes necessary for building a quality culture. These include devolution of accountability to clinical services divisions for quality and financial management, a developing system of quality coordinators/managers, and mechanisms to support the emerging partnership between clinical leaders and management. (Table 1). An important innovation has been appointments of clinical and nursing leaders to DHB executive management positions, with responsibility for facilitating high-level professional advice and advancing quality issues with management.

Table 2 includes specific examples of quality developments. For example, Counties-Manukau DHB has been widely regarded as a model of clinical leadership: working in partnership with management with important quality outcomes. Serving a very disadvantaged population, it was one of the secondary care services least affected by the commercially driven reforms of the 1990s. With support from visionary chief executives, its Clinical Board (chaired by a well-respected clinical leader) has achieved major gains in clinical quality improvement. As a further example, Waitakere Hospital (Auckland) has demonstrated the way in which organisational openness in the face of embarrassing systems failure in a surgical setting can provide both restoration for the patient and an opportunity to build a robust quality system.

**Discussion**

**Entrepreneurial leadership and the role of the ‘centre’**—The most striking feature of quality development in New Zealand over the last decade has been the emergence of professional leadership at all levels, despite the personal and professional risk that ‘sticking one’s head above the parapet’ might entail (especially during the conflicts of the commercially-driven reforms). First were PCOs taking a collective professional approach to organising and managing their activities and providing examples of ways in which clinical leadership can be developed. Second were ‘hospital clinicians spurred’ quality developments in secondary care in response to growing concerns about quality in hospital-based services and threats to it from commercially-driven reforms. Third were the NHC (despite its dependence on government resources) who undertook important, independent, professionally directed work on quality—this work
led directly to the development and launch of the government’s quality strategy.
Fourth, in the late 1990s, were CLANZ who played a role as a collective of professionals, thus providing an independent forum for debates about quality.

These entrepreneurial activities raise questions about the role of the government and central agencies. Unlike the NHS in the UK, the New Zealand Ministry of Health has only recently (after 2000) become involved in developing complex policy in quality areas. Assuming such a role in late 1990s would probably not have received endorsement from clinicians and other health professionals. Nationally, policy on quality has hence come from the plurality of organisations referred to above, with little overall coordination, leading to calls for the assemblage of the ‘quality jigsaw’. The Government support (provided via the NHC and CLANZ) suggests that national roles can be more varied than providing developed policy and direction, and that facilitation and resourcing ‘behind the scenes’ can be equally effective.

Flexible organisations—In terms of health organisations, the primary care sector was able to develop quality initiatives because of the presence of professional leadership, financial incentives (for the PCO, not individual practitioners), and high levels of organisational autonomy. The creation of a suitable organisational environment for quality owed little to national policy, although this was influential in the choice of priority project areas. The hospital sector, however, appears to have required more time to recover from the market and ‘managerialist’ experience of the 1990s. Clearly, hospital-sector quality-management initiatives are being professionally driven, with the importance of clinical leadership recognised in new organisational and staffing arrangements. The pursuance of these strategies on the initiative of individual PCOs and DHBs in contrast to the more centralised approach in the UK where national directives are more usual. In New Zealand, national policy has been influential in more subtle ways.

Convergence of clinical and managerial cultures—The well-documented gulf between governance/managerial and clinical cultures was exacerbated in New Zealand by the commercially-driven conflicts of the 1990s. Recent developments might be described as building a ‘convergence of cultures’. The convergence was evident early in PCOs, with clinicians often taking a dominant role in organisational governance. Primary care clinical leaders have enjoyed a new sense of clinical empowerment and autonomy, which many secondary care clinicians have yet to experience.

Guidance for governance/management in DHBs is provided by the New Zealand Health Strategy. This sets out the shift from concentrating on resource management to quality-focused health outcomes as one of the ‘bottom lines’ for health organisations. Implicit in this is the emerging acceptance by clinicians of their role in resource management and achieving organisational goals. Although there are tensions related to budgetary shortages, clinical and managerial cultures are moving towards a more trusting and interdependent partnership. Similar developments are reported as key factors in the success of Kaiser Permanente in the USA. This partnership is seen by Ferlie and Shortell as critical for quality improvement.

Independent support for the progress in quality improvement reported here, and associated with this convergence, comes from the 2001 Commonwealth Fund study of consumer perceptions of healthcare quality in five countries. This showed that New
Zealand had the highest consumer quality rating (67%) of the countries studied.\textsuperscript{37} The authors of the study attributed at least some of this improvement to the latest health reforms with its more open and collaborative climate. This openness includes engaging with communities (through democratic elections to DHBs) and structured consultation processes. While the involvement of New Zealand consumers has not progressed to the extent that it has in Australia, significant steps have been made with the development of PHOs and the involvement of public participation in the credentialling process.

Related to convergence is the theme of professionalism. According to Freidson, in almost all health systems, professionalism is in ongoing conflict with two other management models: managerialism (bureaucratic control) and commercialism.\textsuperscript{38} Professionalism places a high value on complex knowledge and skills, on decentralised and discretionary decision-making, and on a commitment to public good—all critical to achieving a quality culture. Freidson has argued for ‘keeping the professional model at the centre of healthcare while checking and correcting the vices of its practitioners by carefully chosen elements of the other models’.\textsuperscript{38} These ‘vices’ are those associated with an older form of professional autonomy, including an aversion to organisational accountability, the key element of the ‘other models’.

Through clinical leadership, New Zealand may be implementing a new professionalism. In this model, clinicians (in partnership with management) become collectively and professionally accountable for both the quality and cost of their decisions. This may be a new and more successful form of clinical autonomy.

**Conclusion**

In this overview of progress in developing a quality culture in the New Zealand health system, we have presented evidence of several sources (or ‘streams’) of leadership-endorsed quality; and we support for the views of Moss et al\textsuperscript{39} that ‘organisational change is the key to quality improvement’. Improvements are being achieved by entrepreneurial clinical leadership (in partnership with management) within both primary and secondary organisations.

This partnership has been assisted by the policy framework provided by the New Zealand (Labour) Government’s health strategy, which encourages collaboration within an integrated district based health system. Within this policy framework, the role of the ‘centre’ in relation to quality has tended to be more supportive and facilitatory than directive. Indeed, a partnership between political/bureaucratic and professional cultures may be the key to quality success in New Zealand, and perhaps elsewhere.

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Is New Zealand according too much importance to continuous quality improvement in healthcare?

Stephen Buetow, Gregor Coster

Abstract

In late 2003, New Zealand’s Ministry of Health published a ‘systems approach’ to help guide and plan quality improvements in the nation’s health and disability sector. This approach emphasises a need for continuous quality improvement. We argue that the Ministry should align itself less exclusively with the ‘the small steps of continuous quality improvement’ and ‘maintaining the gains’. Instead, it should encourage the adoption of a variety and combination of quality improvement strategies that include continuous quality improvement between the discontinuities that can occasion a need to re-engineer core processes for revolutionary, quantum gains in quality and safety.

In September 2003, New Zealand’s Ministry of Health published ‘Improving quality (IQ): A Systems Approach for the New Zealand Health and Disability Sector.’ As part of a strategy for nationally consistent standards and quality assurance programmes, it describes a systems approach to help guide and plan improvements in the sector. It suggests a means of supporting and coordinating quality improvement activities underpinned by a shared vision of people ‘receiving people-centred, safe and high-quality services that continually improve and that are culturally competent.’

IQ defines quality improvement as including continuous quality improvement and quality assurance; and signifies ‘a commitment to supporting continuous quality improvement.’ We commend this focus on quality improvement. However, we also wish to question the explicit emphasis given in IQ to continuous quality improvement, alongside the relative neglect of other approaches to quality improvement.

This discussion is timely because we, and others such as the Royal New Zealand College of General Practitioners, have recently championed continuous quality improvement as a quality improvement approach. This has reflected to a large degree the influence of Don Berwick. As President and CEO of the Boston-based Institute for Healthcare Improvement, Berwick has successfully popularised (within healthcare) the continuous quality improvement approach developed by Deming, Juran, and others.

Limitations of continuous quality improvement

Three sets of difficulties bedevil continuous quality improvement in healthcare. The first is that, despite ‘pockets of improvement,’ there is little scientific evidence that continuous quality improvement improves the quality of healthcare among large numbers of professionals or organisation-wide. The effectiveness of initiatives for continuous quality improvement appears to be highly variable, possibly reflecting their diversity and changing nature, and differences in organisational context.

The second set of difficulties reflects ‘disparities between the rhetoric and reality of continuous quality improvement’. For example, continuous quality improvement...
seeks to ‘drive out’ fear—while promoting external quality assessments, such as practice accreditation, that can stress workers and threaten their job security. Expectations on workers to perform with increasing efficiency can produce the same adverse effects.

Among other examples are a tendency for unequal benefits to workers, a requirement for leadership, and the dominance of managerial perspectives and agendas that contradict the ideals of bottom-up participation, teamwork, and overall commitment. The focus of continuous quality improvement on slow, incremental change to existing individual processes (through analysis, standardisation, and improvement) tends to discourage substantial learning and innovation. Continuous quality improvement requires investment in long-term change, but health services in the public sector are typically undercapitalised and tend to focus on the management of short-term crises.

Thirdly, systematic tools of continuous quality improvement (such as Shewart’s Plan-Do-Check-Act [PDCA] cycle) were popularised in, and for, ‘fairly slow moving industries, such as the automotive industry.’ These tools are largely unsuited to the modern-day environmental conditions of accelerating technological change: uncertainty, high complexity, and patient ‘bargaining.’

Questioning the search for processes to reduce and control medical practice variations that are ‘out of control,’ these conditions demand health services that can respond creatively. Rather than seek to prevent errors upstream, this search for (and encouragement of) ‘positive variation’ recognises that ‘errors’ are inevitable (and indeed desirable) for their potential to define opportunities for learning and innovation.

We support, nevertheless, the use of continuous quality improvement. The three sets of difficulties are offset by progressive features of continuous quality improvement. These features include the degree to which worker involvement is valued and the ability of continuous quality improvement to help us understand and improve quality rather than merely add to the proliferation of studies documenting unintended variations and quality deficits.

Hence, the need to grapple with the sorts of contradictions stated above should not deter the use of continuous quality improvement—rather, this need invites the use of continuous quality improvement as one of multiple, concurrent approaches. This is because ‘continuous improvement is not enough’ and other approaches cannot substitute for continuous quality improvement. They can instead support the implementation of continuous quality improvement as, for example, a series of small-scale projects. From this perspective, continuous quality improvement is merely a tool—not the only one, and not necessarily the most important one—to help healthcare organisations, teams, and individuals improve quality in healthcare.

Elsewhere, we have discussed other quality approaches—such as quality assessment, quality assurance, and clinical audit. Meanwhile, contemporary, systemic and practical approaches to management include:

- The contingency approach model, which emphasises the fit between organisations and their environments.
• The ‘probe-and-learn’ model of continuous innovation, which ‘underweights the ‘Plan’ stage depicted in the PDCA cycle and ‘overweights’ the ‘Do’ stage in a rapid iterative process that seeks out error to learn from, and

• Business process re-engineering.

Process re-engineering

We wish to suggest how insights from process re-engineering can complement the commitment of the Ministry of Health to continuous quality improvement and quality assurance. Compared with continuous quality improvement, and its focus on incremental improvements in performance, the top-down approach of process re-engineering emphasises greater and more rapid change over a shorter time period. It involves fundamental, not superficial, rethinking; exploits information technology capability in the revolutionary redesign of macro-level organisational processes; and can be adapted locally to incorporate factors that are critical to successful change management in the public sector. Integral to the approach of process re-engineering is the concept of ‘discontinuous thinking’, by which is meant a total change in thinking.

Discontinuous thinking

Discontinuous thinking anticipates the potential for discontinuous change—including sudden, possibly catastrophic change. It questions whether continuous improvement is always possible and desirable in a discontinuous world and challenges linear and sequential thinking about problems that require solution. It uses a holistic perspective to catalyse breakthrough processes and then seek the problems they might solve.

Theoretical support for discontinuous change comes from biology, quantum physics, and other sciences. Organisational cybernetics demands that changing organisations operate discontinuously. Catastrophe theory, complexity theory, and chaos theory also reveal how discontinuity (including unanticipated changes, and predictions that fail to materialise) is at least as natural as continuity.

Process re-engineering enables organisations to introduce ‘discontinuous improvement’ into their work culture. This overcomes the problem that change in small, incremental steps may be inappropriate when an urgent need arises to quickly fix systems that severely compromise patient safety. For example, the Cartwright Inquiry and major inquiries into hospital services in Christchurch and Gisborne suggest such a need, notwithstanding that radical change can yield incremental improvements and vice versa. Also, Kaitaia provided an excellent example of the need for process re-engineering (see Box 1).
Box 1. Case Study: Improving quality (IQ) and process engineering in Kaitaia

In 2002, an Independent Review Team (IRT) reported its findings on Kaitaia health services.\textsuperscript{31} It found that, although the presenting issues were retention of 24-hour surgery and caesarean sections at Kaitaia Hospital, the real issue was system failure underpinning the poor coordination of services between Northland Base Hospital and Kaitaia Hospital, poor primary-secondary care integration, and the poor health status of Maori.

The IRT recommended significant process re-engineering as well as continuous quality improvement. This involved: Accident and Medical Clinic development; retrieval system improvement and protocols; increased outpatient clinic services; an Integrated Health Organisation involving the Primary Health Organisation and hospital services; integrated care; community governance structures; new systems for obstetrics, women’s care, and anaesthetics; new investment in information technology with integrated systems; and numerous other changes.

Signifying more than continuous quality improvement (CQI), these proposals called for change management involving systems re-engineering.

Process re-engineering also surmounts the problem that if what is already done operates predictably at an unacceptable level and adds no value to a service, improving it incrementally is likely to be a false gain and a cost to the system.\textsuperscript{19} This situation can occur where technology is obsolete, such that the entire process requires changing through systematic process improvement. Such a requirement is not out of place in the public sector, where policy and direction can change suddenly and dramatically.\textsuperscript{22}

In contrast, where ‘special cause’ variation is present, its origin should be examined and managed; for example, in accordance with continuous quality improvement. This is necessary to eliminate negative special causes of the variation, and make positive special causes (such as an improvement effort) part of the normal process. Continuous quality improvement can also overcome limitations of process re-engineering. These include the stress and costs of radical change, and a top-down, business focus on operational processes, which can weaken the focus on patients.\textsuperscript{9}

**Conclusion**

With exceptions,\textsuperscript{32} continuous quality improvement and process re-engineering have seldom been integrated. However, recognition is increasing that these quality movements can complement and enhance one another.\textsuperscript{19} Each focuses on patients and processes, including training and teamwork, to produce measurable results. Each helps to address the other’s deficiencies. To keep pace in a fast-changing, complex and unpredictable world, the Ministry of Health should thus align itself less exclusively with ‘the small steps of continuous quality improvement’ and ‘maintaining the gains.’\textsuperscript{1}

Thornley and her colleagues\textsuperscript{33} suggest that, apart from incremental changes in practice, ‘more radical change is required’—meaning a need ‘to revolutionise our thinking about quality’ by focusing more on quality improvement than quality.
assurance. While tending to agree—we have indicated in this paper a further need to
delineate and discuss the nature of the quality improvement strategy required for such
‘radical change.’ This is because, as a means of quality improvement, continuous
quality improvement is itself evolutionary rather than revolutionary. Furthermore, in
our opinion, the Ministry of Health accords too much importance to continuous
quality improvement.

Just as in areas such as guideline implementation, we see a need for the Ministry to
courage the adoption of a variety and combination of quality improvement
strategies—including the approaches of continuous quality improvement and process re-engineering.

Which of these approaches is most appropriate depends on the individual
circumstances. However, coordinated within a systems-based framework such as
clinical governance, continuous quality improvement can (and should we believe) be
used continuously between the discontinuities that can occasion a need to re-engineer
core processes for revolutionary, quantum gains in quality and safety.

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More of ‘The management of public hospitals in New Zealand’

This extract is taken from a Presidential Address by Dr Ernest Roberton that was published in the New Zealand Medical Journal 1905, Volume 4 (13), p16

Where in the larger centres of population, the hospital authorities take advantage of the gratuitous services of an honorary staff, the injustice of the profession in not restricting right of admission to the sick poor is all the greater, and the effect of aiding in the pauperisation of the community is none the less deplorable.

We cannot deny that there are some who seek hospital treatment in the sincere belief that the State should undertake all medical relief. We may reasonably ask such whether, until the State itself adopts the principle, they are justified in putting an extra burden on their fellow-citizens or in accepting gratuitous services, which are given by medical men on the understanding that they are for those who are financially unable to assist themselves.

As for the other, larger class of well-to-do who take advantage of public hospitals merely to save their pocket, its members belong more or less also to the class of the “mean” man—the man who has no idea on honour sufficient to insure fair dealings with others. For such the only remedy is legal compulsion to enforce adequate payment, and to attain this end there seems nothing more needed than to enforce clause 71 of the Act of 1885, but which each patient in the receipt of relief shall be liable to contribute “a reasonable sum according to his means”.

The custom of Hospital Boards hitherto to make the average cost of each patient per week the maximum sum charged to any patient for the same period independent of special services rendered, and of special expenses incurred by extra nursing or material, and with no charge for the services of the honorary physician or surgeon, has been a direct attraction to the well-to-do patient.

If the opinion of Judge Ward is correct, that in doing this the Boards have not followed the Act, and if the words “a reasonable sum according to his means” are to be interpreted in their ordinary sense, nothing could better serve the purpose than their strict enforcement.
Coronary collateral blood flow visualised by transoesophageal echocardiography

Constantin Marcu, Edward Prokop, Andre Ghantous

During transoesophageal echocardiography (TOE) in a 67-year-old woman, flow was visualised by colour Doppler within the proximal interventricular septum (Fig.1A – white arrow). The flow was limited to diastole as demonstrated by pulse wave Doppler (Fig.1B – white arrowheads).

Coronary angiography showed a complete, long-standing, occlusion of the right coronary artery (RCA) in its proximal portion. The distal RCA (Fig.2 – black arrowhead) was filling through a large diameter first septal perforator branch from the left anterior descending artery (LAD) (Fig. 2 – black arrow). Blood flow in this first septal branch was visualised on TOE, explaining the spectral Doppler signal limited to diastole, characteristic of coronary arterial flow.
Figure 2. Left anterior descending artery with the first septal branch (black arrow) filling a proximally occluded right coronary artery (black arrowhead)

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Lung cancer in women

Lung cancer has become the leading cause of cancer death in US women and is responsible for as many deaths as breast cancer and all gynecological cancers combined. Most lung cancer is caused by cigarette smoke. Despite all that is known about the devastating effects of cigarettes, one quarter of women in the United States continue to smoke. Women are targeted in tobacco advertising, and teenage girls are often drawn to cigarette smoking under a variety of social pressures.

Following the increase in smoking, the death rate from lung cancer in US women rose 600% from 1930 to 1997. Women may be more susceptible than men to the carcinogenic properties of cigarette smoke.

A novel oestrogen receptor β has been detected in lung tumors and suggests that oestrogen signaling may have a biological role in tumorigenesis.

We can’t get rid of oestrogen but cigarette smoking should be eradicated.

JAMA 2004;291:1763–8

Medical migration

International medical graduates account for a quarter of the 853,187 physicians in the United States, an increase of 160 percent since 1975. Immigrant physicians also account for 27% of the country’s 96,937 residents and fellows, having migrated in search of training and career opportunities that are unavailable in their home countries.

India contributes 21% (almost 45,000 physicians). This is good for the United States (and presumably for the Indian immigrants) but is it good for India?


Health tourists

General practitioners will need to vet new patients for their residential status before treating them, under new rules to be drawn up by the government in a bid to cut the cost of so called health tourists seeking medical care in the United Kingdom.

The new proposals come just six weeks after hospitals introduced a system of charging overseas visitors for medical care other than emergency care.

Similarly, family members of people from overseas who reside permanently in the United Kingdom would be stopped from briefly visiting the country for free medical care. For example, pregnant women whose husbands work abroad would no longer have the right to give birth in an NHS hospital free of charge.

BMJ 2004;328:1217
Glaxo changes course

GlaxoSmithKline (GSK) has undertaken to publish the results of all its clinical trials on the internet in an attempt to rebuild its reputation in the face of allegations that it suppressed evidence of the dangers to children of its Seroxat antidepressant drug.

Britain’s biggest drug manufacturer denied that the decision had come as a result of legal action brought by New York attorney-general Eliot Spitzer last week, accusing GSK of “repeated and persistent fraud” in failing to make evidence of Seroxat’s effects on children more widely available.

“The clear message is we are doing something that we think is in the best interests of patients and physicians. We believe this is a major step forward,” said GSK’s European medical director, Alastair Benbow. A spokesman added: “We would not see this as a u-turn.”

Seroxat – Paxil, as it was known in the US – was never licensed for use on children, but some doctors used their discretion to prescribe it “off-label”. Regulators on both sides of the Atlantic banned its use on children last year after it was linked with an increase in suicidal thoughts.

Guardian Weekly 25 June–1 July 2004

Statistical errors

Biostatisticians, Emili García-Berthou and Carles Alcaraz of the University of Girona, Spain, gauged the extent of statistical errors in four volumes of Nature from 2001 and a sample of results in two BMJ volumes from the same year.

In the Nature and BMJ papers, each P value was calculated from two other parameters included in the papers. They recalculated the P values from these numbers, and found that their results differed from those published in more than 11% of cases. They also found small mistakes, such as rounding errors, in 38% of the Nature papers and 25% of the BMJ ones.

In only 1 case out of 27 did an incorrect P value change a significant result to a non-significant one. But, although minor, some believe that the slip-ups expose a pervasive sloppiness towards statistics in published research.

Editorial replies—Philip Campbell, the editor-in-chief of Nature, says the journal will take a closer look at the study’s numbers before deciding whether remedial action is needed. He adds that Nature has amended its editing practices since the period covered by the study.

Richard Smith, editor of the BMJ, says that one way forward is for researchers or journals to publish more raw data on the Internet, where others would be able to check them.

Nature 2004:429:490
Psychiatrist – Professional Misconduct

Charge:
The Director of Proceedings charged that Dr Fisher was guilty of disgraceful conduct in a professional respect or alternatively professional misconduct. The particulars of the charge alleged:

Admission

1. On the patient’s admission to Southland District Health Board Mental Health Services on 10 February 2001 [Dr Fisher]:
   1.1 Failed to adequately assess the patient’s:
       (a) Psychiatric and/or forensic and/or social and/or medical history; and/or
       (b) Phenomenology of mental state; and/or
       (c) Alcohol and drug history; and/or
       (d) Precipitants for admission; and/or
       (e) Prior response to and adverse effects of, his previous and current treatment; and/or
       (f) Risk; and/or
   1.2 Failed to adequately document [his] assessment and/or diagnostic formulation of the patient; and/or

In-patient period 10 February 21 March 2001

2. Between 10 February 2001 and 21 March 2001, while the patient was an in-patient on Ward 12, Southland District Health Board Mental Health Services [Dr Fisher]:
   2.1 Failed to undertake and/or record a thorough and systematic review of the patient’s mental status; and/or
   2.2 Failed to undertake and/or record an adequate assessment of the patient’s risk; and/or
   2.3 Failed to follow-up and/or review the patient’s:
       (a) Alcohol and drug assessment; and/or
       (b) Needs Assessment; and/or
   2.4 Failed to adequately develop and/or review the patient’s:
       (a) Medication regime; and/or
(b) Treatment and management plan; and/or

2.5 Failed to adequately document:

(a) Clinical interactions with the patient; and/or
(b) Assessments of the patient’s care and management; and/or
(c) Management and treatment plans; and/or

**Trial Leave**

3. In relation to the patient’s trial leave (the period between 22 March and 30 March 2001) [Dr Fisher]:

3.1 On or about 22 March 2001 failed to undertake and/or record a thorough and systematic review of the patient’s mental state prior to the commencement of his trial leave on 22 March 2001; and/or

3.2 On or about 22 March 2001 failed to undertake and/or record a comprehensive risk assessment for the patient prior to the commencement of his trial leave on 22 March 2001; and/or

3.3 On or before 22 March 2001 failed to make adequate arrangements for a review of the patient’s mental state during his week of trial leave; and/or

3.4 On or before 22 March 2001 failed to ensure a crisis plan was developed in partnership with the patient and/or recorded; and/or

**Discharge**

4. In relation to the patient’s discharge from in-patient care on 30 March 2001 [Dr Fisher]:

4.1 On or about 30 March 2001 failed to undertake and/or record a thorough and systematic review of the patient’s mental state; and/or

4.2 On or about 30 March 2001 failed to undertake and/or record a comprehensive risk assessment for the patient; and/or

4.3 On or about 30 March 2001 failed to adequately review the patient’s management and/or treatment plan; and/or

4.4 On or before 30 March 2001, failed to make adequate arrangements for the patient’s post-discharge care by:

(a) ensuring the adequate involvement of the patient’s key worker (Community Mental Health Team) in discharge planning; and/or

(b) ensuring the adequate and timely monitoring of the patient’s mental status and/or risk once he was discharged; and/or

(c) ensuring the adequate involvement of the patient’s family in discharge planning; and/or
Between 22 March 2001 and 30 March 2001 failed to ensure a crisis plan was developed in partnership with the patient and/or recorded.

Background:
Dr Fisher came to New Zealand in 1992 and gained full registration as a medical practitioner in New Zealand in March 1993. Initially Dr Fisher was employed as a psychiatric registrar by the Southland DHB. His status changed to Medical Officer Special Scale (MOSS) during the course of 1994. Dr Fisher held positions as a psychiatric MOSS at Southland Hospital and Seaview Hospital in Hokitika from 1994 to early 1999. In October 2000 Dr Fisher was again employed as a MOSS in the psychiatric department of Southland Hospital. Dr Fisher was still employed as a MOSS at Southland Hospital when the events giving rise to the hearing occurred.

The term MOSS is used to describe a doctor who has general registration under the Medical Practitioners Act 1995 (“the Act”) and who is employed in the public health system below the level of a vocationally registered practitioner (specialist). A MOSS may have considerable experience but is nevertheless not eligible to be registered as a specialist.

At the time of the patient’s admission to Southland Hospital on 10 February 2001 he was a 19 year old who had been diagnosed as have schizophrenia and who also had a history of alcohol and drug abuse.

The patient first came into contact with mental health services in July 1998. The patient was observed to have features consistent with psychotic illness. He had a history of alcohol and cannabis use. The patient’s parents were concerned about his aggressiveness and his excessive use of alcohol. Treatment was commenced by medication supervised by the patient’s parents.

Throughout 1999 the patient continued to receive medication and appeared to be a consistent user of alcohol. In the middle of 2000 the patient’s mental state fluctuated. In mid 2000 the patient’s parents expressed concern about the safety of the patient, his brother and sister. The patient was admitted as a voluntary in-patient to Ward 12 of Southland Hospital on 23 June 2000.

In mid August 2000 the patient’s parents noted a period of deterioration in the patient’s mental state. In September 2000 a comprehensive management plan was re-visited. In November 2000 it was thought the patient was displaying symptoms of a relapse.

In mid January 2001 the patient’s mother expressed concerns about the patient’s anger and his aggression towards her. The patient was observed to be restless, suffering disturbed sleep and conversing in a bizarre manner. This pattern of behaviour continued through to early February 2001.

On the night prior to 10 February 2001 the patient went out drinking with friends. The following morning (Saturday 10 February) the patient’s mother went to the patient’s bedroom to see if he was home. The patient verbally abused his mother and threatened to attack her. The patient alleged his mother and brother kept interfering with him at night and that he would get them and kill them. The patient also reiterated allegations he had previously made that his parents had stolen $76 million from him. His parents realised the patient needed urgent psychiatric help. The patient
was able to be pacified and agreed to accompany his father to the Southland Hospital. During the drive the patient reiterated his claims about his mother and brother and that his parents had stolen from him. He also commented that the Matrix was watching.

When the patient and his father arrived at Southland Hospital they were seen by Dr Fisher and nurse I. The patient’s father stayed with his son during the admission interview. Dr Fisher made brief notes. Following the admission interview the patient was admitted to Ward 12 of Southland Hospital as a voluntary patient. Dr Fisher amended the patient’s medication on admission.

On 11 February the patient’s father wrote a detailed letter to Southland Hospital. That letter was received in Ward 12 on 14 February 2001.

The patient remained a voluntary in-patient in Ward 12 from 10 February to 30 March. On 22 March he went on a week’s trial leave.

Despite efforts by nursing staff and Dr Fisher, the patient did not wish to discuss the issues which illustrated his paranoia and delusions. In particular the patient was very guarded and circumspect when efforts were made to explore his belief that his brother and mother had sexually interfered with him and that his parents had stolen $76 million from him. It is apparent from the nursing notes that the patient continued to display paranoia about his parents and siblings. The patient also expressed hatred towards his mother and sister. On ten separate days in February and March notes which indicate the patient’s psychosis were made by nursing staff. The incidents which constituted evidence of the patient’s psychosis fluctuated during the time he was a patient in Ward 12, but were never resolved.

Soon after the patient’s admission Dr Fisher began focussing upon managing the patient’s leave from Ward 12. The first reference to the patient having leave can be found in a note made by Dr Fisher on 14 February.

A referral for a needs assessment was initiated on 12 February 2001. In fact the assessment was not able to be commenced until 8 March. The assessment was never completed.

The nursing notes record the patient left Ward 12 on two occasions in circumstances which constituted an abuse of his leave privileges. On 16 March nursing staff recorded the intention to find accommodation in Invercargill for the patient, and a flat was found which the patient was able to move into on 22 March.

On 17 March the patient spoke to his father about returning his car from Queenstown. The patient’s father did not want the patient to access his car and wished to find out where the patient’s flat was. The patient refused to allow the hospital staff to disclose to his father the location of the patient’s flat. The patient was still angry with his father for not agreeing to the patient having his car. Dr Fisher then spoke with the patient’s father. The patient’s father told the Tribunal that when Dr Fisher telephoned him, he said that he did not see the patient coming back to Queenstown as an option because he had no place to stay and it was in too close proximity to his family. The patient’s father ultimately agreed to bring the patient’s car to Invercargill.

On 22 March the patient was placed on a week’s trial leave. A social worker was assigned to visit the patient’s flat each working day. The social worker visited the patient on 23 March and noted the patient had a supply of beer and whisky. The
patient had continued to drink beer and whisky on 26 March and a similar entry is recorded in the nursing notes for 28 March.

A discharge planning meeting was held on 30 March. The meeting was held 1½ hours earlier than planned because the patient showed up at Ward 12 earlier than scheduled. The re-scheduling of the discharge meeting meant the key worker in the Community Mental Health Team who had been assigned to the patient was unable to attend the discharge meeting.

On the evening of 30 March the patient returned to Queenstown. In the early hours of the morning of 31 March, the patient’s father heard on his police radio that there was a fire at his house. He rushed to the scene where he found his wife dead.

The patient was subsequently arrested and charged with the murder of his mother. In August 2001 a jury found the patient not guilty of murder by reason of insanity. The patient was committed as a special patient.

**Finding:**

The Tribunal recorded in a generic manner that it was satisfied all the allegations that Dr Fisher failed to record, or adequately record his clinical observations, findings, assessments and plans were established.

The Tribunal considered it was necessary to stress the importance of clear and informative medical notes. It considered it exceedingly important that a medical practitioner such as Dr Fisher charged with the responsibility of caring for patients like the patient fully and accurately record their clinical observations, management, treatment and crisis plan. The Tribunal was satisfied Dr Fisher failed to adequately discharge his responsibility to perform these basic tasks.

When particular 1.1 was considered, the Tribunal found that although there were a number of significant deficiencies in Dr Fisher’s assessment of the patient on 10 February, the deficiencies did not justify a disciplinary finding. The Tribunal had reached this conclusion because the deficiencies in the admission assessment could be excused as the admission was an emergency and occurred on a weekend. In addition it would be normal for a full and thorough assessment to be completed within a few days of admission to remedy deficiencies that occurred at the time of admission.

The Tribunal was satisfied particular 2.1 was established. The Tribunal believed Dr Fisher conducted only cursory reviews of the patient’s mental state while he was a patient in Ward 12. There was nothing in the clinical notes to suggest that an assessment of the patient’s delusions was properly explored. There was also nothing to suggest that specific incidents (such as some acts of aggression on 24 February and 12 March) were properly explored by Dr Fisher.

The Tribunal was satisfied Dr Fisher believed he was not out of his depth and fully able to conduct a mental state assessment of the patient and failed to appreciate the mental state assessments he did conduct were inadequate.

The Tribunal was satisfied particular 2.2 was established. The Tribunal was in no doubt Dr Fisher failed in his duty to ascertain the extent and nature of the patient’s delusions, and what these delusions meant in terms of his ongoing level of dangerousness. The Tribunal considered a MOSS practising in a psychiatric unit in
New Zealand in 2001 should readily have identified and explored these matters as part of their obligation to undertake an adequate assessment of the patient’s risk.

The Tribunal found in favour of Dr Fisher in relation to both limbs of particular 2.3 of the charge. The Tribunal accepted Dr Fisher had sound grounds for believing there were no residential and counselling programmes available to the patient because he displayed no willingness to desist from abusing alcohol and drugs. The Tribunal concluded that whilst it was unfortunate no one appears to have “followed up” the obtaining of a needs assessment report on the patient, Dr Fisher cannot be held accountable for this shortcoming.

The Tribunal found both limbs of particular 2.4 of the charge established. Dr Fisher failed in his responsibilities to adequately develop and/or review the patient’s medication regime. He also failed to discharge his responsibilities to adequately develop and review the patient’s treatment and management.

The Tribunal was concerned Dr Fisher resolved that the patient should leave Ward 12 for a week’s trial leave in the following circumstances:

1. The patient’s delusions remained unexplored and had never been properly examined whilst he was in Ward 12;
2. The patient had a poor flatting history;
3. The patient was to go into a flat by himself;
4. The patient had no family or friends in Invercargill; and
5. The flat that the patient was going to had no telephone (there was a public phone nearby).

The Tribunal considered the decision to “treat and manage” the patient by allowing him to go flatting was poorly thought through by Dr Fisher. Leave arrangements should have been planned on a graduated basis and in circumstances where the patient’s ability to care for himself had been properly evaluated.

When considering particular 3.1 the Tribunal was in no doubt Dr Fisher failed to undertake an adequate, let alone a thorough and systematic review of the patient’s mental state prior to his going on trial leave. Dr Fisher’s attempts to assess the patient’s mental state at any time between 10 February and 30 March 2001 were only cursory and failed to properly evaluate and explore the patient’s psychosis.

The Tribunal was satisfied particular 3.2 was established. It considered the risk assessment which Dr Fisher did perform was cursory and inadequate.

The Tribunal determined Dr Fisher did make adequate arrangements to review the patient’s mental state during the week of trial leave and therefore particular 3.3 was not established. The patient was to be visited each working day by a social worker. The Tribunal considered it was reasonable to expect the social worker to note and report any significant change in the patient’s demeanour, presentation and general well being. The patient was seen by Dr Fisher on 27 March which afforded Dr Fisher with an opportunity to re-evaluate the patient’s mental state. In addition, the patient visited the Ward’s workshop during the week of his trial leave. This provided a further opportunity for others to observe the patient and report if there were any notable changes in his presentation. The Tribunal considered although these
arrangements were not ideal they did nevertheless indicate thought was given to trying to monitor the patient while he was on trial leave.

The Tribunal was satisfied particular 3.4 was established. Dr Fisher failed to prepare a proper crisis plan before his patient left the ward on a week’s trial leave.

The Tribunal was satisfied particular 4.1 was established. A thorough and systematic review of the patient’s mental state should have been carried out on or before 30 March 2001. At discharge there was no proper evaluation of the patient’s ongoing psychosis which should have occurred. The Tribunal believed if Dr Fisher felt unable to properly explore the patient’s delusions and the risks these posed for his family, then he should have enlisted the assistance of a specialist. The Tribunal considered it was a serious breach of professional responsibilities for Dr Fisher to agree to the patient being discharged when his delusions had not been properly assessed and evaluated.

The Tribunal was satisfied particular 4.2 was established. It considered Dr Fisher failed to place due weight on the fact that the patient was still psychotic at the time of discharge and had consumed significant quantities of alcohol while on trial leave. The patient had a history of decompensation associated with substance abuse. He was in a flat by himself without social or family support. He by now had his car which offered him the opportunity to quickly return to Queenstown. These factors could not be outweighed by the patient’s improved sociability.

The Tribunal was satisfied particular 4.3 was established. A number of deficiencies in the discharge treatment and management plan for the patient were identified. Those deficiencies included:

- A failure to review the treatment and management plan in light of the evidence of the patient’s consumption of significant quantities of alcohol while on trial leave;

- Dr Fisher agreeing to prescribe olanzapine for three months to meet the patient’s convenience. There was concern about the absence of monitoring the patient’s compliance with his medication for the period subsequent to his discharge.

- Inadequate assessment of the patient’s ability to drive.

- Inadequate evaluation or follow up and monitoring of the patient in the community.

The Tribunal was satisfied particular 4.4(a) was established. It considered Dr Fisher was partially at fault over the unfortunate failure to ensure the key worker from the Community Mental Health Team was present at the meeting. However, in this case, the Tribunal considered it would be unreasonable to hold Dr Fisher liable in a disciplinary forum for communication errors which occurred.

The Tribunal was satisfied particular 4.4(b) was established. Dr Fisher did not put in place appropriate arrangements to ensure that the patient’s mental state and/or risk were monitored in a timely fashion once he was discharged. It considered the key community worker needed to be actively and fully involved in planning the patient’s discharge. Dr Fisher envisaged that the Community Mental Health Team would become involved in planning the patient’s discharge at a further discharge meeting which he scheduled for 6 April 2001. In the Tribunal’s view it was not appropriate for the Community Mental Health Team to become involved in planning the patient’s
discharge a week after he had in fact been discharged. It considered the arrangements put in place to monitor the patient’s mental status and risk once he was discharged were unsatisfactory. They were in essence the same as for the period of the patient’s trial leave.

The Tribunal was satisfied particular 4.4(c) was established. Dr Fisher did not adequately involve the patient’s father in planning the patient’s discharge. It was clear that the patient’s father was not invited to attend the discharge planning meeting. Of even greater concern to the Tribunal was that Dr Fisher did not tell the patient’s father about key incidents that had occurred while the patient was in Ward 12 and on trial leave. The patient’s father did not learn until many months after his son’s discharge that the patient had abused alcohol and continued to be psychotic. The Tribunal accepted that if the patient’s father had known about those matters he would have opposed the patient’s discharge.

The Tribunal was satisfied particular 4.5 was established. The Tribunal considered Dr Fisher’s “informal crisis plan” did not meet the minimum requirements expected of a discharge crisis plan.

Overall Finding:

Although the Tribunal believed Dr Fisher’s errors and omissions were serious it decided that the cumulative effect of his conduct fell short of disgraceful conduct in a professional respect. Accordingly, it found Dr Fisher was guilty of professional misconduct.

Penalty:

The Tribunal considered Dr Fisher’s shortcomings were serious. The Tribunal was very concerned Dr Fisher failed to appreciate his own shortcomings and inadequacies in this case. He continued to labour under the impression that his performance was satisfactory (other than in relation to record keeping). The Tribunal found this lack of insight by Dr Fisher was at times distressing to observe.

The Tribunal ordered:

- Dr Fisher’s registration as a medical practitioner in New Zealand be suspended for a period of six months from the date of this decision.
- Conditions be imposed upon Dr Fisher’s ability to practise psychiatry and psychological medicine in New Zealand. Dr Fisher is required to be accepted and participate satisfactorily in a vocational training programme in psychiatry for three years.
- Dr Fisher is ordered to pay $86,411.46 costs to the Tribunal (50% of its costs) and Director of Proceedings (40% of her costs).

The full decisions relating to the case can be found on the Tribunal web site at http://www.mpdt.org.nz Reference No: 03/109D.
Peter Barrie Herdson

Peter Herdson was born in 1932 in Auckland, the son of a Gallipoli veteran. He was educated at Mission Bay Primary School, and Kings College (Prep and Senior), then qualified in pharmacy at the University of Otago, before turning to medicine—becoming Bachelor of Medicine and Surgery (Otago) in 1959. He gained a Bachelor of Medical Science in anatomy during his undergraduate medical training. After a year’s residency in Auckland, he went for 2 years to the Middlesex Hospital in London, where his career in pathology began, inspired by colleagues such as Epstein, Cotton, and Thompson.

His next move was to the Northwestern Medical School, Chicago in 1965, where he specialised in pathology (particularly renal pathology), obtaining a PhD, and making the most of the burgeoning application of electron microscopy in medical diagnosis which was in its heyday.

At the age of 37, he was recruited by the new Auckland School of Medicine as foundation professor to establish the Pathology Department. This was a period of tremendous building—when the tower block (which housed pathology) was funded and built largely from Peter’s efforts, and a substantial and vigorous staff was created. Peter attracted excellent teachers, researchers, and clinicians (from abroad and locally), and made the first academic appointment in forensic pathology in Australasia.

His department at the new medical school set the standard for teaching, and many students later went on to careers in pathology. He had the knack of getting diverse groups to work together, and forged a cohesive and cooperative department based in the university—with strong links to the hospitals and private practices, and with staff who had medical, dental, veterinary, and scientific interests. Postgraduate trainees in pathology benefited from the well-organised training programme and constantly challenging environment.

From 1978 to 1982, he served as the Councillor for New Zealand for the Royal College of Pathologists of Australasia, and was College President from 1983 to 1985; the first resident New Zealander to hold the office. His term in the College was marked by far-sighted planning for premises and administrative resourcing. An expansive international view of pathology, in which the College extended its affairs to the Middle East and Far East was the hallmark of his presidency. Training programmes were established in Hong Kong and Saudi Arabia, and he was very influential in the renaming of the College as an Australasian rather than Australian body.
In 1985, after 10 years in the Auckland Chair, Peter moved to Saudi Arabia, where he was appointed Professor and Chairman of Pathology at the King Faisal Specialist Hospital and Research Centre in Riyadh. He designed a new laboratory for the hospital, and led a very successful team of international pathologists, as well as encouraging training through the Australasian College for 6 years.

In 1991, he moved to Australia as Professor and Director of the Pathology Department of Canberra Hospital, where he established an undergraduate teaching programme through the University of Sydney. He remained active in College affairs, and continued his interest in forensic pathology. Over many years, Peter was an examiner for the College, served on various editorial boards, and took an active interest in international pathology through the World Association of Societies of Pathology (WASP), of which he was President for a term.

His published articles were prodigious, and appeared in journals ranging from research in basic sciences to politics. He was on the editorial boards of *Pathology* (1972–2000), and *Histopathology* (1976–2000). He was the Editor-in-Chief of the *Annals of Saudi Medicine* (1985–1991).

Life was not always easy for the young Herdson, whose father was a dentist who went blind, causing some hardship. One would never have guessed it from Peter’s outlook on life, which was broad, positive, and forward looking. His sociable nature and good humour, coupled with extraordinary stamina, made him the social glue in the newly developing Pathology Department and Auckland School of Medicine.

Students would end up at the Herdsons’ place, often after a preceding social function, and Peter and Mary-Lou entertained generously. He was a raconteur, always with an apposite remark or observation, and frequently an amusing story (often told against himself). His circle of friends was very wide, and his reputation almost daunting. But he was always very approachable, and willing to assist in a worthy cause. He was wonderfully supported by his wife of 19 years, Carol, in the later, international years of his life.

Peter had a generous nature, and was forceful but charming. Grudges were generally borne lightly, and his forte was in the creation and promotion of centres of excellence, rather than in the routine administration. He bore setbacks with good humour. He encouraged everyone to excel, including occasional students in whom he appeared to find promise where few others had.

There were awards and citations for services to pathology—notably the Distinguished Fellow Award from the Royal College of Pathologists of Australasia, and the Medal of the New Zealand Committee of Pathologists. There was a gold medal for his teaching at Chicago, and the Gold Cane from the World Association of Societies of Pathology.

Malignant mesothelioma was diagnosed while he was on holiday in Darwin, and although he returned to good health following treatment, he died of the disease in his home in Stanmore Bay (north of Auckland) on 29 June 2004. He is survived by Mary Lou, their children (Peter, Sarn, and Caro), and by Carol.

We are grateful to Drs Andy Tie and Clint Teague for this obituary.
Erratum

Alcohol consumption and its contribution to the burden of coronary heart disease in middle-aged and older New Zealanders: a population-based case-control study
Susan Wells, Joanna Broad, Rodney Jackson


The headings ‘Volume of alcohol on usual drinking occasion’ and ‘Average daily volume of alcohol’ in Table 3 and Table 4 were incorrectly positioned; consequently, those tables and two sentences in ‘Results’ have been amended.

Please refer to the above URL to view the corrected copy of the article.
In Practice: The lives of New Zealand women doctors in the 21st century


Dr Rosy Fenwicke has compiled 13 brief autobiographies from female medical colleagues, who trained and are working in New Zealand and are now in mid-career. Their autobiographies start in childhood, describing family and early mentors. The excitement and emotional intensity of student and house officer years is well covered, followed by details of career development, mentors, and how the authors think their careers have impacted on the health of New Zealanders.

The participating women also include frank and intimate insights into their struggles, juggling family and life outside medicine with their chosen careers. Compromises about work/life balance (whether actively chosen or forced upon individuals because of circumstances) have been discussed with great honesty.

The contributors are from a unique generation of doctors, representing the first wave of women who had the opportunity to ‘have it all’, in terms of both career and family life. The principal author does, however, recognise that finances (a factor that did not dominate the life of her generation of doctors) is now something that is likely to dominate decisions for the current generation of female (as well as male) trainees. The editors are to be congratulated for ensuring that each chapter is written in a readable and consistent style. (I suspect, however, that all contributors are excellent writers in their own right and that little editorial input was required.)

I wondered whether the book might appeal only to other mid-career female doctors. But judging by the difficulty I had in retrieving my copy of the book, which has been out on loan to (predominantly male) colleagues, it obviously has a much broader appeal. Who did I last lend the book to? I must ask for it back and remind them to purchase their own copy, in support of the Legacy Women Doctors’ Fund.

Helen Lunt
Physician
Christchurch Hospital
NINDS at 50: Celebrating 50 years of brain research


In this work, clinical neurologist Dr ‘Bud’ Rowland takes on the daunting task of providing what he terms an incomplete history—celebrating the 50th anniversary of the National Institute of Neurological Disorders and Stroke (NINDS). NINDS is one of 27 institutes at the National Institutes of Health (NIH) in the United States, and is responsible for sponsoring research into diverse neurological disorders.

Funding for NINDS has risen from US$1.2 million in 1951 to US$1.7 billion in 2000—with funds currently supporting extramural grantees, and approximately 200 principal neuroscience investigators at NIH itself.

Women played a major role in pushing for NINDS legislation, including Mary Lasker, a wealthy New Yorker who had direct access to presidents and congressional leaders. Mrs Lasker had a strong ally in Florence Mahoney, another remarkable women of wealth and personal influence. These women mobilised expert witnesses, helped write persuasive testimony, and provided vigorous lobbyists.

A fascinating section of the book recounts the biographies and lectures of the 6 Nobel Laureates linked to NINDS. A late chapter deals with ‘yearly landmarks’, contributions that have permanently changed neuroscience or clinical practice from 1950 to 2001. This timeline dramatically emphasises the progressively increasing accomplishments of neuroscientists over this period and the dominance of United States neuroscience. Many examples are provided of the serendipitous nature of scientific discoveries at NINDS.

The book is well written and profusely illustrated—and would provide a welcome addition to neurological and neurosurgical libraries.

Martin Pollock
Associate Professor
Department of Preventive and Social Medicine
University of Otago, Dunedin
ABC of subfertility

Alison Taylor and Peter Braude, editors. Published by BMJ Books, 2004.

This book continues the ABC series of medical books commissioning by the British Medical Journal (BMJ). The authors are associated with the Guy’s at St Thomas’s Assisted Conception Unit, in London.

Although only 51 pages long, it contains valuable advice for anyone involved with initial fertility assessment, and would be a useful summary for those working in a hospital environment or in a women’s health clinic. The sections have been sensibly planned—initially discussing epidemiology and definitions. ‘When to make a referral’ and ‘what can be achieved in the primary health setting and secondary health setting’ is clearly discussed.

The separate treatments of ovulatory disorders, tubal subfertility, and male subfertility are discussed. There is extensive further discussion of the general principles of assisted conception, followed by established and recent advances in in-vitro fertilisation and laboratory techniques. The final sections include details of the problems with assisted conception, such as ovarian hyperstimulation syndrome and the need for counselling for those couples with intractable infertility. Although the section on legal matters is specific to the United Kingdom, there is acknowledgement of those issues as they may be applied internationally.

Throughout this book there are many colour photographs, diagrams, and extensive use of tables and summaries. In particular, the use of summaries with bullet-points (combined with clear, plain language) make this book particularly readable. Each section includes review of appropriate references for further reading. There is also a list of websites linked to support groups and organisations related to infertility care. Although, again, these are UK-based, generally the content would be appropriate for New Zealanders.

Overall, this is a high quality paperback summary of the issues involved with subfertility. For an undergraduate, or any practitioner involved with women’s health, this would be a welcome addition to the bookshelf.

Greg Phillipson
Specialist in Reproductive Medicine and Infertility
The Fertility Centre, Christchurch