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SIT (seated immobility thromboembolism) syndrome: a 21st century lifestyle hazard
R Beasley, P Heuser, N Raymond

A case series of young adults who developed potentially life-threatening blood clots after sitting for long periods (predominantly at their computers at work) has been reported. The cases were characterised by the considerable length of time the individuals sat, as well as the extensive nature of the blood clots in young adults who had no other risk factors. This disorder has been termed the “SIT (seated immobility thromboembolism) syndrome” to describe what may become the 21st century variant of thrombosis associated with immobility from prolonged sitting.

Ethnic differences in mental health and lifestyle issues: results from multi-item general practice screening
F Goodyear-Smith, B Arroll, N Coupe, S Buetow

The multi-item screening tool (MIST) has been developed to screen for lifestyle and mental health problems in New Zealand primary care settings. This study compared 1000 Auckland patients by ethnicity (NZ Europeans, Pacific Island people, Maori) in their responses to the tool; whether they wanted help with identified problems, and its acceptability. There were few ethnic differences—but compared with NZ Europeans, Pacific Island people were significantly more likely to have concerns about abuse and anger control, and Maori to want help with cutting down alcohol use.

Few rural general practitioners use the Internet frequently in regard to patient care
R Janes, B Arroll, S Buetow, G Coster, R McCormick, I Hague

Eighty-nine percent of all rural North Island general practitioners (GPs) have computer access during consultations with patients, with two-thirds of these also having Internet access at this time. At home, almost all rural GPs have access to computers and the Internet. Despite this high availability of the Internet, less than 10% of rural GPs reported using the Internet 3 or more times a week, either at work or home, in regard to a patient. A minority of rural GPs had broadband (fast) Internet access at work (27%) or home (11%). A majority of rural GPs (59%) self-rated their computer skills as ‘amateur’ (“I’m comfortable with certain areas, but get out of my depth easily”). Explanations for the low usage of the Internet in regard to patient care would include lack of broadband access coupled with poor computer skills.
Patterns of medical practice variation: variability in referral for back pain by New Zealand general practitioners
T Love, P Crampton, C Salmond, A Dowell

GPs’ referral and prescribing rates are often highly variable at area level, which can appear to be a sign of inefficient care. Health management agencies may therefore try to control costs by reducing variability among clinicians. This study finds that while there is great variability in GPs’ referral rate for cases of back pain, the degree of variability is not associated with a higher level of referral for a population. Managers should be cautious about expecting reduced variability among clinicians to result in reduced costs.

Documentation of family violence in New Zealand general practice
D Miller, N Thow, J Hall, I Martin

The rate of recording family violence issues in NZ general practice was determined by analysing 6 months of anonymous general practice records from throughout NZ from the year 2000. The number of consultations documenting family violence was low. 80% of the patients were female. The perpetrator was identified as the partner in 40% of consultations, as the parent in 16%, and the patient identified themselves as the possible abuser in 5% of the consultations. Almost half the consultations recorded physical abuse and 26% sexual abuse. Past abuse was discussed as often as current abuse. Depression and anxiety disorders were documented in almost 20% of these consultations. Family violence is recognised as a significant health issue in New Zealand and worldwide. GPs are in a good position in our communities to identify those struggling with family violence. Guidelines and training for GPs in this difficult area are now established and need ongoing support. This research should assist in GPs’ understanding the nature and variety of presentations related to family violence, the importance of documentation, and of asking about a history of abuse.
Venous thromboembolism: when inaction can be fatal

Rodney Hughes

Venous thromboembolism (VTE) is a significant cause of morbidity and mortality. The estimated incidence of symptomatic lower limb deep vein thrombosis from all causes is approximately 0.5 per 1000 per year,\(^1\) suggesting that as many as 2000 New Zealanders develop new events per annum. If evaluated thoroughly, up to half of these patients will have the more concerning complication of pulmonary embolism, some of which will be fatal.\(^2\) Even for those in who embolism does not occur, 30 to 50% will develop features of post-thrombotic syndrome within 2 years and approximately 30% will develop recurrent VTE within 10 years of the initial event.\(^3\)

In 1856, Virchow described the key aetiological features of venous thromboembolism: vascular injury, venous stasis, and hypercoagulability. In 1940, Simpson, a London pathologist, observed an increase in the incidence of fatal pulmonary embolism in people who were seated for prolonged periods in underground shelters during the London Blitz of World War 2.

More recently, several studies have demonstrated a relationship between the prolonged immobility of long distance air travel and VTE (so called Travellers’ Thrombosis).\(^4\)

In this issue of the NZMJ, Beasley et al [SIT (seated immobility thromboembolism) syndrome: a 21st century lifestyle hazard. URL: http://www.nzma.org.nz/journal/118-1212/1376] describe five cases of VTE occurring in young individuals who regularly spent prolonged periods (>8 hours) in a seated position. All of these cases lacked the risk factors classically associated with VTE, and the authors suggest that seated immobility played a key role in the development of their VTE. The authors also highlight the poor recognition of this as a potential risk factor, apparently suggesting that such events would otherwise have been misclassified as idiopathic.

Despite the speculated aetiologies surrounding VTE in association with long-haul air travel, there is little evidence that this condition is unique to air travel, or that anything other than prolonged immobility and venous stasis plays a significant role. The cases presented by Beasley et al support this premise, and highlight the need to advise regular lower limb (and perhaps even upper limb) exercises to anyone who is seated for a prolonged period.

In both cases, thrombolysis with alteplase (t-PA) was quickly and appropriately administered and advanced life support measures continued until adequate systemic perfusion was re-established. Skinner and Foley also describe the use of echocardiography as the initial imaging tool, allowing the features of acute right ventricular strain to be acted upon promptly and effectively without the sometimes unnecessary delay caused by further imaging.

Massive pulmonary embolism is a medical emergency, and many patients who suffer such an event do not survive long enough to be treated by emergency services. It is usually only young or otherwise very healthy individuals that can tolerate sudden increases in pulmonary vascular resistance and right ventricular afterload. Reduced filling of the left heart and subsequent systemic hypotension is a late and ominous sign and demands immediate attention. Although all current guidelines recommend the use of thrombolysis in this situation, supportive evidence for this approach is somewhat lacking.

Even less clear is the management of sub-massive pulmonary embolism. In this situation there is significant pulmonary vascular obstruction but cardiac output and systemic blood pressure is preserved. The limited available data suggests that although there is more rapid vascular clearance, 30-day mortality is not improved with either systemic or directed thrombolysis (when compared to conventional unfractioned heparin administration). Methodically rigorous randomised controlled data is lacking.

Non-invasive markers of severe right ventricular dysfunction, such as progressive right ventricular dilatation on echocardiography, elevated Troponin T or rising plasma B-type naturetic peptide (BNP), have been associated with more adverse outcomes following sub-massive pulmonary embolism. However, the utility of these markers in determining patient management has not been studied in a prospective manner. It is therefore left to the clinician in this circumstance to evaluate the risk/benefit of thrombolysis in an individual patient, with the current American College of Chest Physicians guidelines recommending against thrombolysis in most situations.

Until recently, it has been assumed that the long term sequelae of pulmonary embolism, (that of progressive pulmonary vascular obstruction by laminated fibrotic material) occurs infrequently. However, in a rigorous follow-up study reported by Pengo et al, the authors concluded that almost 4% of patients who suffered their first episode of PE developed the potentially life-threatening condition of chronic thromboembolic pulmonary hypertension (CTEPH) within 2 years. Aside from recurrent events, the main determinant of the development of CTEPH in this study was the degree of initial vascular obstruction. This suggests that early, improved clearance of thrombotic material with thrombolysis may reduce the subsequent risk of developing CTEPH, although this assumption is yet to be validated.

It is evident that further collaborative studies are urgently needed to clarify the role of thrombolysis in the management of pulmonary embolism. In the meantime, the most appropriate management of this condition will remain the use of effective preventative measures, and the recognition of new risk factors, such as seated immobility.

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References:


SIT (seated immobility thromboembolism) syndrome: a 21st century lifestyle hazard

Richard Beasley, Patricia Heuser, Nigel Raymond

Abstract

The association between prolonged seated immobility and venous thromboembolism (VTE) is well recognised in relation to travel. In this case series, we report the occurrence of deep vein thrombosis (DVT) or pulmonary embolism (PE) following prolonged sitting in relation to work and/or recreation. The cases were characterised by the considerable length of time the individuals sat, the extensive nature of the VTE events in young individuals without other recognised risk factors, and the lack of recognition by the attending doctors of seated immobility as the likely major risk factor. While recognising that the association may be coincidental rather than causal, we propose the acronym ‘SIT’ (seated immobility thromboembolism) syndrome to encompass all forms of seated immobility associated with VTE.

The risk of developing VTE following sitting for prolonged periods at a computer (termed ‘eThrombosis’) has recently been recognised.1 This report generated considerable interest and raised several related issues—including whether this case was an isolated event; in what other situations were people at risk; and whether this association is recognised by the medical profession. These issues have been considered through review of a number of additional cases which have been brought to the attention of the authors as a result of the initial publication. In all cases, the relevant details were obtained by review of the hospital medical records and patient interviews.

Methods

Patients were included in this case series if they met the following inclusion criteria:

- Hospital discharge diagnosis of deep vein thrombosis (DVT) and/or pulmonary embolism (PE),
- Age <40 years,
- History of regular seated immobility of at least 8 hours, and
- No other recognised risk factors (including past or family history of VTE, gross obesity, recent surgery or trauma, long distance travel, immobility related to illness, oral contraceptive use, or underlying thrombophilia state).

The clinical diagnosis of DVT or PE required radiological confirmation by one of the following: positive compression Doppler ultrasound; positive venography; high or intermediate probability V/Q scan; positive helical CT with pulmonary angiography; or pulmonary angiography.

Results

The clinical characteristics of the five cases which met the inclusion criteria are shown in Table 1.
Table 1. Characteristics of subjects

<table>
<thead>
<tr>
<th>Case</th>
<th>Age (yr)</th>
<th>Sex</th>
<th>Occupation</th>
<th>Average (max.) time seated (hr)</th>
<th>Max. time seated without getting up (hr)</th>
<th>Diagnosis</th>
<th>Complications</th>
<th>Recognition of association by doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>M</td>
<td>Chef</td>
<td>8 (14)</td>
<td>6</td>
<td>DVT (CFV, SFV, PV)</td>
<td>Extension to EIV</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>M</td>
<td>Computer worker</td>
<td>8 (14)</td>
<td>4</td>
<td>PE^</td>
<td>Nil</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>39</td>
<td>M</td>
<td>Graphic designer</td>
<td>15 (15)</td>
<td>5</td>
<td>PE^</td>
<td>Nil</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>33</td>
<td>F</td>
<td>Manager, with computer work</td>
<td>8 (8)</td>
<td>3</td>
<td>DVT (SFV, PV)</td>
<td>PE^</td>
<td>Recurrent DVT</td>
</tr>
<tr>
<td>5</td>
<td>28</td>
<td>M</td>
<td>Computer Programmer</td>
<td>8 (30)</td>
<td>5</td>
<td>DVT (SV, AV)</td>
<td>Nil</td>
<td>No</td>
</tr>
</tbody>
</table>


†: recreation, seated at computer

^a Ventilation perfusion scan – high probability with multiple bilateral unmatched perfusion defects

^b CT pulmonary angiography – large thrombi L and R lower lobe pulmonary arteries; pulmonary infarction
The presentations of the venous thromboembolic events were striking in terms of the site of the venous thrombosis (proximal, including one case of axillary and subclavian vein thrombosis), the life-threatening nature (including bilateral lobar PE), and complications (including both a subsequent extension and recurrence of a proximal lower limb DVT). In four cases, the immobility related to prolonged periods of sitting at work—whereas in one case, the subject sat for long periods at the computer at home, independent of work.

In the weeks prior to the VTE event, the average length of time per 24 hours spent seated at work and/or recreation ranged from 8 to 15 hours. The maximum number of hours in which the subjects spent seated at work or recreation prior to the VTE ranged between 8 and 30 hours. The subjects reported being seated between 3 to 6 hours at a time without getting up to stand or walk around.

In four of the five cases, the role of prolonged seated immobility was not recognised by the attending doctors, despite the possibility being proposed by the patient in three of the cases.

**Discussion**

This case series indicates that individuals who sit for prolonged periods in relation to their work and/or recreation may be at risk of developing a VTE. We previously termed this disorder ‘eThrombosis’, due to the prolonged periods the initial case spent seated in front of a computer. However, in view of the different occupations and recreations associated with seated immobility, we have renamed this disorder the ‘seated immobility thromboembolism’ (SIT) syndrome. The SIT syndrome would also encompass other forms of seated immobility that are associated with VTE such as distance air, train or car travel.

The cases were characterised by the considerable length of time the individuals sat and the extensive nature of the VTE events in young individuals without other recognised risk factors. The other striking feature was the lack of recognition by the attending doctors of seated immobility as the most probable risk factor for the VTE event, in some cases despite the possibility being raised with the doctor by the patient and the lack of alternative risk factors.

The likelihood of a young adult without underlying risk factors developing a proximal DVT or PE would be considered to be extremely low, suggesting the importance of immobility as a provoking factor in these subjects. Because this was not a prospective study and subjects were predominantly identified by self-referral, it was not possible to determine the relative frequency of seated immobility in cases of VTE in young adults.

We acknowledge that the association between prolonged seated immobility and VTE may be coincidental rather than causal, given the sedentary nature of many people’s lives. However, in recognising the accepted role of immobility as a risk factor for VTE, we propose the term ‘SIT syndrome’ to encompass all forms of seated immobility that are associated with VTE. This syndrome would include immobility associated with long distance travel (air, train, road), prolonged computer use at work or in recreation, and other situations associated with seating in cramped conditions such as the theatre.
Hopefully the acronym ‘SIT’ will facilitate the recognition by doctors of the role of seated immobility as a risk factor for VTE.

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**References:**


Ethnic differences in mental health and lifestyle issues: results from multi-item general practice screening

Felicity Goodyear-Smith, Bruce Arroll, Nicole Coupe, Stephen Buetow

Abstract

Aim To determine ethnic differences in response, acceptance and desire to address problems identified by the multi-item screening tool (MIST).

Methods Patients were assessed using the MIST in urban Auckland. Fifty consecutive adult patients from 20 randomly selected practices completed the MIST and evaluation sheet before their consultation. All patients and general practitioners (GPs) completed feedback forms. Analysis adjusted for the clustered nature of the data.

Results Participants were 1000 patients and 20 urban GPs. The participation rate was 87% of GPs and 97.75% of patients. Compared with New Zealand Europeans, Pacific Island people were significantly more likely to be concerned about abuse and anger control. Maori were significantly more likely to want help with cutting down their alcohol use. The screening tool was accepted by all patients (<1% objection rate) regardless of ethnicity.

Discussion This is the first study to examine possible ethnic differences between primary care patients’ response to screening on lifestyle behaviours and mental health issues.

Within general practice and primary healthcare, there has been an increasing drive towards preventive medicine and early detection of treatable conditions. Initially this has focused on biomedical components to health, such as immunisation schedules and cervical and breast cancer screening programmes. More recently the need has been identified to screen for lifestyle risk factors and mental health. This screening facilitates early detection and intervention for problematic behaviours and mood disorders, which negatively impinge on health.

Several screening tools are available, including the Alcohol Use Disorders Identification Test (AUDIT); the Drug Abuse Screening Test (DAST); the South Oaks Gambling Screen instrument (SOGS) for the identification of problem gambling; the Beck Depression Inventory; the Partner Violence Screen, and the Conflict Tactic Scale (measuring use of reasoning, verbal aggression and physical violence in resolving conflict). However, these tools are generally too lengthy for routine use in general practice.

Routine screening by invitation is likely to be more effective than opportunistic screening, but, if it is too time-consuming, compliance with routine screening regimes are likely to be low for patients and practitioners. A recent study indicates that non-recognition of psychological problems is at a problematic level with patients with little recent contact with a regular general practitioner (GP), and this is a patient population who might be most advantaged by screening.
Primary care screening for cigarette smoking, alcohol, and other drug misuse meets World Health Organization (WHO) criteria, as do the mental health conditions of depression and anxiety. Recent court rulings in New Zealand highlight the need for employers to attend to the psychological safety of the workplace and the role of GPs in assessing the ‘stress’ levels of their patients is likely to increase. Problem gambling is an identified increasing social problem which can impact negatively on health. The development of screening tools and effective interventions supports primary care screening. Interpersonal violence is a growing concern, including spousal abuse. Partner abuse currently does not meet the internationally-recognised criteria for screening, particularly in regard to its unacceptability to many women patients.

However, medical organisations in New Zealand and internationally advocate routine screening. By embedding a generic question about violence and threats and offering patients opportunity to address their own issues with anger management, it was hoped to increase the acceptability of screening for these issues.

Physical inactivity has been associated with an increase in risk of several disease states, as well as lower quality of life compared with an ‘active’ lifestyle. Indeed, interventions aimed at improving the physical activity of sedentary patients can help to reduce cardiovascular disease, diabetes, obesity, osteoporosis, and symptoms of depression as well as improve quality of life. Given the high health burden due to physical inactivity, and that this is an area of significant health gain potential, screening and intervention should be effective. Similarly, ‘overweight’ poses a health burden at all ages, being associated with a number of diseases caused by metabolic complications and/or the excess weight itself, and there is justification in screening for eating disorders and obesity.

For some people, asking about sensitive lifestyle behaviours is embarrassing or objectionable. For example, studies looking at women’s acceptability of domestic violence show that the percentage of women who object ranges from 15 to 57%. Similarly, most studies indicate that the majority of GPs and other primary health care workers do not favour screening for partner abuse.

With these issues in mind, we have developed a multi item, short (two-sided A4 page) screening tool (MIST) for lifestyle and mental health risk factors (smoking, alcohol use, other drug use, problem gambling, depression, anxiety, stress, abuse, anger, physical inactivity, and eating disorders). Adults can self-administer this tool or have it administered to them by their GP or practice nurse (PN).

It was anticipated that generic screening for several potentially sensitive issues would reduce the likelihood of people feeling ‘singled out’ and offended, and hence would enable them to feel comfortable providing this information. The MIST also contains a section for patients to indicate whether they would like any assistance, either immediately or at a later date, with any problem area they have identified.

This paper aims to determine any ethnic differences between Maori, Pacific Island people and NZ Europeans in their

- ‘Felt needs’ to address any problem areas identified by the MIST, and their
- Rate of objection to any question in this screening tool.
Methods

The MIST tool was designed in collaboration with a team including general practitioners, university researchers, a psychologist, and a community-based brief intervention educator of primary health care providers. Where possible, the MIST was developed from existing short screening tools or key questions from longer tools (for example, the AUDIT32 identified from the literature. Many of the questions have been validated within primary care (for example, the two-question depression screen and the question assessing sedentary behaviour). The tool was assessed by 20 Auckland GPs who were randomly selected from a database of all GPs in the Auckland region. Fifty consecutive patients (aged 16 years and over) attending their practice were recruited by a research assistant in the waiting room. Patients were invited to complete the lifestyle assessment screening tool and evaluation sheet. Exclusion criteria were patients unable to understand English or with mental impairment precluding meaningful participation.

Patients self-identified their ethnicity on the form, using the standard 2001 Census format. Those identifying with multiple ethnicities were allocated a single ethnicity on the basis of the priority system of Statistics New Zealand. For example, a patient identifying as Maori and New Zealand (NZ) European would be classified as Maori.

Lifestyle screening forms were completed by patients before their consultation, either by themselves in the waiting room or with assistance. Where patients identified issues they wanted addressed, GPs could either deal with the problem immediately or reschedule a further consultation. All patients and GPs completed feedback forms, which elicited their positive and negative responses to the tool and recorded any objections to the questions asked. Data from this feedback were used to determine the acceptability and feasibility of use of the tool.

Data included demographic information; positive responses to each screening question; number of patients requesting assistance from their doctor or nurse concerning risk factors; patients’ objections to questions; and estimation of patient and practitioner satisfaction with the resource. For each lifestyle issue, we calculated differences, by ethnicity, between the proportions of patients requesting assistance from their doctor. Using the STATA V7 statistical software package, the confidence intervals were adjusted for clustering within GP. This analysis adjusts for the possibility that patients within individual practices are more likely to respond in a similar manner than are patients in different practices.

Results

1000 consecutive Auckland patients from 20 GPs participated in the study. The practitioner participation rate was 87% (20/23). The patient response rate was 98% (1000/1023).

The sample comprised 67.6% NZ European; 7.1% Maori; 14.4% Pacific Island people, and 10% ‘other’ (with 1% missing ethnicity data). According to the New Zealand Census, the Auckland region population in 2001 was about 68% NZ European; 10% Maori, and 14% Pacific Island people. The gender of patients was approximately two-thirds female with an age range from 16 to 91 years (mean of 47 years). The gender balance of patients was similar for NZ European, Maori, and Pacific Island people (between 67.0% and 67.8% female).

Taking clustering into account, no significant differences were found between NZ European and Maori in their responses to the screening questions (Table 1). At the 5% level of statistical significance, NZ European and Pacific Island people differ with respect to their expressed exposure to abuse and their difficulty controlling anger.

Overall, only a small percentage of people who responded positively to the screening questions signalled they wanted help with these problems (Table 2). Maori were significantly more likely than New Zealand Europeans to indicate they would like help with cutting down their alcohol consumption. Pacific Island people were similar
to New Zealand Europeans in their expressed interest in receiving help with specific problems. For example, the questions on depression and anxiety yielded high positive responses, some of whom requested assistance. It is not known whether these were newly detected problems or whether patients’ consultations were for ongoing care of these pre-existing conditions. A study is currently underway to determine whether those requesting help are those with moderate or severe depression in greatest need of intervention.

Table 1. Comparison of NZ European with Maori and Pacific Island people’s responses for lifestyle concerns

<table>
<thead>
<tr>
<th>Variable</th>
<th>NZ Europeans (%) (a)</th>
<th>Maori (%) (b)</th>
<th>Absolute difference (95% CI) (a-b)</th>
<th>Pacific Islanders (%) (c)</th>
<th>Absolute difference (95% CI) (a-c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to cut down smoking</td>
<td>14.7 (57/389)</td>
<td>37.0 (10/27)</td>
<td>22.4 (-48.1–92.9)</td>
<td>18.2 (6/33)</td>
<td>3.5 (-38.7–45.7)</td>
</tr>
<tr>
<td>Need to cut down alcohol</td>
<td>11.2 (76/676)</td>
<td>8.5 (6/71)</td>
<td>2.8 (-6.9–12.5)</td>
<td>14.6 (21/144)</td>
<td>3.3 (-4.2–10.8)</td>
</tr>
<tr>
<td>Need to cut down other drug use</td>
<td>1.1 (7/628)</td>
<td>0 (0/66)</td>
<td>1.1 (-3.4–5.6)</td>
<td>2.9 (4/139)</td>
<td>1.8 (-15.0–18.6)</td>
</tr>
<tr>
<td>Unhappy after gambling</td>
<td>1.9 (13/674)</td>
<td>4.2 (3/71)</td>
<td>2.3 (-3.0–7.6)</td>
<td>3.5 (5/144)</td>
<td>1.5 (-1.6–4.6)</td>
</tr>
<tr>
<td>Depression (both questions)</td>
<td>24.4 (164/673)</td>
<td>26.1 (18/69)</td>
<td>1.7 (-16.8–20.2)</td>
<td>26.4 (38/144)</td>
<td>2.0 (-12.9–16.9)</td>
</tr>
<tr>
<td>Anxiety: worrying about everyday problems</td>
<td>40.4 (272/674)</td>
<td>47.1 (33/70)</td>
<td>6.8 (-22.7–36.2)</td>
<td>56.2 (81/144)</td>
<td>15.9 (-1.9–33.7)</td>
</tr>
<tr>
<td>Abuse: hurt, threatened, controlled</td>
<td>4.4 (30/675)</td>
<td>5.9 (4/68)</td>
<td>1.4 (-4.4–7.2)</td>
<td>11.3 (16.141)</td>
<td>6.9 (1.4–12.4)</td>
</tr>
<tr>
<td>Problem controlling anger</td>
<td>12.0 (81/676)</td>
<td>22.5 (16/71)</td>
<td>10.6 (-12.4–33.6)</td>
<td>29.2 (42/144)</td>
<td>17.2 (1.6–32.8)</td>
</tr>
<tr>
<td>Physically inactive</td>
<td>53.5 (361/675)</td>
<td>52.1 (37/71)</td>
<td>1.4 (-14.4–17.2)</td>
<td>58.3 (84/144)</td>
<td>4.9 (-9.3–19.1)</td>
</tr>
</tbody>
</table>

CI=confidence interval; NZ=New Zealand.

The screening tool was accepted very well by patients, with a minimal (<1%) objection rate to any of the questions. The greatest objection was to the question on recreational drug use (0.8%). There were no ethnic differences in the acceptance of the tool.

**Conclusion**

This is the first study to look at differences between NZ European, Maori, and Pacific Island patients’ responses in primary care to screening questions on risky lifestyle behaviours and mental health issues. After adjustment for clustering by practitioner, Pacific Island patients expressed more concerns than NZ Europeans about being abused and expressing their anger. No other ethnic differences were found in patients’ expressed need to reduce their own lifestyle risk factors—despite ethnic differences in prevalences of risky lifestyle behaviours such as smoking and drinking—although such data are limited for general practice patients.
Table 2. Comparison of NZ European with Maori and Pacific Island patients wanting help (today or later) for specific problems

<table>
<thead>
<tr>
<th>Variable</th>
<th>NZ Europeans (% (a))</th>
<th>Maori (% (b))</th>
<th>Absolute difference (95% CI) (a-b)</th>
<th>Pacific Islanders (% (c))</th>
<th>Absolute difference (95% CI) (a-c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>4.9 (33/673)</td>
<td>9.9 (7/71)</td>
<td>5.0 (-17.1–27.1)</td>
<td>9.7 (14/144)</td>
<td>4.8 (-8.5–18.1)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>0.7 (5/676)</td>
<td>0.0 (0/71)</td>
<td>0.7 (0.1–1.3)</td>
<td>1.4 (2/144)</td>
<td>0.7 (-1.5–2.9)</td>
</tr>
<tr>
<td>Other drugs</td>
<td>0.0 (0/676)</td>
<td>0.0 (0/71)</td>
<td>0.0 (0.0–0.0)</td>
<td>0.7 (1/144)</td>
<td>0.7 (-0.8–2.2)</td>
</tr>
<tr>
<td>Gambling</td>
<td>0.3 (2/675)</td>
<td>0.0 (0/71)</td>
<td>0.3 (-0.1–0.7)</td>
<td>0.0 (0/144)</td>
<td>0.3 (-0.1–0.7)</td>
</tr>
<tr>
<td>Depression</td>
<td>11.0 (74/674)</td>
<td>15.7 (11/70)</td>
<td>4.7 (-20.9–30.3)</td>
<td>13.9 (20/144)</td>
<td>2.9 (-12.3–18.1)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>7.9 (53/674)</td>
<td>10.9 (7/64)</td>
<td>3.1 (-11.2–17.4)</td>
<td>13.2 (19/144)</td>
<td>5.3 (-2.3–12.9)</td>
</tr>
<tr>
<td>Abuse</td>
<td>1.2 (8/675)</td>
<td>0.0 (0/71)</td>
<td>1.2 (-12.7–15.1)</td>
<td>3.5 (5/144)</td>
<td>2.3 (-1.7–6.3)</td>
</tr>
<tr>
<td>Anger</td>
<td>1.2 (8/675)</td>
<td>2.8 (2/71)</td>
<td>1.6 (-6.3–9.5)</td>
<td>8.3 (12/144)</td>
<td>7.2 (-0.9–15.3)</td>
</tr>
<tr>
<td>Exercise</td>
<td>1.3 (9/674)</td>
<td>1.4 (1/71)</td>
<td>0.1 (-2.8–3.0)</td>
<td>0.7 (1/144)</td>
<td>0.6 (-1.0–2.2)</td>
</tr>
</tbody>
</table>

CI=confidence interval; NZ=New Zealand.

The study reports findings in relation to ethnic differences and further validates a new collection of screening questions for use in primary care by establishing its ‘acceptability’.

Ethnic differences are known to characterise the prevalence of risky lifestyle behaviours such as smoking and drinking, but such data are limited for general practice patients. Community-wide, and compared with non-Maori, Maori have an increased risk of smoking, hazardous use of alcohol, use of cannabis, problem gambling, and being victims of violence. Maori are also more likely to be sedentary than New Zealand European and other ethnic groups. Information on the use of mental health and related services indicates that Maori have more mental health problems than the general population. Furthermore, Maori also have increased rates of hypertension, combined cardiovascular risk factors, diabetes, and obesity.

In 1994, Pacific Island people were identified as the fastest and youngest growing population in NZ with a large percentage aged under 20 years. There are less data for some of these issues relating to Pacific peoples, such as recreational drug use. Given the growing number of youth, they warrant attention with respect to risky lifestyle behaviours and mental health issues. Pacific smokers report that they smoke less heavily compared with NZ European or Maori smokers. However, smoking is a leading cause of disability adjusted life years (DALYs) lost among Pacific males. Pacific people overall are less likely to drink alcohol than NZ Europeans, but those who do drink tend to drink more on a typical day when drinking than NZ European
drinkers. Pacific people are more than twice as likely to have been diagnosed with diabetes than NZ European people, and to be diagnosed at a younger age.

Certain population groups have higher problem gambling prevalence rates. Maori and Pacific peoples are over-represented with respect to access to treatment services, and youth as a population group are becoming more visible in problem gambling studies.

Only a small percentage of patients admitting to a particular problem requested professional help with it. With issues such as gambling, patients noted on their feedback evaluation forms that they did not realise that this was a problem for which they could seek help from their GP. Previous research has indicated that structural characteristics of services such as cost, times open, and travel distance are seldom reasons for not seeking care for mental health problems; rather, reasons were mainly attitudinal, such as believing they should be strong enough to cope without professional help.

Even in circumstances where patients have positive lifestyle risk behaviours but do not indicate they want help to change, the practitioner still has the opportunity to raise the issue. For example, the GP could acknowledge ‘I see that sometimes you feel the need to cut down on your drinking but right now you are not seeking help with this’ and then explain that if at some stage the patient does want assistance, several possible interventions are available. Patients with gambling problems may not see this as an issue with which the GP can help. This allows pre-contemplative patients (patients not yet ready to make changes) the chance to return to address issues should they contemplate behaviour change at a later date.

Mason Durie has identified that Maori rates of mental illness have been increasing since 1975, and he thinks that Maori have a different mental illness profile compared with non-Maori; reasons include the late presentation for treatment. The te Puawaitanga Maori Mental Health National Strategic Framework identifies that ‘primary, early intervention and mental health services need to be more accessible and appropriate to the needs of Maori to mitigate entry of Maori into crisis and forensic services.’

International indigenous youth suicide literature introduces the concept of cultural depression, considered to be related to trying to live in two worlds but fitting in neither, coupled with a history of cultural destruction over which indigenous peoples not had control. The anger identified by Maori patients may be a reflection contemporary Maori society’s loss of power over their destiny.

A limitation of the study is that it does not demonstrate what additional knowledge is gained over what the GP or practice nurse already knows about the patient. Some of the needs expressed by individual patients may already be known to their healthcare providers or be self-limiting. Nevertheless, in contributing to an assessment of ethnic differences in patient-defined health needs, this study indicates that Pacific peoples warrant particular attention with respect to at least two risky lifestyle behaviours and mental health issues: being abused and expressing anger.

A further caveat is that when people report more than one ethnicity, the priority system for coding them to one ethnic group gives special priority to Maori and, to a lesser extent, Pacific Island people. This loses detail and makes assumptions, which may be false, about the ethnic group with which people most strongly identify.
Nevertheless, the priority system is one of the ways used by Statistics New Zealand to report ethnic data.

The acceptability of the MIST by patients and clinicians has been well established, and is now undergoing validation as a single tool. Systematic screening of primary care patients may uncover lifestyle and mental health problems, which some patients would like addressed. While in some practices the GP may already know lifestyle details and mental health issues of their patients,\textsuperscript{10} in our research experience, screening may increase the practice workload. Possible solutions include providing for a subsidised or free extra consultation (as is now available under some primary health organisation protocols) or having a trained and dedicated person available. This could be a GP, PN, or a primary mental health co-ordinator who has appropriate brief intervention and problem-solving skills; can provide relevant patient education including the use of written resources, and has knowledge of appropriate referral agencies and individuals for patients requiring external referral.

Telephone monitoring has been shown to enhance the effectiveness of management of depression\textsuperscript{46–48} and has been advocated as a model for serving vulnerable populations, to co-ordinate and integrate community services.\textsuperscript{49}

A primary mental health co-ordinator could work with the individual and family and assist them to acquire social supports they may lack. It is important that any intervention is culturally appropriate and meets the needs of the ethnic populations served by a practice. This might include translated resources or referral to suitable external providers.

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**Acknowledgements:** Funding for this study was provided by the Charitable Trust of the Auckland Faculty of the Royal New Zealand College of General Practitioners.

The study involved initial collaboration between primary health care researchers (with specific lifestyle or mental health interests and expertise) at the Department of General Practice and Primary Health Care, University of Auckland who assisted us in the development of the tool. In particular, considerable input into the tool development and evaluation was undertaken by Dr Raina Elley, Dr Sean Sullivan, and Ms Barbara Docherty. We also thank the research assistants, GPs, and especially the patients who contributed to this study.

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Few rural general practitioners use the Internet frequently in regard to patient care

Ron Janes, Bruce Arroll, Stephen Buetow, Gregor Coster, Ross McCormick, Iain Hague

Abstract

Aims To benchmark North Island rural general practitioner (GP) access to computers and the Internet, both at work and home, and assess whether rural GPs are using the Internet in regard to patient care.

Methods Cross-sectional postal survey of all North Island rural GPs in mid-2003.

Results 175 of 289 GPs (60.6%) returned useable questionnaires. Most (89.0%) reported computer availability at work when consulting, but even more had access to a computer at home (97.1%, p<0.01). Access to the Internet was also lower at work (68.6%) than at home (98.8%, p<0.01). Fewer GPs (p<0.05) reported ever using the Internet at work in regard to patients (56.5%) than at home (71.9%). Less than 10% of all GPs used the Internet three or more times a week at work (6.9%) or home (8.6%) in regard to patients. Of those with Internet access at work, 27.0% had broadband (fast Internet) access. Predictors of having (versus not having) work Internet access were computer availability in consultations (p=0.04).

Conclusions Few North Island rural GPs use the Internet frequently in regard to patient care, despite increasing access to computers and the Internet, both at work and home.

Medical education is a lifelong journey, requiring a commitment to the acquisition of new knowledge, skills and attitudes. Urban centres have traditionally been the location of educational meetings and medical libraries, disadvantaging rural general practitioners (GPs) in accessing continuing medical education (CME) and health information. This disadvantage has contributed to difficulties in recruiting and retaining rural GPs.¹

With the rapid growth of the Internet in the previous decade, rural GPs can now access online resources including medical journals, medical texts, and CME programmes. Additionally, the health sector is increasingly moving information electronically. Therefore, GPs now require hardware, software, and Internet access—as well as the knowledge and skills to both find and send information. To usefully use the Internet during consultations, they will also require broadband (or fast Internet) access.

In New Zealand (NZ), a 1998 regional study² showed that 36% of Otago and Southland GPs (rural and urban combined) had access to the Internet at work. Furthermore, in two national NZ studies in late 1999-early 2000, 39% of rural GPs reported Internet access at work,³ while 47% of rural GPs reported email access at work.¹ Internet or email access at home, compared with work, was higher in all three studies: 55%,² 73%,³ and 72%.¹
In comparison, among Scottish GPs (West Lothian) in 1997, 12% had Internet access at work, with twice as many (24%) having access at home.\(^4\) Within 2 years, access to the Internet at work for Scottish GPs had increased to 92% of practices, partly because of government support and funding.\(^5\) A 2001 Swiss study of primary care physicians found that 75% had access to the Internet at work, although only 7% reported using it during patient consultations.\(^6\)

This paper aims firstly to provide a 2003 benchmark of North Island rural GP access to computers and the Internet, at work and home; secondly, to assess whether rural GPs are using the Internet in regard to patient care; and thirdly, to account for whether practices have work Internet access. The paper forms part of a larger study that compares and contrasts North Island rural health professionals’ (GPs, practice nurses, and pharmacists) attitudes towards, and experiences of, computers, the Internet, and distance learning.\(^7\)–\(^9\)

**Methods**

The methodology for this cross-sectional study has been reported previously.\(^5\) In summary, all North Island rural GPs (practice nurses and pharmacists) were posted a questionnaire requesting self-reported information about their attitudes towards, and experiences of, computers, the Internet and distance learning. The questionnaire had been reviewed and endorsed by the Rural General Practice Network (and the Pharmacy Guild of New Zealand). The study was approved by the Auckland Ethics Committee.

All North Island rural GPs had been identified from the workforce database of the Institute of Rural Health, in Hamilton. A ‘rural’ GP was defined by a score of 35 points or greater on the Rural Ranking Scale.\(^10\) Numbered questionnaires, each with a self-addressed, stamped return envelope, were mailed in April 2003. Non-respondents were posted a reminder card in May, a reminder questionnaire in June and another reminder card in July, before receiving a final reminder by telephone. The data collection was closed on August 31, 2003. Data on broadband access in rural North Island localities were obtained from Seager Mason, Telecom Rural Investment Team (personal communication) for June 2003 and June 2004.

A statistical software package (Stata version 7.0) was used to conduct the analysis. This includes fitting a logistic regression model to account for whether or not GPs reported having Internet access at work. Predictor variables for this model reflected our prior analysis of the data. Effects for the model are expressed as changes in the ‘odds of access’ versus ‘no access’. Adjustment was made for clustering by practice. Cases were deleted if they had values missing on any variables in the model (listwise deletion).

**Results**

**Response rate**—Questionnaires were sent to 289 North Island rural GPs in 81 identified rural localities; 175 (60.6%) of these GPs (from 70 of the localities) returned completed questionnaires.

Table 1 summarises the sample: only 27.4% were female, the mean GP age was 45.8 years, and only 43.4% had graduated from medical school in NZ. Almost two-thirds of rural GPs owned their business (63.4%), while 17.7% were employed and 13.1% were locums. On average, the GPs worked 45.2 weeks in the last year, worked 49.2 hours in a typical week, and had been working in NZ for 12.8 years.
Table 1. Characteristics of GP sample

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years (mean)</td>
<td>45.8 (174)</td>
</tr>
<tr>
<td>25-34</td>
<td>5.8% (10/174)</td>
</tr>
<tr>
<td>35-44</td>
<td>42.5% (74/174)</td>
</tr>
<tr>
<td>45-54</td>
<td>35.6% (62/174)</td>
</tr>
<tr>
<td>55-64</td>
<td>13.8% (24/174)</td>
</tr>
<tr>
<td>65-74</td>
<td>2.3% (4/174)</td>
</tr>
</tbody>
</table>

| Gender: Female                        | 27.4% (48/175) |

<table>
<thead>
<tr>
<th>PROFESSIONAL EDUCATION AND WORK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduation year</td>
<td></td>
</tr>
<tr>
<td>≤1959</td>
<td>1.1% (2/175)</td>
</tr>
<tr>
<td>1960-69</td>
<td>7.4% (13/175)</td>
</tr>
<tr>
<td>1970-79</td>
<td>26.3% (46/175)</td>
</tr>
<tr>
<td>1980-89</td>
<td>49.7% (87/175)</td>
</tr>
<tr>
<td>≥1990</td>
<td>15.4% (27/175)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country of professional graduation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>43.4% (76/175)</td>
</tr>
<tr>
<td>Great Britain</td>
<td>30.3% (53/175)</td>
</tr>
<tr>
<td>South Africa</td>
<td>15.4% (27/175)</td>
</tr>
<tr>
<td>Australia</td>
<td>1.1% (2/175)</td>
</tr>
<tr>
<td>Other</td>
<td>16.0% (17/175)</td>
</tr>
</tbody>
</table>

| Number of years working in rural NZ (mean) | 12.8 (172) |

<table>
<thead>
<tr>
<th>Professional work – employment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business owner</td>
<td>63.4% (111/175)</td>
</tr>
<tr>
<td>Employee</td>
<td>17.7% (31/175)</td>
</tr>
<tr>
<td>Locum</td>
<td>13.1% (23/175)</td>
</tr>
<tr>
<td>Other</td>
<td>5.7% (10/175)</td>
</tr>
</tbody>
</table>

| Weeks worked in last year (mean)       | 45.2 (173) |

| Hours worked in typical week (mean)    | 49.2 (169) |
Table 2. Computerisation at work and home

<table>
<thead>
<tr>
<th>Computer availability: at work (when consulting) or home</th>
<th>WORK (154/173)</th>
<th>HOME (169/174)</th>
<th>Difference (%)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace sends information via a modem</td>
<td>83.0 (142/171)</td>
<td>-</td>
<td>8.1</td>
<td>2.8 to 13.4</td>
</tr>
<tr>
<td>Workplace receives information via a modem</td>
<td>76.3 (132/173)</td>
<td>-</td>
<td>23.5</td>
<td>16.7 to 30.3</td>
</tr>
<tr>
<td>Internet access: work or home</td>
<td>68.6 (118/172)</td>
<td>98.8 (163/165)</td>
<td>30.2</td>
<td>23.0 to 37.3</td>
</tr>
<tr>
<td>'High speed' Internet access: work or home</td>
<td>27.0 (31/115)</td>
<td>11.8 (19/161)</td>
<td>15.2</td>
<td>5.6 to 24.7</td>
</tr>
</tbody>
</table>

Internet used at work or home in regard to patients

<table>
<thead>
<tr>
<th>Internet used at work or home in regard to patients</th>
<th>WORK (65/115)</th>
<th>HOME (115/160)</th>
<th>Difference (%)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>12.7 (8/63)</td>
<td>1.8 (2/112)</td>
<td>10.9</td>
<td>2.3 to 19.5</td>
</tr>
<tr>
<td>3 or more times/week</td>
<td>6.4 (4/63)</td>
<td>11.6 (13/112)</td>
<td>5.3</td>
<td>-3.2 to 13.7</td>
</tr>
<tr>
<td>1-2 times/week</td>
<td>36.5 (23/63)</td>
<td>21.4 (24/112)</td>
<td>15.1</td>
<td>0.9 to 29.2</td>
</tr>
<tr>
<td>Less than weekly</td>
<td>44.4 (28/63)</td>
<td>65.2 (73/112)</td>
<td>20.7</td>
<td>5.6 to 35.8</td>
</tr>
</tbody>
</table>

CI=Confidence Interval
Table 3. Rural GP self-assessment of computer competence

| Illiterate: I will use them reluctantly, if at all, and only if forced | 3% (5) |
| Amateur: I’m comfortable with certain areas, but get out of my depth easily | 59% (102) |
| Confident: I enjoy working with computers and learning new programmes and skills | 25% (43) |
| Experienced: Computers are a part of my life; others come to me to sort out problems | 13% (22) |

Table 4. GP Internet access at work. Logistic regression model (n=110)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>No = 0</th>
<th>Yes = 1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Internet access</td>
<td>phi</td>
<td>Z</td>
<td>P &gt;</td>
<td>z</td>
<td></td>
</tr>
<tr>
<td>Computer available when consulting</td>
<td>No = 0</td>
<td>Yes = 1</td>
<td>8.4</td>
<td>2.0</td>
<td>0.04</td>
</tr>
<tr>
<td>Frequency of home Internet use</td>
<td>Less than weekly = 0</td>
<td>At least weekly = 1</td>
<td>2.6</td>
<td>1.9</td>
<td>0.06</td>
</tr>
<tr>
<td>Hours spent learning in a typical week</td>
<td>&lt; 2 = 0</td>
<td>≥ 2 = 1</td>
<td>0.5</td>
<td>-1.1</td>
<td>0.27</td>
</tr>
<tr>
<td>Days spent learning away from clinical work in the last year</td>
<td>0-5 = 0</td>
<td>≥ 6 = 1</td>
<td>1.6</td>
<td>0.9</td>
<td>0.36</td>
</tr>
<tr>
<td>Competence with computers</td>
<td>Illiterate or amateur = 0</td>
<td>Confident or experienced = 1</td>
<td>0.8</td>
<td>-0.6</td>
<td>0.55</td>
</tr>
<tr>
<td>Graduation year</td>
<td></td>
<td></td>
<td>1.0</td>
<td>-0.7</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Pseudo-R² (goodness of fit) = 10.1; χ² = 13.2, P > χ² = 0.04

\[
\text{Z} = z\text{-score for test of } \phi = 1 \\
\text{P > |z|} = p \text{ value for z-test}
\]
Computer usage—Table 2 documents computerisation at work and home. Most GPs (89.0%) reported having computers available at work when consulting, but even more had computer access at home (97.1%, p<0.01). Although most rural general practices send (83.0%) and receive (76.3%) information via a modem, Internet access at work (68.6%) was much lower than at home (98.8%, p<0.01).

Likewise, fewer GPs (p<0.05) reported ever using the Internet at work in regard to patients (56.5%), than at home (71.9%)—and those who reported using it at work, showed greater (p<0.05) daily Internet use in regard to patients (12.7%) than those who reported using it at home (1.8%).

Overall, of the 175 rural GP respondents, 12 (6.9%) used the Internet more than twice-a-week at work in regard to patients, while 15 (8.6%) did so at home. Internet access, when available, was more commonly ‘high-speed’ (p<0.01) at work (27.0%) than home (11.8%).

Computer competence—Table 3 shows the self-assessed computer competence of respondents. Over half the rural GPs (59%) identified themselves as computer ‘amateurs’: ‘I’m comfortable with certain areas, but get out of my depth easily.’

Broadband Internet access—Rural GPs from 21 rural localities reported having broadband Internet access. As of June 2003, Telecom NZ Ltd was providing broadband Internet access to 53 of the 81 rural localities on the North Island (and this increased to 71 localities as of June 2004).

Table 4 shows that in the logistic regression fitted, computer availability when consulting increases the odds of work Internet access by a factor of 8.4 (p=0.04), holding all other variables constant. Other predictor variables were not statistically significant at the 0.05 level. However, the effect of at least weekly home Internet use was only marginally non-significant statistically (p=0.06). Broadband access at work, and the age and gender of the GP, each had no effect (and are not reported).

Moreover, no interaction effects were detected. The pseudo-$R^2$ (goodness of fit) of the model as a whole was 10.1%, but this measure provides only a rough index of the adequacy of the model.

Discussion

This study has described North Island rural GP access to computers and the Internet (both at work and home), and assessed the frequency of Internet use by this provider group in regard to patient care. The age, gender, and country of graduation of the GPs in this study agree closely with the New Zealand Rural General Practitioners 1999 Survey.\(^1,11\) This suggests that our results may be generalisable to all NZ rural GPs.

The GPs’ mean age (of 45.8 years is of interest, as the common perception is that older rather than younger GPs frequently lack the confidence and skills to use computers and the Internet.\(^12\) However, in our study, GP age did not predict work Internet access, indicating that this may be becoming incorrect.

Key findings—Access to computers when consulting with patients was reported by 89.0% of North Island rural GPs, which is close to the near universal access in the UK.\(^13\) Internet access at work in NZ has increased from 39% of rural GPs in 1999-2000\(^3\) to 68.6% of North Island rural GPs as of mid-2003 in this study. However, this
is still lower than the 92% reported for Scotland\textsuperscript{5} in 1999 and the 75% reported in Switzerland\textsuperscript{6} in 2001.

Just over half (56.5\%) of the rural GPs in this study with work Internet access reported having ever used it at work in regard to patients. While two-thirds of the rural GPs reported having Internet access at work, only 12 GPs (6.9\% of all respondents) reported using the Internet at work more than twice-a-week in regard to patient care, possibly explained by the time constraints of consultations. This is similar to the low percentage (7\%) of Swiss GPs who reported using the Internet during a consultation.\textsuperscript{6}

The only statistically significant (p<0.05) factor to predict Internet access at work in this study was availability of computers \textit{when consulting with patients/clients.} However, the frequency of home Internet use (p=0.06) almost achieved statistical significance.

Internet access for these rural North Island GPs was more common at home than work (p=0.05), similar to other GPs studied.\textsuperscript{2–4} Despite almost universal Internet access at home (98.8\%), only 8.6\% of all respondents used the Internet more than twice-a-week at home in regard to patient care. This would suggest that rural GPs do not yet consider the Internet a necessary source of health information in regard to patient care (even when the time constraint during consultations is not present), or that there are other barriers to Internet use.

Broadband access was more common at work (27.0\%) than home (11.8\%), which may help to explain why the small percentage of GPs who reported using the Internet daily in regard to patients, did so more frequently from work.

\textbf{Strengths and limitations—}We surveyed all rural North Island GPs and obtained a reasonable response rate of 61\%. Demographically, our sample appears to be representative since it resembles that from the NZ Rural GP 1999 Survey.\textsuperscript{1} A limitation of this study is the reliance on self-reported data. The rapid pace of change means that our data from mid-2003 probably now underestimate the extent to which Internet use in regard to patient care has penetrated the workplace and home environment of rural GPs.

\textbf{Implications:} With 89.0\% of rural North Island GPs in this study reporting computer availability when consulting, the most expensive component of accessing the Internet is in place. The two other necessary components are a high-speed Internet connection and GPs with the knowledge and skills to use the technology.

In our multivariate analysis, broadband access alone did not predict access to the Internet at work. Logic suggests that use of the Internet in regard to patient care during a consultation will not increase until all three necessary components are in place. This is because the time constraint imposed by consultations necessitates that GPs have the knowledge and skills to be able to rapidly access high quality scientific information (if this information is to influence decision-making in real time).

However, we were unable to find any randomised controlled trials examining the effects of Internet access during patient consultations on patient outcomes. Irrespective of whether the Internet is accessed during a consultation, having Internet access is becoming increasingly necessary for information sharing with government agencies (claims, forms, etc).
As of June 2004, Telecom NZ Ltd was providing broadband Internet access to 71 of the 81 rural localities on the North Island. Therefore, the 'high-speed Internet access' component is now available to most North Island rural GPs, thereby offering them the potential during consultations (if they have the knowledge and skills) to rapidly access quality scientific information via the Internet.

With computers and broadband Internet now widely available, and with our finding that 59% of rural GPs self-rate their computer skills as ‘amateur’, future research should focus on the third necessary component to accessing health information on the Internet: the knowledge and skills of GPs in using information technology. Also needing investigation is the question of whether other factors related to the Internet or broadband access may also be inhibiting the use of this technology.

Swiss GPs cited ‘time pressure’ and ‘concern about potential negative interaction with physician-patient communication’ as their reasons for not using the Internet, while GPs and nurses in Glasgow referred to ‘time restraints’ and ‘concerns they lack the necessary skills.’

Additional factors might include concern about: hackers accessing private health information; Internet viruses disrupting systems; employees accessing inappropriate sites; a negative effect on work productivity; or other concerns. All these issues must be addressed if GPs are to be expected to invest in information technology, and acquire Internet skills.

In addition, research should examine whether Internet access during consultations has any effect on doctor-patient communication, patient care, or health outcomes—and should include a cost analysis of accessing the Internet during consultations. It may be appropriate for Government to consider inducements, as in Scotland, to help integrate the Internet into everyday general practice. Government, universities, and professional colleges could play a pivotal role in providing education for GPs to enable them to make this transition.

**Conclusion**—This study provides a 2003 benchmark of North Island rural GP access to computers and the Internet, both at work and home. It confirms that the availability of computers and the Internet during consultations in NZ rural general practice is increasing. The only factor predicting Internet access at work was computer availability during consultations. Despite the increasing availability of computers and the Internet, less than 10% of the GPs surveyed used the Internet more than twice-a-week, either at home or at work, as a health information resource in regard to patient care.

(The views expressed in this paper are the authors’ alone.)

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Acknowledgements: We gratefully acknowledge a research grant from the New Zealand Medical Education Trust. In addition, ProCare Health Ltd is thanked for funding the Senior Research Fellowship of Stephen Buetow. We are also indebted to those rural GPs, nurses, and pharmacists who provided constructive input into earlier drafts of the questionnaire, as well as to all those persons who took the time to complete and return the questionnaire. We also acknowledge and thank Irene Chaudhari for organising the printing for the study, the questionnaire mail-out, and data entry.

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References:

Patterns of medical practice variation: variability in referral for back pain by New Zealand general practitioners

Tom Love, Peter Crampton, Clare Salmond, Anthony Dowell

Abstract

Aims To describe patterns of variation in referral among general practitioners, and to establish whether variability among practitioners within a geographic area is associated with high levels of utilisation in an area.

Method Multilevel analysis of routinely collected primary care data. The four outcome measures were referral to physiotherapy, specialist assessment, radiology, and approval of earnings-related compensation.

Results The pattern of observed variability is not consistent for different referral activities: groups of general practitioners within one area may practice consistently in referral for one outcome, but be highly variable for another, while practitioners in other areas can show the reverse pattern. The degree of variability among GPs within geographic areas was not significantly correlated at the 95% level with the absolute level of referral to any of the referral options.

Conclusion The mechanisms which drive variability operate at the level of the specific clinical management option, rather than at the level of the overall approach to management of the disease. Caution should be exercised about claims that reductions in variability will produce reductions in utilisation.

Variation in medical practice has been documented in a wide range of settings. The observation that different geographic areas receive different levels of health services has provoked suggestions that variability among medical practitioners should be reduced in order to increase the effectiveness, efficiency, and quality of health services. The argument is that, if there are different rates of procedure in different geographic areas, then some areas must have rates which are higher or lower than the optimal level. This implies that some populations will be exposed to inappropriate drugs or procedures, representing poor quality care and wasted health resources, while other populations may not be receiving enough care. Such irrational prescribing or referral could have considerable impact upon the efficiency and quality of health systems.

Since medical practice variation could have a considerable impact upon health services, much research effort has been devoted to trying to describing patterns of variation and identifying the causes. A prominent debate in the field is the degree to which the clinician’s uncertainty in either making a diagnosis or deciding on a course of treatment or referral may be an important factor in causing medical practice variation. Reducing uncertainty may then become a rationale for specific interventions to reduce the range of practice for individual clinicians. By contrast, some commentators have pointed out that clinicians may disagree with each other without necessarily manifesting uncertainty, while others have suggested that environmental or other factors such as access to hospital resources could account for variation.
The problems which are implied by observations of variability (whether among individual clinicians or across geographic areas) are often invoked as justification for reducing variability among individual clinicians (for example in the work of Wennberg\textsuperscript{8}).

Techniques for reducing such differences in practice may include the implementation of guidelines,\textsuperscript{9,10} feedback on utilisation to individual clinicians, and the monitoring of performance measures for clinicians, the aim being to reduce the utilisation rate of those individuals who refer or prescribe at high levels.\textsuperscript{11} Reducing scientific and clinical uncertainty has been an explicit justification for expenditure upon outcomes research in health sciences.\textsuperscript{1}

The increasing interest which many health management agencies have in constraining the scope of individual clinical freedom with such mechanisms therefore derives, at least in part, from concerns about the consequences of variation, beliefs about what factors cause variation, and a desire to minimise the adverse consequences of variability.\textsuperscript{12}

These considerations have played an important part in the development of New Zealand’s health sector in recent years. Variation in prescribing and laboratory referral has been observed in New Zealand,\textsuperscript{13,14} and has stimulated the development of guidelines and feedback programmes for GPs.\textsuperscript{15,16} Similarly, the reduction of geographic differences in the rates of elective surgery has been a factor in the drive to introduce consistent criteria for access to surgery.\textsuperscript{17}

Both in New Zealand and internationally, observations of variability across geographic areas are increasingly used as the rationale to constrain the range of clinical practice, and to implement mechanisms which will control the decision making of individual clinicians.

However, observations of difference in health care utilisation between areas are not necessarily a strong justification for changing the clinical practice of subgroups of individual practitioners. Studies which have sought to make a direct link between variability in practice and poor quality care have failed to show an association.\textsuperscript{18} Moreover, reasoning from area level observations of variation to a conclusion about the practice of individual clinicians constitutes an ecological fallacy.\textsuperscript{19}

The aim of this study was to describe patterns of variation among general practitioners (GPs), and to establish whether variability among practitioners within a geographic area is associated with high levels of utilisation in an area. Back pain is an appropriate clinical entity to explore variation for a number of reasons. In many health systems it is responsible for significant health expenditure, with a strong incentive to try and reduce the number of referrals. It remains an area where the evidence base is relatively weak for treatment outcomes, and there is a history of wide variations in practice, although guidelines for management of back pain have been widely promulgated.\textsuperscript{20}

**Methods**

The study was conducted with routinely collected accident insurance data supplied by the Accident Compensation Corporation (ACC), New Zealand’s national statutory accident insurance agency. ACC is a national, no-fault social insurance system which administers payments for all accident related health services, whether in the workplace or elsewhere, and regardless of whether lump sum compensation is paid to the injured person. The nature of insurance data, which link all activity to a
defined ‘claim’, equivalent to an episode of injury, means that a referral rate per episode of care can easily be calculated. This property makes ACC data particularly well suited to the study of medical practice variation.

The study was approved by the Wellington Regional Ethics Committee.

The data covered all New Zealand claims for treatment of accident related back pain which were initiated during the 1998 calendar year (n=142,215). The information for each claim included a unique identifier for the GP who managed the claim, and binary indications of whether there had been each of four possible consequences of an episode of back pain which depend upon decisions made by the GP.

This produced a yes/no indication of whether during the claim there had ever been:

- Physiotherapy treatment,
- Specialist assessment,
- Radiology, or
- Earnings-related compensation.

New Zealand general practitioners had a gatekeeping role for each of these four outcomes in 1998, meaning that such payments may be interpreted as a GP decision to refer a patient, or to approve compensation. The decision to approve compensation is essentially a judgement that a patient is not able to continue to work in their usual place of employment. The ACC is concerned about variability in these measures, and has put in place a programme of feedback to clinicians with the aim of reducing variability.

Claims which involved more than one GP were excluded from analysis, since they cannot be interpreted as the referral decision of an individual practitioner. The final analysis was based upon 129,079 claims managed by 2,679 GPs.

Each general practitioner in the dataset was coded to one of 21 areas which cover the whole of New Zealand. The areas are defined by current District Health Board (DHB) boundaries which, sometimes under different names, represent consistent local regions for the management of health services in New Zealand over the past decade. New Zealand’s geography dictates that, apart from three DHBs within the city of Auckland and two DHBs in Wellington, these areas are mostly discrete and are defined by natural geographical boundaries or the wider area surrounding an entire town.

The statistical modelling package SAS was used to fit a mixed model to a binary indication of referral to each of the four GP management outcomes, using the GLIMMIX macro with a logit link function and binomial error distribution. The age and sex of the patient and the back pain caseload of the GP were used as fixed effects within the model, and the GP identifier was designated a random effect. The results were a series of variances, on the logit scale, which indicate the variability of referral practice for GPs in each outcome for each area.

In some instances variances could not be computed as a consequence of ill-conditioned data, where there are small numbers of extreme values, or a few values which are extremely anomalous. This was the case for some of the smaller DHB areas which contained few GPs.

The modelled variances were compared across the four management options to establish whether groups of GPs which are very variable in one facet of back pain management were also variable in other aspects. The modelled variances were also compared with the absolute level of referral to each of the outcomes in the area.

**Results**

The raw level of variability observed across areas was *prima facie*, large. Area level referral rates per case of back pain vary from 23.9% to 55.2% for physiotherapy, from 2.5% to 5.3% for referral to a specialist, from 0.9% to 16.5% for referral to radiology, and from 2.6% to 10.6% for approval of earnings related compensation.
### Table 1. Variances of GP referral rates within each area

<table>
<thead>
<tr>
<th>DHB Area</th>
<th>Physiotherapy</th>
<th>Specialist</th>
<th>Radiology</th>
<th>Compensation</th>
<th>Physiotherapy</th>
<th>Specialist</th>
<th>Radiology</th>
<th>Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>0.560</td>
<td>0.392</td>
<td>0.397</td>
<td>0.276</td>
<td>48.2</td>
<td>3.0</td>
<td>15.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>0.334</td>
<td>0.497</td>
<td>0.478</td>
<td>0.028</td>
<td>51.1</td>
<td>3.2</td>
<td>12.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Canterbury</td>
<td>0.518</td>
<td>0.240</td>
<td>0.274</td>
<td>0.346</td>
<td>47.7</td>
<td>3.6</td>
<td>15.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Capital Coast</td>
<td>0.641</td>
<td>0.430</td>
<td>0.426</td>
<td>0.517</td>
<td>46.8</td>
<td>3.0</td>
<td>13.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Counties Manukau</td>
<td>0.683</td>
<td>0.367</td>
<td>0.356</td>
<td>0.346</td>
<td>42.6</td>
<td>2.9</td>
<td>14.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Hawke’s Bay</td>
<td>0.540</td>
<td>0.303</td>
<td>0.643</td>
<td>0.210</td>
<td>50.0</td>
<td>3.2</td>
<td>16.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Hutt Valley</td>
<td>0.444</td>
<td>0.201</td>
<td>0.449</td>
<td>0.176</td>
<td>46.1</td>
<td>3.5</td>
<td>15.4</td>
<td>5.0</td>
</tr>
<tr>
<td>Lakes</td>
<td>0.427</td>
<td>0.128</td>
<td>0.119</td>
<td>0.288</td>
<td>43.0</td>
<td>3.3</td>
<td>14.5</td>
<td>4.6</td>
</tr>
<tr>
<td>MidCentral</td>
<td>0.332</td>
<td>0.492</td>
<td>0.903</td>
<td>0.130</td>
<td>46.4</td>
<td>3.1</td>
<td>13.4</td>
<td>4.0</td>
</tr>
<tr>
<td>Nelson Marlborough</td>
<td>0.257</td>
<td>0.196</td>
<td>0.375</td>
<td>0.179</td>
<td>40.4</td>
<td>2.5</td>
<td>8.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Northland</td>
<td>0.546</td>
<td>0.119</td>
<td>1.378</td>
<td>0.183</td>
<td>46.2</td>
<td>3.3</td>
<td>12.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Otago</td>
<td>0.455</td>
<td>0.303</td>
<td>1.184</td>
<td>0.330</td>
<td>52.5</td>
<td>3.1</td>
<td>8.2</td>
<td>3.7</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>0.220</td>
<td>0.142</td>
<td>0.440</td>
<td>0.440</td>
<td>55.1</td>
<td>3.5</td>
<td>10.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Southland</td>
<td>0.233</td>
<td>0.243</td>
<td>0.672</td>
<td>0.305</td>
<td>55.2</td>
<td>3.5</td>
<td>8.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>0.288</td>
<td>0.031</td>
<td>0.655</td>
<td>0.239</td>
<td>23.9</td>
<td>3.5</td>
<td>16.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Taranaki</td>
<td>0.638</td>
<td>0.313</td>
<td>1.249</td>
<td>0.263</td>
<td>38.9</td>
<td>5.3</td>
<td>14.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Waikato</td>
<td>0.457</td>
<td>0.401</td>
<td>0.603</td>
<td>0.293</td>
<td>49.8</td>
<td>4.6</td>
<td>10.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>0.489</td>
<td>0.086</td>
<td>0.086</td>
<td>0.241</td>
<td>38.2</td>
<td>4.6</td>
<td>2.1</td>
<td>7.9</td>
</tr>
<tr>
<td>Waimatea</td>
<td>0.466</td>
<td>0.103</td>
<td>0.259</td>
<td>0.241</td>
<td>46.4</td>
<td>3.4</td>
<td>15.1</td>
<td>3.2</td>
</tr>
<tr>
<td>West Coast</td>
<td>0.166</td>
<td>0.832</td>
<td>0.014</td>
<td>0.222</td>
<td>37.2</td>
<td>5.1</td>
<td>15.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Mean</td>
<td><strong>0.440</strong></td>
<td><strong>0.272</strong></td>
<td><strong>0.615</strong></td>
<td><strong>0.222</strong></td>
<td><strong>44.9</strong></td>
<td><strong>3.6</strong></td>
<td><strong>12.1</strong></td>
<td><strong>4.3</strong></td>
</tr>
</tbody>
</table>
Table 2. Correlation between GP variances

<table>
<thead>
<tr>
<th>Outcome 1</th>
<th>Outcome 2</th>
<th>Correlation coefficient</th>
<th>Number of DHBs</th>
<th>Significant at 5% level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy</td>
<td>Specialist</td>
<td>0.293</td>
<td>18</td>
<td>NO</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>Radiology</td>
<td>0.147</td>
<td>19</td>
<td>NO</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>Compensation</td>
<td>0.469</td>
<td>19</td>
<td>YES</td>
</tr>
<tr>
<td>Specialist</td>
<td>Radiology</td>
<td>0.074</td>
<td>18</td>
<td>NO</td>
</tr>
<tr>
<td>Specialist</td>
<td>Compensation</td>
<td>0.126</td>
<td>16</td>
<td>NO</td>
</tr>
<tr>
<td>Radiology</td>
<td>Compensation</td>
<td>-0.133</td>
<td>17</td>
<td>NO</td>
</tr>
</tbody>
</table>

*Null hypothesis of no correlation; significance determined with reference to a table of critical values

Table 3. Correlation between GP variances and level of referral

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Correlation coefficient</th>
<th>Number of DHBs</th>
<th>Significant at 5% level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy</td>
<td>-0.000</td>
<td>21</td>
<td>NO</td>
</tr>
<tr>
<td>Specialist</td>
<td>-0.005</td>
<td>18</td>
<td>NO</td>
</tr>
<tr>
<td>Radiology</td>
<td>-0.254</td>
<td>19</td>
<td>NO</td>
</tr>
<tr>
<td>Compensation</td>
<td>-0.413</td>
<td>19</td>
<td>NO</td>
</tr>
</tbody>
</table>

*Null hypothesis of no correlation; significance determined with reference to a table of critical values
Table 1 presents the variances which were modelled for groups of GPs in each area for each of the four management options. The variances in GP referral rates within geographic areas are not associated across each of the four options. For example, the group of GPs in Counties Manukau DHB are at the top end of the variance range for referral to physiotherapy, but in the lower end of the variance range in referral for radiology, whereas GPs in MidCentral DHB show the opposite pattern.

Table 2 shows this lack of correlation by presenting the correlation coefficients of the variances of GP referral within DHB areas for combinations of each of the four management options. The variances for each of the options are not correlated with each other at the 5% level, with the exception of an association between referral for physiotherapy and approval of earnings related compensation (p<0.05). This lack of correlation suggests that whatever mechanism causes variation between GPs, be it uncertainty, enthusiasm or environmental factors such as resource availability, it is linked to the specific options for management which are open to a clinician, rather than to a more general influence on the management of the disease. GPs are not consistently variable in their use of the different management options for a single condition.

Table 3 presents correlation coefficients for the variances of GP referrals within an area compared to the overall rate of referral in each area for each of the four GP management options. Once again, these data are not correlated at the 5% level, showing that variability among clinicians is not associated with high levels of utilisation across the whole group of clinicians in an area.

**Discussion**

The degree of variability in referral was not consistent for any one group of GPs across the four management options for back pain which were analysed in this study. A given group of GPs may have a relatively narrow consensus upon one aspect of back pain management, but may have great variance in the use of another management option. This finding suggests that patterns of consensus among GPs work differently for different activities. This pattern persists regardless of the guidelines for the management of back pain which have been promulgated in New Zealand by the Accident Compensation Corporation. Although the guideline for acute back pain suggests very specific circumstances in which there should appropriately be referral to radiology or specialist assessment, these options for management can sometimes show greater variance among a group of GPs than referral for physiotherapy, where the guideline is less specific.

The finding that variability and absolute referral rate is not correlated has a direct implication for those involved in managing health services. Although reducing the inefficient use of health resource is often invoked as a rationale for reducing variability among clinicians, this study found that lower levels of variability did not always correspond with lower levels of utilisation. This does not in itself mean that inefficient use of resources is never a consequence of variability, but it suggests that caution should be applied when expecting reduced variability among practitioners to translate into lower overall rates of utilisation.

The results reported here may be viewed as complementary to a long standing result of variation analysis, which is that absolute levels of one outcome are not consistently
high or low across areas. Wennberg found that a hospital area which has an exceptionally high volume of one procedure may have a very low volume of a different procedure. The results here show that not only are single areas inconsistently high or low for different activities, but that the degree of variability within areas is not consistently large or small for different activities.

New Zealand general practice has both similarities and differences to primary care services in other countries, which raise questions about the generalisability of these results. However it is clear that New Zealand clinical guidelines on the management of back pain are similar to guidelines in many other countries, while the magnitude of variability found in the raw levels of referral were of a similar order to studies of area level variation in other settings (e.g. Wennberg and Gittelsohn’s classic study of hospital variation). Moreover, a high level of variability in primary care referral patterns has been established in other settings. Since both the clinical setting and the magnitude of the phenomenon appear to be comparable to other observations of variation in primary care, it is reasonable to believe that the pattern of variability found here may be applicable to observations of variation outside New Zealand.

These results have the strength that they arise from a comprehensive national set of data which is susceptible to analysis at the level of individual patient and practitioner. Such comprehensive national datasets are rare, especially in a primary care setting. The tradeoff in selecting this dataset for analysis is that there is a limited amount of detailed information available about each case (such as severity and other factors which might be used to adjust for case-mix), and it was not possible to aggregate the data to practice level in order to analyse any clustering among GPs in each general practice. There is a need to complement comprehensive national analysis with more detailed studies which involve smaller groups of patients and general practitioners, but more complete information about the subjects.

The results presented in this study imply that a conservative approach should be taken to the issue of managing medical practice variation. These findings can justify only a cautious interpretation of the role of individual clinicians in driving area level observations of variation, and emphasise the interpretation of individual clinical decisions as phenomena within an overall population of practitioners, rather than isolated decisions without context. If health agencies seek to change area levels of utilisation it would therefore be more appropriate to consider the overall population of practitioners, and the environmental factors which influence them, rather than to focus upon changing the practice of a small number of high referrers. The charge of irrationality is an easy one to level at clinicians, but a hard one to prove.

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Acknowledgements: The New Zealand Accident Compensation Corporation supplied the data for this study. The authors also acknowledge useful comments provided by Dr Deborah McLeod.
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References:


Documentation of family violence in New Zealand general practice

Dawn Miller, Natalie Thow, Jason Hall, Isobel Martin

Abstract

Aim To determine the rate of family violence documented during general practice consultations and describe clinical presentations.

Method A dataset of 447,809 computerised consultations involving 143,634 patients from 41 general practices throughout New Zealand was examined to identify consultations recording family violence issues. The documentation rate was determined and the subset analysed.

Results A subset of 337 consultations from the 447,809 examined (0.075%) involved a family violence issue. This subset included 311 patients, 0.2% of the 143,634 patients in the original 6-month dataset. 225 (81%) of the patients in the subset were female. Family violence was the main reason for presentation in 137 (40%) consultations. The perpetrator was identified as the partner in 134 (40%) consultations, as the parent in 54 (16%) consultations and the patient identified themselves as the possible abuser in 17 (5%) consultations. Physical abuse (42%) and sexual abuse (26%) was most commonly mentioned. Past abuse (42%) was discussed as often as current abuse (41%). Depression and anxiety disorders were documented in 59 (18%) of these consultations.

Conclusions The number of consultations documenting family violence is low in this dataset. Such information is not always recorded, however GPs can also be reluctant to ask about, and patients can be hesitant to disclose family violence issues. The number of consultations involving the perpetrator was higher than expected. GPs require training to deal with both the victim and the perpetrator of family violence.

Family violence is now recognised as a substantive health issue in New Zealand, and reduction of interpersonal violence is one of 13 priority population health objectives of the New Zealand Health Strategy.1

The reported prevalence of violence in New Zealand is high. From the 21-year-old birth cohort of 482 men and 462 women in the Dunedin Multidisciplinary Health and Development Study, 45% of the men and 25% of women reported at least one physically abusive episode in the previous year. Most assaults on men were by strangers, whereas women were usually assaulted by their partner.2 Significantly, The New Zealand National Survey of Crime Victims found that 15.3% of surveyed women had ‘ever’ experienced some form of partner abuse,3 while a 1994 survey of 2000 New Zealand men showed that 55% had physically or psychologically abused their partner in the last year and 65% had abused their partner in their lifetime.4 In addition, The Otago Women’s Health Survey reported that 16.2% of 2000 women randomly selected from the electoral role stated that they had been physically abused by their male partner; 25% of these women sought medical attention for their injuries.5
Studies show that the prevalence of violence among people attending their GP is also high. A 1993 study of over 3000 women attending Melbourne general practices showed that (in the previous year) one in four women had experienced physical or emotional abuse from a partner; and in their lifetime, 13% had been raped or suffered attempted rape, while 28% had been abused sexually as a child.

A 1999 study of 1200 women attending general practices in east London, England, showed that 41% had ‘ever’ experienced physical violence from a partner or former partner. However, only a small proportion of patients with such a history disclose this to their GP.

GPs often do not ask about a history of violence. And a Wellington study shows that even after training GPs to identify intentional injury, the rate of identification of such injury by these GPs was only 0.36 per 1000 consultations per month.

The GP’s documentation of consultations relating to family violence is an important part of the identification and ongoing management. This record can enhance the continuity of care and support for the patient as that information is available to that GP and any other health practitioners in the practice involved in that patient’s care.

Furthermore, careful documentation of details can also assist in working through any formal complaint. The Ministry of Health’s Family Violence Intervention Guidelines: Child and Partner Abuse and the guidelines specifically for GPs, Recognising and Responding to Partner Abuse, each include a special section on documentation. However a GP’s concerns about a patient’s experience of violence is not always recorded in the patient’s notes.

The first objective of our study was to determine the rate of family violence documented during general practice consultations by searching patient records on the RNZCGP database for documentation of actual or suspected family violence. The dataset was then examined further regarding documentation of the history of abuse, management, and any associated issues.

Family violence is defined as physical, sexual, psychological, or emotional abuse of a man, woman, or child by a family member. This includes partner abuse, elder abuse, and child abuse (whether acute, longstanding, or historical).

This research was approved by the Otago Ethics Committee.

Methods

The dataset for this study was identified from the Royal New Zealand College of General Practitioners (RNZCGP) Research Unit’s database. This Research Unit collects anonymous health data voluntarily contributed by New Zealand general practitioners. Extraction programmes gather data from practice management systems without including names, addresses, and other identifying information. Each patient is allocated a unique code, which is individuating but non-identifiable. Data is imported into a database (Microsoft Access 2000) at the Dunedin RNZCGP Research Unit.

The dataset was of patients who consulted at 41 group or solo practices from throughout New Zealand during the period 1 January 2000 to 30 June 2000. All practices used either Medtech32 or Healthtech16 software and were selected on the basis of their recording full clinical notes. The practices were not randomly selected—however they were geographically spread, with 11 practices coming from the Northern region, 10 from Midland, 7 from Central, and 13 from the Southern region. 143,634 patients consulted 447,809 times at an average of 3.1 consultations per patient.
Keywords, abbreviations, and phrases for the database search were identified by brainstorming GP lecturers and researchers in the Department of General Practice, Dunedin School of Medicine. The GPs were asked to list all the terms that they might use in documentation related to family violence.

The full consultation notes were then searched using those terms as listed: violen*, anger, abuse, fear, Women’s refuge, sensitive claim, protection order, victim, partner, hit, perpetrator, husband hit, rape crisis, boyfriend hit, child protection, CYPs (Children’s & Young Persons Service), victim support, smack, DSAC (Doctors for Sexual Abuse Care), assault, police, beaten, relationship problems, CYPFS (Children, Young Persons and their Families Service), family court, relationship issues, family issues, attacked, family problems, domestic dispute, push, slap, shove.

The dataset was then further scrutinised (eye-balled) to determine if the records did in fact relate to an incident of family violence. From the final subset, the alleged perpetrator, type and history of abuse, and details relating to patient safety, treatment, referrals and ongoing problems, were identified for further analysis.

Regional analysis of the data was not undertaken as the general practices included in this study were not randomly selected.

Results

Family violence was documented in 337 consultations, 0.075% of the original dataset of 447,809 consultations. These records related to 311 patients (0.2% of the 143,634 patients in the original 6-month dataset), and included 255 (81.8%) female patients and 56 (18.2%) male patients. Of the 337 consultations, 39 (11.6%) were for suspected violence, while in 137 (40.7%) cases, family violence appeared to be the primary reason for the consultation.

Concern for patient safety was documented in 15 (4.5%) consultations, and safety planning and referral (including advice about involving the police or a women’s refuge) was documented in 27 (8.0%) of the consultations. Emotional support for the patient was mentioned in 11 (3.3%) consultations, and arrangements for follow-up by the GP was documented in 41 (12.2%) consultations.

Table 1 shows the alleged perpetrator of the abusive episode(s). In nearly 40% of cases, the partner was identified as the perpetrator while 16% of abusers were parents. The perpetrator was not specified in 30.6% of records.

Table 1. Alleged perpetrator of family violence

<table>
<thead>
<tr>
<th>Abuser</th>
<th>Consultations</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>134</td>
<td>39.8</td>
</tr>
<tr>
<td>Not specified</td>
<td>103</td>
<td>30.6</td>
</tr>
<tr>
<td>Parent</td>
<td>54</td>
<td>16.0</td>
</tr>
<tr>
<td>Patient</td>
<td>17</td>
<td>5.0</td>
</tr>
<tr>
<td>Sibling</td>
<td>10</td>
<td>3.0</td>
</tr>
<tr>
<td>Child</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>337</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

In 17 (5%) consultations, the patient identified themselves as the perpetrator or alleged perpetrator in their role as parent and/or partner. Fourteen (82%) of these consultations involved male patients. In nine of the consultations, the possible perpetrator identified their child or children as the actual, potential, or alleged victim
of abuse, while the partner or ex-partner was identified similarly in eight of the consultations.

Physical abuse was the most common form of abuse documented (n=11), with sexual abuse being recorded in 3 consultations. Of these 17 consultations with a perpetrator, 3 resulted in patient referral for counselling or anger management, 2 were phone calls in a crisis situation of physical violence, and 2 included presentations of depression. Two consultations concerned allegations of abuse, one of these requesting a letter from the GP stating that the GP had never noticed any evidence of abuse related to this man’s son. One male presented concerned about an allegation of satanic practises with his children.

Physical abuse (41.8%) and sexual abuse (26.4%) were the most common forms of violence documented. Emotional and psychological abuse was mentioned in about 10% of the consultations.

Table 2. Type of abuse as documented

<table>
<thead>
<tr>
<th>Type of abuse</th>
<th>Consultations</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>141</td>
<td>41.8</td>
</tr>
<tr>
<td>Sexual</td>
<td>89</td>
<td>26.4</td>
</tr>
<tr>
<td>Not specified</td>
<td>56</td>
<td>16.6</td>
</tr>
<tr>
<td>Emotional and psychological</td>
<td>32</td>
<td>9.6</td>
</tr>
<tr>
<td>Multiple</td>
<td>18</td>
<td>5.3</td>
</tr>
<tr>
<td>Satanic</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>337</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The history of abuse, where it was able to be determined from the consultation record, was divided almost equally between past and present experience as shown in Table 3. In 20 (5.9%) consultations, abuse was a longstanding and ongoing problem and concern about future risk of abuse was documented in 2 (0.6%) of the consultations.

Table 3. Documented history of abuse

<table>
<thead>
<tr>
<th>History of abuse</th>
<th>Consultations</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>142</td>
<td>42.1</td>
</tr>
<tr>
<td>Past</td>
<td>139</td>
<td>41.2</td>
</tr>
<tr>
<td>Not specified</td>
<td>34</td>
<td>10.1</td>
</tr>
<tr>
<td>Longstanding</td>
<td>20</td>
<td>5.9</td>
</tr>
<tr>
<td>Risk of abuse</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Future intent</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>337</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Of the 90 consultations documenting associated problems, depression was documented in 36 (40%) consultations and was also coupled with other diagnoses (e.g. anxiety and depression, sleep problems, and depression) in a further 6 (6.7%) records. Forty-seven consultations included the prescribing of medication. The most common prescription was for antidepressants, mentioned in 31 (66%) of those 47 consultations.
Table 4. Associated problems documented at family violence consultations

<table>
<thead>
<tr>
<th>Problem</th>
<th>Consultation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>36</td>
<td>40.0</td>
</tr>
<tr>
<td>Multiple</td>
<td>19</td>
<td>21.1</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>17.8</td>
</tr>
<tr>
<td>Sleep</td>
<td>8</td>
<td>8.9</td>
</tr>
<tr>
<td>Stress</td>
<td>7</td>
<td>7.8</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 5. Treatments associated with family violence consultations

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Consultations</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antidepressants</td>
<td>31</td>
<td>66.0</td>
</tr>
<tr>
<td>NSAID</td>
<td>4</td>
<td>8.4</td>
</tr>
<tr>
<td>Sleeping tablets</td>
<td>3</td>
<td>6.4</td>
</tr>
<tr>
<td>Counselling</td>
<td>3</td>
<td>6.4</td>
</tr>
<tr>
<td>Steri-strips</td>
<td>2</td>
<td>4.3</td>
</tr>
<tr>
<td>Anxiolytic</td>
<td>2</td>
<td>4.3</td>
</tr>
<tr>
<td>Pain relief</td>
<td>1</td>
<td>2.1</td>
</tr>
<tr>
<td>Antidepressants and sleeping tablets</td>
<td>1</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

NSAID=non-steroidal anti-inflammatory drug.

Referrals to or mention of involvement with another practitioner or agency were documented in 100 (29.7%) consultations. Of those 100 consultations, 47 (47%) mentioned a counsellor. A further 25 (25%) involved an agency such as CYFS and Mental Health Services.

Discussion

Family violence issues were documented in just 0.075% of the general practice consultations in the dataset, and involved 0.2% of the dataset’s patients. There is, therefore, a considerable difference between the rate of documentation of family violence issues in the general practices included in this study and the prevalence of family violence in New Zealand.2–5 And overseas studies have shown that the prevalence of family violence amongst people attending general practice is also high.6–8

GP s do not always document information relating to family violence. Victims or perpetrators of abuse may have concerns about confidentiality of the records and request that information about abuse is not included in their medical record, or included only in a coded format. Then only the doctor involved directly with that patient’s care has access to the information. Therefore the rate of identification of family violence in general practice could be higher than the documentation rate. This is supported by the 2002 UK study where 1200 women attending their GP were asked about history of abuse. From those surveyed, a randomly selected subset of 258 patients had their medical record reviewed. Of the 90 women in that subset who had
self-reported experience of physical violence, one-third had disclosed this violence to their GP. However the history of violence was documented in just 17% of their medical records.\(^8\)

Patients also do not readily disclose a history of violence. Two-thirds of the women in the 2002 UK study who had self reported experience of physical violence had not discussed this with the GP.\(^8\) In the 1993 Melbourne study of 3000 women attending general practices, only 27% of those who had suffered physical abuse as a child or adult, and only 9% of those who had experienced sexual abuse had disclosed this to their doctor.\(^6\)

And GPs often do not enquire about a history of abuse. In the 2002 UK study, 41% had ever experienced physical violence from a partner and only 4% of the women in the study had ever been asked by their GP if they had ever been hit, injured, or abused by their partner or former partner.\(^5\) GPs have described a variety of difficulties asking about family violence including: their fear of offending the patient; a sense of powerlessness if a patient discloses a problem but will not take action to change their situation; and time constraints. GPs can, therefore, be hesitant to ask about a history of abuse.\(^9,10\) Guidelines and training for GPs in dealing with family violence should include consideration of these concerns and assistance in working through them.

There could be issues related to violence underlying many patients’ presentations to their GP. Routine or targeted screening for family violence is now advocated by many health professionals. However there is concern about the implementation of routine screening programmes as there is currently a lack of evidence of benefit, and of protection from harm, of specific interventions.\(^15\)

The documentation rates of present and past abuse were similar in this study. Training and guidelines on dealing with family violence emphasise current abuse as there can be more immediate risk to those involved and hence need for immediate risk assessment, safety planning, and referral. Historical abuse involves assessment and appropriate referral but usually there is less immediate risk.

The GP’s arrangements for a follow-up appointment with a patient dealing with family violence was documented in 12.2% of the consultations. In the 6-month study period, 311 patients consulted 337 times. Therefore only up to 26 patients (8.3%) had more than one consultation related to family violence during that time. The actual rate of follow-up consultations (8.3%) is probably consistent with rate of follow-up appointments organised and documented by the GP (12.2%).

Not all patients keep follow-up appointments as arranged, and some follow-up appointments could have been timed after the 6-month period of the study. However the rate of follow-up consultations is low. This could be because appropriate referral was arranged. General practitioners are often a point of first contact in the multi-agency support for victims and perpetrators of family violence. The importance of the GP providing good follow-up and support of patients dealing with family violence should be emphasised in GP training and guidelines. Even with other health professionals and agencies involved, the GP is in an ideal position to provide continuity of care for that patient.

In 40% of the identified consultations, family violence appeared to be the primary reason for the consultation. This suggests that these patients presented their concerns
to the GP. With increasing community awareness of family violence as a health issue and of support available, it is hoped that patients will more readily seek help and support for violence and abuse. However, a 1993 qualitative analysis of USA physicians who had expertise in identifying family violence found that direct patient disclosure was a rarity, thus suggesting that GPs need to be proactive in enquiring about abuse.14

Training and guidelines for healthcare practitioners in New Zealand emphasise recognising risk factors and cues, and being prepared to ask the right questions if family violence is suspected.12,13 This is important, and could have been required in up to 60% of these identified consultations (as 40% had family violence as the primary reason for the consultation). However there is still a large difference between the rate of identification of violence in general practice and the prevalence in the community. Patients do not readily disclose these issues and GPs do not enquire about them.9,10,14

Once violence or abuse has been identified, the Ministry of Health Family Violence Intervention Guidelines recommend support and empowering the victim of abuse, assessing their risk, safety planning, and referral.12 In our study, emotional support of the patient was mentioned in 3.3% of the consultations, concern for patient safety was documented in 4.5% and safety planning and referral in 8.0% of the records.

These figures are low, suggesting little documentation of support and safety issues, things which are important to record in the ongoing care of a patient at risk. This could also indicate that such issues were not discussed in the consultation. However 40% of the consultations in the subset related to past (not present) abuse, so could be removed from the analysis of assessing patient safety and safety planning, therefore improving the statistics. Also New Zealand GPs had received little formal training or guidelines on dealing with violence or abuse to the year 2000.

Physical abuse was the most common form of family violence (reported in more than 40% of the records). Sexual abuse was mentioned in more than 25% of these records; and in 10%, psychological, emotional, or verbal abuse was recorded. This breakdown by the type of abuse was similar to that reported by the 3000 women surveyed as they attended Melbourne general practices,6 suggesting that even though the identification rate is low in this study, the variety of abuse may be consistent with that experienced by general practice patients.

The perpetrator was identified as the partner in 40% of consultations, and as a parent in at least 16%, and was not identified in 30% of the records. In 17 (5%) consultations, the patient identified themselves as a perpetrator or potential perpetrator. The Ministry of Health guidelines on family violence15 and the RNZCGP resource manual13 have concentrated on dealing with the victim(s) of family violence, including only brief information and an appendix regarding the perpetrator. This research suggests that perpetrators of violence do present to general practitioners with a variety of issues. Guidelines and training of general practitioners in dealing with family violence should also prepare the GP well for dealing with the perpetrator. More research and training is required in this area.

Depression, anxiety, and sleep disorders (common presenting complaints in general practice) were the other health conditions most commonly documented in the consultations related to family violence. Indeed, their association with the
consultations involving family violence suggest that they may be a cue to underlying problems. The ‘picking up’ on such cues has been noted in previous research as an important way of identifying family violence by health professionals.19

The non-random selection of general practices for inclusion in this study could have introduced bias. However the practices were geographically spread throughout New Zealand.

Conclusions

The number of consultations from this dataset, which document family violence, is low. This does not necessarily reflect what was discussed in the consultation, as such information may not always be recorded. However patients are often reluctant to disclose (and GPs often do not ask about) violence and abuse. There could be issues related to violence underlying many patients’ presentations to their general practitioners.

The rate of follow-up consultations (after family violence issues had been identified) was also low. This may be because appropriate referral was organised. However the GP could provide ongoing support for a patient dealing with family violence issues. The number of consultations involving the perpetrator was higher than expected. More emphasis is required in training and guidelines on the GP’s role dealing with the perpetrator of family violence.

Further research on the GP’s role in dealing with family violence (including their difficulties identifying patients at risk, and interaction with the perpetrator and follow-up of patients) would be helpful in improving patient care. With guidelines now available and training for GPs in dealing with family violence issues more established, it would be useful to conduct this study again to determine the effectiveness of those interventions in the documentation of family violence issues.

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Acknowledgements: This research was funded by the Dunedin School of Medicine, University of Otago. The RNZCGP Research Unit receives financial support from the New Zealand Health Information Service. We thank the general practitioners who contribute to the RNZCGP Research Unit’s database, and the Research Unit team.

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References:


Heathrow to ICU direct

Oisin O’Connell, Bronwen Rhodes, Geoff Shaw, Lutz Beckert

Abstract

We present the case of a witnessed massive pulmonary embolism (PE) resulting in pulseless electrical activity (PEA) following a long-haul flight. Our patient was successfully treated with cardiopulmonary resuscitation (CPR) and thrombolysis in the Emergency Department at Christchurch Hospital and went on to complete her honeymoon in New Zealand.

We present the case of a witnessed massive pulmonary embolism (PE) resulting in pulseless electrical activity (PEA) following a long-haul flight.

Case report

A 40-year-old woman on her honeymoon had been flying from England to New Zealand with a 3-hour stopover in Singapore. During the second part of the flight, she developed tight calves, chest pain, shortness of breath, and dizziness. She had a syncopal episode when getting off the plane and was rushed to hospital.

On arrival in the Emergency Department (ED) at Christchurch Hospital, she was severely hypoxic with grossly distended neck veins. She arrested in the ED and was found to have an electromechanical dissociation.

Cardiopulmonary resuscitation (CPR) was commenced and she was intubated. She received three doses of 1 mg adrenaline and 0.6 mg atropine. She regained return of circulation (ROC); a femoral arterial line was inserted and a t-PA infusion was begun. A blood gas showed a severe mixed metabolic and respiratory acidosis—pH 6.83, pCO$_2$ 63 mmHg, pO$_2$ 151 mmHg, and bicarbonate 10.2 mmol/L.

A short time later, her mean arterial pressure (MAP) fell to 35 mmHg and was refractory to additional adrenaline boluses. Despite ROC, CPR was recommenced to augment her critically low right ventricular and cerebral perfusion pressures. CPR was aggressively delivered until a systolic blood pressure of 100 mmHg was obtained. CPR was continued for about 3 minutes after which her blood pressure recovered with systolic pressures greater than 150 mmHg. No further inotropes were required during her admission.

Three hours after transfer, she was stable enough to have a computed tomography pulmonary angiogram (CTPA), which confirmed thrombi in the left upper lobe segment and patchy intravascular abnormalities in the right lower lobe and left lower lobe.

An ultrasound (U/S) scan of her leg veins showed minor echogenic abnormalities in her popliteal vein. Her risk factors for pulmonary embolism included her long-haul flight and its associated immobility; the use of a second generation oral contraceptive pill (OCP)—Trinordiol- levonorgestrel and ethinylestradiol; and a body mass index (BMI) of 29.
She was ventilated for 20 hours. Following extubation the next morning, she was managed on a medical ward. Her only complications were transient mild short-term memory loss and a lower respiratory tract infection. She went on to complete her honeymoon in New Zealand.

**Discussion**

Prolonged air travel and the associated immobilisation are risk factors for venous thromboembolism popularised as ‘Economy Class Syndrome’.¹ A New Zealand study suggests the incidence of venous thromboembolism (VTE) associated with at least 10 hours air travel is 1%.²

Case reports of thrombolysis for PEA in selected patients with known or suspected PE have promising results.³ It is a standard recommendation that patients with a massive VTE with severe circulatory collapse should receive thrombolysis as soon as possible.⁴ However a recent randomised prospective study found no beneficial effect for thrombolysis in nonselected patients with cardiac arrest and PEA.⁵ Another recent controlled study of patients with submassive PE found that emergency intervention was less likely in those given thrombolysis in addition to heparin, but there was no survival advantage.⁶

This case illustrates two principles. Firstly, the importance of improving coronary perfusion pressures by CPR despite a ROC. CPR is necessary to restore aortic diastolic pressure and should be commenced while the blood pressure remains critically low irrespective of a ROC.

In studies of experimental massive pulmonary embolus in dogs, an adequate right ventricular pressure was essential for survival.⁷ Human and animal data suggest myocardial perfusion pressures (MAP–right atrial pressure) greater than 15–20 mmHg are essential for survival after cardiac arrest.⁸,⁹ In this case, it is highly probable the myocardial perfusion pressure was less than this threshold—given a MAP of 35 mmHg, high CVP, and the lack of response to adrenaline.

Secondly, this case serves as a reminder of international pulmonary embolism guidelines that massive pulmonary embolism must be considered in cases of cardiogenic shock or instability. These patients should be promptly treated with a bolus of 50 mg t-PA in the same dose as that familiar to junior doctors treating myocardial infarction.¹⁰

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**References:**


Pulmonary embolus successfully treated with thrombolysis in the resuscitation room

Adrian Skinner, Bernard Foley

Diagnosis of pulmonary embolism (PE) is usually confirmed by nuclear medicine scanning or computed tomography pulmonary angiogram (CTPA) prior to instituting thrombolysis. Such procedures require transport of unstable patients away from the resuscitation room. Indications for use of thrombolytic agents in PE are not well defined and remain controversial.¹

We present a patient with massive PE in whom diagnosis of acute PE was made using transthoracic echocardiography (TTE) in an emergency department (ED) resuscitation area (resus). The patient’s clinical status was considered sufficiently unstable to initiate thrombolysis in resus.

Case report

A 69-year-old male discharged from hospital following appendicectomy re-presented to our ED 18 days later in shock, complaining of a 1-week history of worsening dry cough, shortness of breath, and left-sided pleuritic chest pain.

On presentation, he was hypoxic, tachypnoeic, tachycardic [in atrial fibrillation (AF)], hypotensive, and cyanosed. Blood gas revealed partially compensated metabolic acidosis. Electrocardiogram (ECG) indicated AF; right axis deviation; right bundle branch block; strain pattern S₁, Q₃, T₃; and T-wave inversion V₁-V₄.

ED TTE revealed a significantly dilated right ventricle (RV)—43 mmHg above right atrial pressure. A chest X-ray illustrated an oligaemic left lung field.

Definitive treatment for diagnosis of massive PE with RV strain was implemented in resus. The patient was thrombolysed with 10 mg stat followed by 90 mg t-PA (tissue plasminogen activator ‘alteplase’) over 2 hours, and heparin infusion. AF was rate-controlled with sotalol.

Significant improvement occurred immediately post-thrombolysis, with the patient maintaining SaO₂ 100% on high-flow oxygen, normotension, and mild tachypnoea/tachycardia. Subsequent CTPA showed extensive bilateral PE, with right main pulmonary artery thrombus almost completely occluding the right pulmonary artery and extending into all its divisions. The left pulmonary artery thrombus appeared more fragmented.

At the 2-week review, the patient reported complete recovery to previous health. ECG demonstrated sinus rhythm without both strain and features of right heart failure. Outpatient TTE indicated no dilatation of left ventricle with normal systolic function; bi-atrial enlargement with mild mitral and tricuspid regurgitation; and mildly elevated RV peak systolic pressure. The patient will remain on prophylactic warfarin for the rest of his life.
Discussion

PE is associated with significant morbidity and mortality, with in-hospital mortality considerably higher among patients presenting with clinical or echocardiographic evidence of acute right heart failure.\(^1\)\(^{-6}\) The degree of clinical and haemodynamic instability due to acute right heart failure is the most important determinant of mortality—with the mortality rate increasing from 15.1% (among those haemodynamically stable) to 58.3% (among those haemodynamically unstable at presentation).\(^2\)

Other significant prognostic factors in PE include extent of pulmonary arterial embolic obstruction, severity of pre-existing cardiopulmonary dysfunction, peripheral venous thrombosis, and age >70 years.\(^2\) Elevated cardiac troponin-T is an independent predictor of increased 30-day mortality in patients with massive and moderate PE.\(^7\)

The current absolute indication for thrombolysis is massive PE with haemodynamic instability or cardiogenic shock.\(^1\),\(^5\) Some authorities also recommend thrombolysis in sub-massive PE with evidence of RV dysfunction on echocardiography. The requirement for traditional definitive tests for PE decrease inversely with the severity of haemodynamic instability at presentation.

In the presence of severe haemodynamic compromise, physicians often rely on bedside echocardiography findings and proceed to ‘rescue thrombolytic treatment’ without further diagnostic certainty and despite contraindications to thrombolysis.\(^1\),\(^8\) Echocardiography can be performed in the relatively safe environment of resus; hence eliminating potentially dangerous transfers to diagnostic imaging departments.

Thus, in our management of the patient presented here, we have followed the guidelines of the British Thoracic Society by using echocardiography as one of the first modes of investigation in a haemodynamically unstable patient, and then administering t-PA in the usual cardiac dose.\(^9\)

Furthermore, we have demonstrated that definitive treatment of potentially fatal massive PE in a haemodynamically unstable patient can be achieved in ED, resulting in successful patient outcome.

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References:


Responsible IVF treatment in New Zealand is the preferential transfer of a single embryo

Andrew Murray, John Hutton, John Peek

In vitro fertilisation (IVF) was first undertaken in New Zealand in 1983, 5 years after the first IVF baby, Louise Brown, was born in England. Since then, IVF has become an increasingly common treatment. The treatment has improved with better drug regimens; simpler oocyte retrieval techniques; fertilisation by intracytoplasmic sperm injection (ICSI); and better methods of culture, cryopreservation and transfer of embryos.

Many factors affect the success of an IVF treatment including particularly the number of embryos transferred, and whether these are replaced fresh or after cryopreservation.1,2 In the early 1990s, before there were good cryopreservation techniques, it was common to transfer three embryos (see Table 1). However, as IVF became responsible for a significant proportion of triplet pregnancies, the average number of embryos transferred fresh was reduced, particularly in Northern Europe, Australia, and New Zealand (see Table 1). Even in 2001, one in seven replacements were of three or more embryos, however this was usually in the setting of repeated IVF failures or advanced maternal age.

Table 1. Number of fresh embryos replaced per transfer in all Australian and New Zealand IVF clinics3,4

<table>
<thead>
<tr>
<th>Number of embryos</th>
<th>1992 (%)</th>
<th>2001 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.3</td>
<td>16.7</td>
</tr>
<tr>
<td>2</td>
<td>29.8</td>
<td>67.9</td>
</tr>
<tr>
<td>3</td>
<td>55.7</td>
<td>13.9</td>
</tr>
<tr>
<td>4</td>
<td>5.1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

As the number of treatments has increased, and the success of IVF has improved, the impact of transferring even two embryos in a majority of cycles has become more visible.

A comparison of the IVF births with all the births reported in New Zealand for 1992 and for 2002 is shown in Table 2. Given the growth in the number of treatments and current success rates, we estimate there will be, in 2004, at least 100 IVF twin births in New Zealand, and these will represent at least 10% of all twin pregnancies and births.
Table 2. Comparison of all births and IVF births in New Zealand (NZ) in 1992 and 2000*refs:3,5–7

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Singleton</td>
<td>58058</td>
<td>102*</td>
<td>0.18</td>
<td>55,120</td>
<td>257</td>
<td>0.47</td>
</tr>
<tr>
<td>Twin</td>
<td>715</td>
<td>21*</td>
<td>2.94</td>
<td>878</td>
<td>84</td>
<td>9.56</td>
</tr>
<tr>
<td>Triplet</td>
<td>5</td>
<td>3*</td>
<td>60.0</td>
<td>26</td>
<td>5</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
<td>58778</td>
<td>126*</td>
<td>0.21</td>
<td>56,024</td>
<td>346</td>
<td>0.61</td>
</tr>
</tbody>
</table>

*Estimate based on combined Australian and New Zealand rates.

The second major factor affecting the success of IVF is the age of the woman. Younger women who have two embryos replaced are more likely to have twins than older women undergoing IVF—the numbers of all IVF births and twin births from the transfer of two fresh embryos at the Fertility Associates Ltd clinics in Auckland, Wellington, and Hamilton between 2000 and 2002 is shown in Table 3 according to the age of the woman.

Table 3. Number of transfers of two fresh embryos at all Fertility Associates Ltd clinics between 2000 and 2002, and the consequent number of total births (>20 weeks), and number of twin births

<table>
<thead>
<tr>
<th>Number of births versus age of women</th>
<th>&lt;36 yrs</th>
<th>36–39 yrs</th>
<th>&gt;39 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two embryo transfers (fresh)</td>
<td>1248</td>
<td>527</td>
<td>82</td>
</tr>
<tr>
<td>Any birth (% live births)</td>
<td>488 (39%)</td>
<td>148 (28%)</td>
<td>18 (22%)</td>
</tr>
<tr>
<td>Twin births (% of live births as twin pregnancies)</td>
<td>152 (31%)</td>
<td>31 (21%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Outcome of twin pregnancies after IVF

Twin pregnancies have long been known to be associated with an increased risk of serious obstetric and perinatal complications when compared with singleton pregnancies. In addition, IVF singleton pregnancies have more complications than naturally conceived singleton pregnancies. Therefore, as expected, twins born after IVF have a higher rate of complications compared to even natural binovular twins.

At National Women’s Hospital, Auckland, between 1996 and 2001, 126 of 1136 multiple births (11%) were conceived following IVF—these pregnancies and births were all much more complicated than twin pregnancies not associated with fertility treatment, and had poorer infant outcomes.

In comparison to singleton births, the risks of complications for either the mother or the infants of having IVF twins are generally always increased—commonly three-fold but sometimes up ten-fold. The stillbirth and neonatal death rates are increased at least three times.

A Swedish Register study has found an increased risk of cerebral palsy in children after assisted conception, mainly because of the high rate of twins. IVF twins also cause more stress for the mother.
In a recent European study comparing IVF singleton pregnancies and births with those of IVF twins, the medical cost per IVF twin pregnancy was more than five times higher than per singleton pregnancy, at €13,469 and €2,550, respectively.\textsuperscript{19}

Preliminary analysis of New Zealand data suggests a similar differential between singleton and twin births (W Gillett, personal communication, 2004). Thus, the additional hospital cost of the 100+ twin births after IVF in New Zealand is currently estimated at >NZ$2,000,000 per annum. There are also other non-hospital costs that continue, such as those for the care of children with disabilities consequent upon being born prematurely.

**Single embryo transfer**

Theoretically, the only way to minimise the chance of a multiple pregnancy after IVF is to always transfer only a single embryo. Unfortunately, there is no prospective randomised study to compare the outcomes of single and double embryo transfer—such a study involving some IVF units in Australia and New Zealand was discontinued this year because of the difficulty in recruiting adequate numbers of couples willing to be randomised between single and double embryo transfer. There are, however, several published retrospective studies that demonstrate that multiple pregnancies can be significantly reduced by transferring only a single embryo in selected populations without significantly affecting the overall pregnancy rate.\textsuperscript{20–23} In one study, despite an increase of single embryo transfers from 11% to 56%, a relatively stable mean pregnancy rate of 34.0% (range 28–42%) was maintained while the multiple pregnancy rate was reduced from 25% to 7.5%.\textsuperscript{22}

Thus, it was concluded that, in selected populations, a single embryo transfer policy could be adopted without significantly affecting the pregnancy rate. Interestingly, the mean birthweight of singleton births in one study was significantly higher after single embryo transfer than with singleton births after the transfer of two embryos—this suggests there may even be superior implantation and developmental potential after a single embryo transfer.\textsuperscript{23}

Transferring only one embryo, rather than two, will usually result in one more embryo being available for cryopreservation. When these extra frozen embryos are subsequently thawed and transferred, the cumulative pregnancy rate may approach that for double embryo transfer. We have modelled the chance of pregnancy in women aged <36 yr who are having their first or second IVF cycle with the assumption that the chance of pregnancy from a good quality frozen embryo will be about half that of a fresh embryo.

The cumulative chance of pregnancy from one fresh embryo and a second frozen embryo, if not pregnant with the fresh embryo, is 40% compared to 48% if both embryos had been transferred fresh. The proportion of twin deliveries would fall from 36% to under 2%. In the single embryo transfers, the small incidence of twins arises from identical twins.

**Selecting single embryo transfer**

Whilst the transfer of a single embryo is a theoretical solution to the problem of multiple pregnancy; in practice, a woman’s age, and whether she has had a pregnancy previously are factors which also need to be considered. An older age at treatment,
embryos of lower quality, nulliparity and previous unsuccessful IVF attempts are not
only associated with lower pregnancy rates, but also a lower chance of multiple
pregnancy (see Table 3).

Currently, in New Zealand, there is a strong preference to transferring two embryos;
and few women with two or more good quality embryos elect to transfer a single
embryo, and cryopreserve the others. One factor that has been discouraging couples
from electing the transfer of a single embryo has been funding. Since late 2000, public
funding of IVF in New Zealand has been restricted to only one cycle in a couple’s
lifetime, and consequently most couples have chosen to have two embryos
transferred. However, the Minister of Health has recently announced the public
funding of a second cycle of IVF for those who do not become pregnant from their
first cycle. The extra funding is linked with introduction of a single embryo transfer
policy in recognition of the risks and costs of twins, and of improvements in IVF
pregnancy rates that make this feasible.

Broader social issues

Anecdotal observation and research shows many infertile couples do not see any
problem with having twins, and indeed regard twins as a bonus for the completion of
their family with one cycle of IVF treatment.24

Women alter their dietary and social habits to minimise an already small risk of
handicap to their infant—such as by the addition of a folate supplement and the
avoidance of alcohol, smoking and caffeine—yet they elect the transfer of two
embryos, with, comparatively, a very high risk of handicap, or other serious adverse
outcome.

However, we acknowledge that lifestyle precautions are easy and inexpensive, while
reducing the perceived chance of pregnancy carries a high opportunity cost. Although
there is media publicity about the adverse outcomes of IVF twin pregnancies, (such as
Courtney Cox’s IVF twin pregnancy), more education about the benefits of the
transfer of a single embryo is required.

The move to elective single embryo transfer has engendered widespread debate on the
best means of measuring success for IVF programmes. One candidate is the birth of a
single child at 37 weeks or more gestation (BESST—Birth Emphasising Successful
Singleton at Term).25 Although measures such as BESST have their shortcomings26,27,
they do signal a new era in IVF where improved pregnancy rates allow a growing
focus on the quality of a pregnancy, not just the chance of a pregnancy.

Summary

The current data about IVF birth outcomes suggests that responsible IVF in New
Zealand now requires a policy of selective single embryo transfer in higher risk
groups to minimise the number of twin births with their relatively high rate of
complications for both mother, infants, and society.

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References:


6. Demographic Trends 2003. Wellington: Statistics New Zealand.. Table 2.04


Reflecting on the ‘difficult’ patient

Hamish Wilson

Clinical care is usually straightforward: most patients improve and the goals of being a health professional seem achievable. Sometimes however, it is not so easy; a doctor or nurse in any branch of medical practice may experience quite marked difficulties with a particular patient. Various terms have been used to describe these patients such as ‘difficult’, ‘heartsink’, ‘problem’, or even ‘hateful’—but these terms obscure a range of underlying medical conditions including chronic pain, personality disorder, somatisation, and incurable suffering.

It is likely these labels are a reflection of doctors’ emotional responses to patients; negative feelings may start with simple dislike or minor annoyance, but can progress to frustration, exasperation, hopelessness, sadness, and anger.

In this context, Schwenk et al noted it is the physician-patient relationship that is the underlying issue, rather than specific characteristics of the individual patient. However, it is uncommon for doctors to view their ‘difficult’ patients as illustrative of a problem in their relationship with a patient; there are relatively few doctors who explore their personal reactions to patients in a deliberate way.

This article proposes that ‘difficult’ patients can be superb triggers for learning about important issues in modern medicine: awareness of self within the doctor-patient relationship, professional maintenance, models of health care. Various activities in reflective practice are proposed as a method of learning about these issues.

Background

In the UK, O’Dowd initiated discussion of such patients in 1988, coining the term ‘heartsink’ to describe intuitive feelings of impending doom or helplessness when certain names appear in the appointment book. There have been several useful articles in the general practice literature since O’Dowd, which have focused on contributing characteristics of the doctor as well as helpful approaches for practitioners. In 1994, Norton and Smith identified various issues in ‘the transaction’ between doctor and patient, while an excellent review of the ‘heartsink’ phenomenon came from Clarke and Croft.

The overall impression from the literature is that ‘difficult’ patients consume considerable time and resources, receive many unnecessary investigations, can be litigious, and can cause their doctors considerable anguish. However, rather than blaming the patient, it is helpful to review some of the tacit or unconscious expectations of the modern practitioner.

The assumptions of modern medical practice

Ostensibly, students enter medicine to help others, motivated perhaps by their experiences of being helped themselves or through family traditions of service. As they progress through medical school, they learn the current principles and methods
of modern medicine, which are based almost exclusively on ‘disease theory’ and developed as a product of the modern scientific method in the 17th and 18th Centuries. Box 1 lists two versions of these methods or ‘rules’ of modern medical science.

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### Box 1. The biomedical paradigm

| “First, all disease is caused by a specific agent (the ‘disease entity’), such as a virus, parasite or bacterium. Second, the patient is to be regarded as the passive target of medical intervention, since scientific medicine is concerned with the body as a sort of machine, rather than a person in a complex social environment. Third, restoring health requires the use of medical technology and advanced scientific procedures.” |
| “Patients suffer from diseases which can be categorised in the same way as other natural phenomena. The disease can be viewed independently from the person who is suffering from it. Each disease has a cause and it is a major objective of research to find the causes of disease. The physician’s main task is to diagnose the disease and, wherever possible, to prescribe a specific remedy aimed at removing the cause or ameliorating the symptoms. To do this, the physician is provided with an intellectual tool—the clinical method known as differential diagnosis. The patient is usually a passive recipient of the prescribed remedy.” |

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Given the powerful socialisation process into medical culture, it is perhaps not surprising that graduating doctors accept these models of practice without ever examining them explicitly. A problem arises, however, if the inherent assumptions in these models are implicitly challenged by patients presenting with unexplained or untreatable illness. Doctors could unintentionally blame a person for being less than the ideal or model patient.

When asked to describe their own ‘rules’ of practice however, practitioners can have difficulty in putting their ideas into words. As an illustration, GPs in the Masters of General Practice degree at the University of Otago review seminal readings on models of medical practice and write essays on their experience of work, including their views on the biomedical model. It takes several months of study before these experienced postgraduate students become articulate about biomedicine and can identify its utility and its limitations. These graduates have been exposed to more recent ideas about medical practice in the last 20 years such as the ‘biopsychosocial’ and ‘patient-centred’ models, yet acknowledge the continued dominance of biomedicine.

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**A theory of ‘difficult’ patients**

To recap, a theory that could explain the ‘heartsink’ or ‘difficult’ patient phenomenon is: Doctors have good intentions of helping patients. Over many years of immersion in medical culture they acquire, and tacitly accept, the assumptions of modern practice that are based on a positivist, empirical convention that arbitrarily separates ‘mind’ from ‘body’. This model works well most of the time, especially when the patient presents with a physical illness of known cause and an effective treatment is available. However, the model is less accurate or helpful when a patient has symptoms without...
identifiable cause, remains persistently unwell, does not conform to the expected social role of ‘patient’, or has symptoms that cross the mind-body ‘divide’. It would be possible to view such patients as challenges to the underlying model or paradigm of practice, but more commonly doctors become irritated or annoyed by the patient who does not fit their a priori assumptions of how medicine should be and how patients should behave. The outcome for the doctor can be frustration, leading to a complex and difficult interaction with the patient.

Viewing such patients as challenges to the theory or practice of medicine is more constructive than labelling the patient as ‘difficult’. Box 2 is a recent example from my own experience, with further notes after reflection in Box 3.

Box 2. A ‘difficult’ patient

I met Mrs X for the first time recently, but as I read the clinical notes I felt a familiar sinking feeling. She had been presenting to my colleague fortnightly for a year with mysterious pains in the neck and difficulty swallowing. She had been thoroughly reviewed by specialists in ENT and gastroenterology. She had denied being depressed, but was on antidepressants. On arriving, she gave a long story about ‘collapsing’ while visiting a friend and elaborated at length on further throat symptoms. My naïve attempts to switch the discussion from problems with her body to more personal feelings were met with disdain. After 20 minutes, I was becoming increasingly frustrated, the waiting room was filling fast, and the chances of making a personal appointment in town looked remote. I felt like screaming…

(Resolution in Box 3)

The doctor-patient relationship

Although doctors may have quite intense experiences in relation to certain patients, medical training does not generally encourage expression or further exploration of these experiences. It is also uncommon to formally describe patients in terms other than ‘nice’ or ‘pleasant’, even though doctors may be torn with powerful feelings that threaten their objectivity and even their sense of vocation. These unresolved tensions have been implicated in compassion fatigue and ‘burn-out’ of both hospital specialists and general practitioners. Given the development of modern medicine as a ‘science’ that assumes the ‘objective observer’ stance, this naivety to, or even denial of, interpersonal processes is understandable in mainstream medicine. However, there has been considerable work on the self of the doctor within the doctor-patient relationship in the UK by Drs Michael and Enid Balint. Their research method was straightforward; asking groups of general practitioners to discuss their ‘difficult’ or ‘heartsink’ patients, using a psychotherapist as a resource. The ensuing Balint movement has produced a number of useful books and some GP training schemes have more emphasis now on self-awareness. Graduates are also more aware of stress and other psychosocial factors in the genesis of illness.

However, while peer groups of GPs are now common throughout the Western world, few of them include psychotherapists as regular members; more widespread insights
into doctor-patient relationships have been minimal. Despite the Balintian contribution to understanding the transaction between doctor and patient, McWhinney’s interpretation of modern medical practice may still be quite accurate (Box 1). There is no focus on, or even mention of, the doctor being involved in a complex social interaction and evolving relationship with each and every patient. Further, the development of the concept of the ‘difficult’ or ‘heartsink’ patient in medicine has been largely within the field of general practice from 1980 to 2000 with few articles since; there have also been very few publications appearing in other specialties, Marshall and Smith being the exception.

**Reflective practice**

Specifically discussing one’s ‘difficult’ patients (as in a Balint group) is an example of reflective practice, where practitioners use structured time to review their clinical experience, their personal responses to patients, and their own ideas on the nature of practice. Just as formal study of the doctor-patient relationship is relatively uncommon in medicine, practitioners who take reflective practice seriously are few and far between. Structured activities of reflection include journaling, critical incident analysis, mentoring, and supervision. Brookfield noted that reflection can facilitate emotional release, more objective identification of underlying issues, and realistic evaluation of one’s method of practice. These activities are quite different from ‘mulling over’ the day’s events or chatting with one’s spouse after work.

Activities of reflective practice are good examples of self-directed learning: doctors identify their learning issues and what methods to use; the activities are low in cost; the implications for health care of the patient and peace of mind for the doctor are considerable.

Consistent with medical schools in the UK, the undergraduate course at Otago University now includes various activities of reflective practice such as peer groups, mentoring and critical incident analysis, in the belief that the next generation of doctors will be able to critically review their doctor-patient relationships. These particular local undergraduate activities will be discussed in further publications.

**Box 3. Personal resolution**

| Choosing an exercise in reflective writing to review my ‘difficult’ patient, I realised I had fallen into an old trap of ‘competing’ with my colleague to show how effective I was with such patients. In retrospect, this patient had frustrated my usual interventions; I had become disrespectful of her suffering and impatient she was not more responsive to my ideas. It seemed that neither a ‘body’ nor a ‘mind’ focus was helping this patient; neither of us was finding a way to bridge the gap. I resolved to approach her next time without trying to ‘fix’ her, and to use a little more humility… |

**Conclusions**

All doctors can be irritated (or more severely troubled) by certain patients, but activities in reflective practice help them explore their emotional responses. It seems
likely that reflective practice will facilitate greater self-awareness, increase confidence, and reduce the risks of compassion fatigue and patient complaints, but research is required to confirm these effects. At the very least, regular reflection on one’s emotional responses will reduce the likelihood and severity of being troubled by so-called ‘difficult’ patients.

**Summary points**

- All doctors encounter patients who they find personally or professionally challenging
- Many such patients present with poorly defined medical problems or with interpersonal difficulties; being labelled as ‘difficult’ depends on the perception of the doctor involved
- ‘Difficult’ patients may present a challenge to the doctor’s assumptions, either about how illnesses ‘should’ progress, or how patients ‘should’ behave
- Recognising emotional responses to patients is helpful
- Learning these skills before graduation is ideal
- Structured activities that increase self-awareness will help doctors monitor their doctor-patient relationships.

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**Acknowledgement:** I would like to thank Mr Tony Egan for his invaluable editing advice.

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**References:**


These advertisements come from selected issues of the New Zealand Medical Journal 1905.

To view the advertisements, see the PDF version accessible at
Internal Leak

A 65-year-old man underwent an elective endoluminal repair (stent graft) of a 55 mm infrarenal abdominal aortic aneurysm 3 years ago. He was acutely readmitted with pelvic pain thought to be related to his prostate cancer for which he was undergoing radiotherapy.

A CT scan (Figure 1) was performed, and his previous annual abdominal radiographs reviewed (Figure 2).

Questions:

What is the diagnosis and what is the purpose of the plain radiograph?

(see the answers on the next page)
Diagnosis – Type 1 endoleak from a right limb dislocation

Endoluminal repair of infrarenal abdominal aortic aneurysms has become accepted practice. This minimally invasive approach is hampered by the development of endoleaks, where blood enters the sac outside the stent graft. This creates a pressurised sac which may expand and rupture. The majority of these endoleaks result from retrograde flow in aortic branch arteries such as the lumbars.

In this case, the graft is modular and the right limb has dislocated and the CT shows contrast in the aortic sac outside the graft limbs, indicating a brisk endoleak. Annual CT and plain radiographs are performed to detect endoleaks. The particular value of the plain radiograph is to detect structural failure of the endoprosthesis.
Bigger definitely not better

Apparently the latest USA National Health and Nutrition Examination Survey shows that some 127 million of the country’s 280 million people are overweight. And a sub-group of 10 million have life-threatening morbid obesity. And we know that the latter is associated with a several-fold increase in such chronic debilitating conditions as type 2 diabetes, hypertension, stroke, heart disease, dyslipidemia, arthritis, degenerative musculoskeletal diseases, gallstones, certain types of cancer, asthma, sleep apnea, and socioeconomic and psychosocial impairment. But what we didn’t know was that obesity and its coexisting illnesses cost an extra US$117 billion in health care and 300,000 deaths annually in the USA. Apparently, there are nearly 200,000 surgical procedures performed annually in the USA to curb this epidemic!

Ambulance at the bottom of the cliff—again.


Speed cameras—do they work?

Methuselah can vouch that at least one driver consults his speedometer more frequently after messing with a camera some years ago. As does a learned colleague who managed to get pinged twice by the same camera on the same route.

More scientifically, however, a recent systematic review of 14 observational studies shows that speed cameras are an effective intervention in reducing road traffic collisions and related casualties. Most studies were before-after studies without controls (n=8). All but one of the studies showed effectiveness of cameras up to three years or less after their introduction; one study showed sustained longer term effects (4.6 years after introduction). The level of evidence is relatively poor as most studies do not have satisfactory comparison groups or adequate control for potential confounders.

One wonders how such a matter could ever be subjected to a double-blinded randomised controlled trial?!

BMJ 2005:330:331–4

Acute otitis media in children—antibiotics or not?

In a trial in Canada, 512 children (6 months to 5 years of age) with acute otitis media were randomly assigned to receive amoxicillin or placebo. Children who received placebo had more pain and fever in the first 2 days. But, at 2 weeks, 84.2% of the children receiving placebo and 92.8% of those receiving amoxicillin had clinical resolution of symptoms. Recurrence or middle ear effusion at 1 and 3 months were the same in both treatment and placebo arms. I bet most parents would opt for amoxicillin.

CMAJ 2005;172(3):335–41
Dementia and its management

Up to 50% of community-dwelling elderly individuals older than 85 years have dementia—something to look forward to! Most will display neuropsychiatric symptoms, such as agitation, aggression, delusions, hallucinations, repetitive vocalizations, and wandering.

A recent systematic review has evaluated the efficacy of pharmacological agents used in the treatment of such neuropsychiatric symptoms.

The authors conclude—“pharmacological therapies are not particularly effective for management of neuropsychiatric symptoms of dementia. Of the agents reviewed, the atypical antipsychotics risperidone and olanzapine currently have the best evidence for efficacy. However, the effects are modest and further complicated by an increased risk of stroke.” And, after reviewing eight studies of cholinesterase inhibitors (including galantamine and donepezil), they concluded that “additional trials may be warranted.”

JAMA 2005;293:596–608

Patient self-management of oral anticoagulant therapy?

Indications for oral anticoagulant treatment to prevent thromboembolic disease have increased in recent years, as has the incidence of related adverse effects—notably haemorrhage. Management of oral anticoagulant treatment improved greatly after the international normalized ratio (INR) was introduced and management by specialized staff at anticoagulant clinics seem to be safer than other clinical strategies in terms of numbers of complications.

In a recent study, the authors reported that “in this randomized, controlled trial of 737 patients, patients assigned to self-management of anticoagulation achieved a similar level of control and had fewer adverse events than patients assigned to conventional management.”

The patients received a 4 hour training course, including the use of their portable coagulometer (cost US$947). The other hitch—for one reason or another—21% of the self management group dropped out of the trial.

Screening for prostate cancer: a response to four letters


It is good to see that Richardson has the loyal support of the junior members of her department, who have written highly emotive letters defending the position she stated in her article entitled Prostate cancer screening: is it possible to explain diametrically opposed views? (URL: http://www.nzma.org.nz/journal/118-1209/1289).

Unfortunately for these supporters, the subsequent letter from Richardson indicates she has already made a significant shift from her earlier position. It would appear that it is now allowable for men to request prostate cancer screening, but not for doctors to ‘offer’ it to them.

This change in position highlights the observation that Richardson and colleagues are only able to consider prostate cancer screening as an academic exercise, and have lost touch with that vital component of any medical service, the patient. The current thinking on primary health care is that it should be a partnership between the doctor and patient, and that decisions should be made in consultation. Therefore, making a distinction between screening that is offered and screening that is self-requested will sometimes be difficult.

If the doctor or his/her staff telephones a patient and calls him into the surgery for screening, that is clearly ‘offered’ screening. At the other end of the spectrum, if a patient makes an appointment with his doctor for the express purpose of being screened, that is clearly ‘self-referred’ screening. But what of the man who visits his doctor for a ‘health check’? Is the doctor being unethical if he ticks the PSA box on the blood test form, along with fasting lipids and glucose? And what of the medical examinations for health and life insurance purposes, which are increasingly insisting on a PSA test for some men? Should the doctor refuse to perform these examinations?

Readers will be relieved to discover that attaching the right label to the screening presently performed in New Zealand is not an issue of any relevance. The patient nearly always initiates the patient-doctor interaction leading to screening, and hardly any screening is ‘offered’.

Richardson and colleagues have shown poor understanding of the meaning of the word ‘ethical’. The dictionary definition is ‘relating to morals, especially as concerning human conduct’. If you ask Ethicists what is ‘moral behaviour’ (as we have done on several occasions) you will be told that morality is an inexact science, and that moral behaviour is that behaviour which the great majority of people consider ‘reasonable’. Of course, the word ethical takes on a special meaning in relation to the design and running of clinical trials, when the word implies that an independent body with high morals has confirmed that the patient’s interests in the trial will be properly protected. For this reason, clinical researchers will tend to adopt
a highly defensive position when the word ‘unethical’ is applied to any aspect of their work, and under certain circumstances, might even consider the word defamatory.

Richardson quotes the comments of Stamey, who (in an article in 2004\textsuperscript{1}) criticised the wholesale use of PSA testing for the diagnosis of prostate malignancy. We agree with him, as PSA testing alone lacks the necessary sensitivity and specificity required for a diagnostic test. Screening for prostate cancer should also include a digital rectal examination (DRE), and the ability to proceed to multiple thin core biopsies of the prostate if indicated. The DRE is important because, as Stamey himself notes in the same article, ‘palpable cancers almost always require some form of treatment’.

Over recent years, there have been some changes in the pathological understanding of tumours arising in the prostate gland. Firstly, pathologists now accept that in the past prostate cancer was an over-diagnosed entity.\textsuperscript{2} Some of the cases previously diagnosed as cancer are now correctly labelled atypical adenomatous hyperplasia or cribriform hyperplasia. Secondly, the majority of early studies on the incidence and outcomes of prostatic cancer rely almost entirely on data from patients with tumours that were detected in the transitional and central zones of the gland by trans-urethral prostatic resection. These cancers are far less aggressive in their biological behaviour than the higher grade cancers usually detected by digital rectal examination and/or thin core biopsies from the peripheral zone of the gland.\textsuperscript{3} Pathologists recognise this difference is an important one, so it is disappointing that public health physicians don’t even appear aware of it.

Paul, from Dunedin, asks why we do not recommend offering screening to all men deemed to be at sufficiently high risk. The answer is we do, and we had hoped this message would come across in our editorial. We believe that the genetic risks of developing prostate cancer are well known and sufficiently great to start actively screening men with a family history of the disease. An individual with just one first-degree relative already diagnosed with prostate cancer has a risk of developing the disease himself 2.5 times greater than that of the general male population, and the risk rises to 11 times greater with three first-degree relatives already diagnosed.\textsuperscript{4} What are we waiting for?

Finally, we would suggest to all health practitioners that our collective objective should be to diagnose disease and treat accordingly, and not to make no effort to diagnose a disease in the hope that it will remain clinically silent.\textsuperscript{5} A hard-line anti-screening position does nothing to reduce the impact of prostate cancer, which in reality is an important cause of morbidity and mortality in our community. We believe that the 594 New Zealand men who died of prostatic cancer in 2000 would have agreed with us.

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Brett Delahunt
Professor of Pathology and Molecular Medicine
Wellington School of Medicine and Health Sciences
References:


Screening for prostate cancer: the view of the Prostate Awareness and Support Society’s President

As President of the Prostate Awareness and Support Society (PASS) I have read with interest, but with no great sense of surprise, recent articles and letters (A Richardson, B Delahunt, D Lamb, P Corwin, C Paul, C Brunton) concerning screening for prostate cancer in New Zealand (http://www.nzma.org.nz/journal/118-1210/).

While it is encouraging to observe the medical profession engaged in lively debate, the opponents to prostate cancer screening are huffing and puffing over something that has already been decided. Men in New Zealand are increasingly deciding themselves whether to be checked for prostate cancer, and this is the way it should be.

The Internet has changed everything as it contains the latest information from the most prestigious medical institutions written by the most eminent researchers and physicians in the world—it is all available on the Internet. Quite frankly who cares what Ann Richardson and her acolytes (Corwin, Paul, Brunton) say or write?

The PASS policy is to encourage men to inform themselves as fully as possible in consultation with medical professionals. Note I say professionals. We also suggest men seek second and third opinions about diagnosis and potential courses of action.

It is notable, in the discussion so far in this journal, that no-one has discussed the effects of prostate cancer. They have mentioned possible side-effects of treatment such as incontinence and impotence but have avoided talking about the potentially miserable death faced by men suffering from metastasised prostate cancer.

I invite any doctor to join me in talking to men and their families who contact PASS on our 0800 counselling service. Men in their 40s and early 50s dying of a disease that is giving them pain. But however much is their physical suffering, nothing matches their sense of anger and injustice that they were never given the opportunity to choose for themselves whether they should or should not be checked out for prostate cancer. It should have been their call, but they never got to make it.

We know that over 500 men die annually from prostate cancer. What is so sad is that an estimated 200 of these are younger men whom New Zealand’s most eminent urologists say could, in all probability, have been successfully treated with earlier diagnosis. Why will the National Health Committee, the Minister, and others not listen to New Zealand’s own experts in this field?

Barry Young
President
Prostate Awareness and Support Society (PASS)
Regarding ‘Informing consent in New Zealand research: researchers’ conflict of interest and patient vulnerability’

Martin Tolich and Kate Mary Baldwin, in their article published in the 25 February 2005 issue of the Journal (http://www.nzma.org.nz/journal/118-1210/1325/), made some extraordinary statements that I should like to comment upon, starting with the Abstract where there is the assertion that “New Zealand health ethics had its origins at National Women’s Hospital where a physician researched his own patients.”

Medical ethics in New Zealand follows the tradition of the Western world, tracing its origins to pre-Christian times in Greece and the principles that were attributed to Hippocrates have not altered over 2000 years or more. They might have been strengthened following the inquiry into the care of some women who attended National Women’s Hospital but certainly did not start there. I am sure that the other professions with the health sector have had codes of ethics that have been recognised for more than 20 years.

It is important note that National Women’s Hospital had an ethics committee from the mid-1960s, including a lay member and, during the subsequent two decades, the NZMA was involved in formalising the processes of informed consent and that work included a major conference in 1987, again before the Inquiry at National Women’s.

It is not true to say that the women who took part in the study by Associate Professor Green knew nothing about it. The Inquiry heard only from women who were complaining about the study. The women saw medical staff other than Associate Professor Green and, as a registrar and tutor specialist, I saw women who not only knew about their participation in the study but were happy with what was happening to them. Some of those women volunteered that they would like to have been heard at the Inquiry but were deemed to be not suitable for it.

It is a shame that the article uncritically repeats the views of a journalist who herself had a major interest in the Inquiry and declared that interest in her writings. The comment “Eight women died taking part in the research project conducted by Associate Professor Green “is a contrivance, not a finding in the Report of the Inquiry.

It is important to note that the processes of informed consent, the development of ethics committees and the recognition of conflict of interest have evolved over time and criticism of previous activities must be tempered by the fact that life was very different then.

M A H (Tony) Baird
Chairman
NZMA Ethics Committee
Modern surveillance needed to control the increase in STIs

Sexually transmitted infections (STIs) in New Zealand appear to be on the increase according to a recent report in the Journal. The authors of this report caution that their data are not nationally representative and do not provide accurate estimates of the population burden. They rightly urge for improved surveillance. Two other reports in the same issue of the Journal provide additional evidence of the need to improve control of STIs in New Zealand.

In considering the future of STI surveillance, it is useful to review the two public health goals that communicable disease surveillance needs to meet. These are to support:

- Effective disease control, by detecting cases and their contacts that require specific individual follow-up and treatment, and
- Effective disease prevention, by providing ongoing, timely, representative epidemiological data to guide prevention strategies.

Surveillance of STIs is no different, except for the particularly high need for confidentiality, which also applies to currently notifiable diseases such as AIDS and acute hepatitis C.

So what surveillance model will best meet these goals? Johnston et al argue for laboratory-based reporting to provide comprehensive national surveillance data. We would go a step further and advocate combined case notification by clinicians and laboratory reporting. Many years’ experience with surveillance of diseases (such as HIV/AIDS, tuberculosis, and meningococcal disease) in New Zealand has demonstrated the value of this integrated approach. Both surveillance methods are needed and achieve different things: Notification by clinicians provides in-depth data on risk factors, case treatment, and outcomes—and establishes a dialogue with public health agencies over the follow-up of contacts and outbreaks. Laboratory reporting helps identify cases that have not been notified, and provides supporting data on organism characteristics where these are important. Processes can be put in place to protect patient confidentiality as has been done with AIDS notification in New Zealand and many other countries.

Our existing clinic-based approach to STI surveillance was inherited from Britain decades ago. It has been superseded in most developed countries. The bacterial STIs are nationally notifiable in Australia, the United States, Canada and most countries in Europe. These centres use a mix of case notification by clinicians and laboratory reporting.

The bacterial STIs are all very treatable, so it is technically possible to interrupt their transmission. Syphilis and gonorrhoea are certainly excellent candidates for case notification to support disease control measures. The follow-up need not be by the local public health service. It is probably more appropriate that Sexual Health Services receive regional STI notification data and are adequately funded to follow-up cases and contacts where required. Diseases where a high proportion of cases are
asymptomatic, such as *Chlamydia*, pose extra challenges and require additional strategies for measuring prevalence. Improving STI surveillance appears to have been put in the ‘too hard basket’ in New Zealand. The 2001 Ministry of Health Sexual and Reproductive Health Strategy identified improved information as one of its four main strategies, but did not describe how this would be achieved for STIs. The review of notifiable diseases conducted in 2003 raised the issue of making the STIs notifiable, but did not reach a definitive conclusion on this point. Yet a well-designed surveillance strategy is at the heart of all modern population health strategies for communicable disease control.

New Zealand has responded swiftly and decisively in the past to ensure improved surveillance of emerging infectious disease threats such as HIV/AIDS, SARS, Avian Influenza, and meningococcal disease. It is time we showed a similar commitment to the re-emerging problem of STIs. Combined case notification and laboratory reporting provides a well tested model that can help to link clinicians, laboratories, public health practitioners and policy makers into an integrated and more effective response to the threat posed by STIs.

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References:


COX-2 inhibitors—second, do some good

Weatherall et al make several valid points about COX-2 inhibitors, but they (like many commentators practising outside the musculoskeletal disciplines) take too little account of the benefits of COX-2 inhibitors to those New Zealanders who choose to use them.

In New Zealand, COX-2 inhibitors are not subsidised by the Government which means that, relative to other countries, the population using COX-2 inhibitors is enriched with those who have failed to benefit from (or cannot tolerate) subsidised alternatives. The lack of subsidy also tends to limit the dose and frequency of use to well below the doses used in the studies that show cardiovascular risk. It is wrong to assume that the relative risks seen in recent trials will apply to arthritis patients using COX-2 inhibitors in this way.

Weatherall et al cite the placebo-controlled trials in which the relative risks of a cardiovascular thrombotic event were around 2.0 after prolonged use of high dose COX-2 inhibitors—but their illustration of absolute risk employs the four-fold risk increase taken from the VIGOR study in which patients took twice the highest recommended dose of rofecoxib for 1 year, and in which the naproxen comparator is likely to have reduced the event rate in the control group.

There has been a general acceptance that the APPROVe study demonstrates an increase in the risk of cardiovascular thrombotic events after treatment with rofecoxib for 18 months, whereas a more objective conclusion would be that treatment with placebo for 18 months dramatically reduces the event rate.

Due to public awareness of the potential cardiovascular risks of COX-2 inhibitors, patients and prescribers are currently re-appraising the need for these drugs on a case-by-case basis. In future, the typical COX-2 inhibitor user is likely to be younger, to have lower baseline cardiovascular risk, and to be highly functionally dependent on a specific COX-2 inhibitor after having failed to benefit from or tolerate traditional NSAIDs (even with a proton pump inhibitor).

Weatherall et al refer to an editorial which asks whether COX-2 inhibitors can be justified in light of the priority to do no harm. When the notion of *primum non nocere* was first conceived, treatments were often highly toxic and of doubtful benefit. To apply this maxim today, or indeed to scrutinise the modern pharmacopoeia under the same spotlight that is currently on COX-2 inhibitors, would necessitate the justification of almost everything from aspirin to zoledronic acid.

Aided by analytical tools that measure the impact and severity of different disease and treatment outcomes, we can now use informed clinical judgement to predict whether the likelihood of benefit to an individual outweighs the likelihood of risk. In this equation, the risks of omission can often equal or exceed the risks of commission. Practitioners whose experience of COX-2 inhibitors is limited to adverse reactions are often not in the best position to make this judgement.
Can these drugs be justified? They can when the limited available data is interpreted and extrapolated with caution, and when the clinician making the risk-benefit analysis takes into account the circumstances (and opinion) of each individual patient.

Andrew Harrison  
Honorary Secretary  
New Zealand Rheumatology Association

References:


The epidemiology of multiple sclerosis in New Zealand

Multiple sclerosis (MS) is a chronic inflammatory demyelinating disease of the central nervous system resulting in severe neurological disability. An accurate estimate of the number of people in New Zealand with MS is currently unknown, partly because hospital outpatient and private neurologist records (the majority of diagnostic care) are not centrally collected and administered.

The epidemiology of MS in New Zealand is of particular interest for several reasons outlined below.

An increasing disease prevalence has been consistently observed with decreasing latitude in both New Zealand and Australia. Three explanations for this trend have been proposed: a concentration of genetically susceptible individuals, fewer sunshine hours in the south, and unknown environmental factors associated with colder climates.

Increasing incidence and prevalence of MS has been observed worldwide without explanation. It has been postulated that improved diagnostic techniques such as magnetic resonance imaging (MRI) and an increase in the number of neurologists per population head make it easier to identify cases. However, the prevalence has continued to increase in areas even where there has been a reduction in the number of neurologists per population head, as was the situation in Novosibirsk, Russia in 2003, according to local neurologist Larisa Sperling (personal communication to Lou Gallagher, 2003).

Improved patient survival resulting from modern medical treatments has also been shown to be an insufficient explanation, as both incidence and prevalence have increased in areas where no treatment is available.

MS prevalence studies have been conducted in New Zealand since 1968. However, they are not directly comparable since there has been significant variation in case identification methods, clinical definitions of MS, demographic differences in the reference population studied, and inconsistent time periods during which the studies have been conducted. This is a common problem throughout the world, resulting in a situation where only the crudest of comparisons of MS prevalence by geographic region can be made.

According to previous studies, the prevalence of MS in New Zealand Maori seems to be substantially lower than in the European population. Explanations for this apparent ethnic disparity in MS prevalence include differences in socioeconomic factors (Maori are less likely to present with MS symptoms to medical practitioners) and differences in environmental factors (Maori are less likely to live in areas with exposure to environmental triggers of MS). However, another plausible explanation is that differential susceptibility to MS between Maori and European groups is partially conferred by variation in genetic inheritance, as has been observed among subpopulations overseas. If Maori genetic inheritance confers some degree of immunity to MS, how much Maori ancestry is enough?, and what genetic variants are specifically protective for individuals with Maori ancestry?
The optimal epidemiological design for studying the aetiology of complex diseases of relatively low prevalence such as MS is a case-control study. Given that MS aetiology has a significant genetic component it is prudent to design such studies to take into account the relative contribution of genetic and non-genetic factors. This means testing known and suspected MS susceptibility genes such as the vitamin D receptor gene.

To begin addressing the hypothesis that Maori are genetically protected from MS it will also be important to obtain ancestral information either by patient self-report (based on ancestry of four grandparents) or inferred by ancestry-informative genetic markers. This information will allow ancestry-specific genetic risk of MS to be determined and also provide the data to control for ancestry as a potential confounder.

Of paramount importance for such epidemiological research is a comprehensive, clinically well-characterised and standardised MS patient registry. A national registry would also allow tracking of important changes in disease incidence and provide researchers and clinicians with a resource of patients for new drug trials and for monitoring drug treatments on a national basis.

It is hoped that the first national prevalence survey being jointly funded by the Health Research Council and the MS Society will initiate meaningful epidemiological research on MS in New Zealand in the future. Of particular note will be studies illuminating the relative contribution of ancestry-specific genetic susceptibility and environmental exposures to MS prevalence.

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References:


Are DEXA results reproducible?

DEXA is a precise method for measuring bone density with a coefficient of variation of 1%. However there is debate regarding the reproducibility of results due to factors such as patient positioning, technician variability, and machine performance—e.g. edge detection. A floppy disc failure allowed us to explore this issue in a small group of patients whose initial scan results were unable to be accessed so that the scan was repeated within a few days but without reference to the first scan data regarding positioning or analysis eg cursor placement.

We routinely scan the lumbar spine, hip, and wrist using a Norland XR 36 and employ standard positioning of the patient as recommended by the manufacturer. Five female and one male patient were re-scanned from between 2 to 12 days after the initial scan. The position of the cursors in the lumbar spine was performed manually by the technician in five patients and automatically in only one patient (aged 41). The hip cursors were positioned manually using standard protocol with the wrist cursors placed automatically at the end of the ulna. For all three sites scanned, no comparison could be made with the position of the cursors in the initial scan so that at the second scan patients were positioned, scanned, and analysed as if they were new patients.

Excluding two outlying results the percent change in bone density (either positive or negative) was between 0.7 and 3.2 in the lumbar spine, 0 and 3.9 in the femoral neck, and 0.3 and 3 in the distal wrist (Table 1) An 8% change was recorded in the spine scan of an 83-year-old female, probably because the cursors may have placed at different levels between the scans. Her T score of –0.71 in the spine compared to a T score of –2.61 suggests significant degenerative disease of the lumbar spine which would have a significant influence on the bone density reading if the cursors were not placed at identical levels in both scans.

The change at her femoral neck was 3.9%, and 0.4% at her distal wrist. In another 66-year-old female, a 6.6% change was recorded in the femoral neck, probably because hip rotation may have differed between the scans—with a change of 3.2% in the spine and 0.3% in the distal wrist.

Table 1. Percent change between initial and second scan

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Lumbar spine</th>
<th>Femoral neck</th>
<th>Distal wrist</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>41</td>
<td>- 0.9</td>
<td>+ 0.8</td>
<td>- 1.0</td>
</tr>
<tr>
<td>F</td>
<td>50</td>
<td>- 3.1</td>
<td>- 1.2</td>
<td>+ 1.4</td>
</tr>
<tr>
<td>M</td>
<td>54</td>
<td>- 1.3</td>
<td>0.0</td>
<td>+ 3.0</td>
</tr>
<tr>
<td>F</td>
<td>62</td>
<td>+ 0.7</td>
<td>+ 2.4</td>
<td>+ 1.8</td>
</tr>
<tr>
<td>F</td>
<td>66</td>
<td>+ 3.2</td>
<td>+ 6.6</td>
<td>- 0.3</td>
</tr>
<tr>
<td>F</td>
<td>83</td>
<td>+ 8</td>
<td>+ 3.9</td>
<td>- 0.4</td>
</tr>
</tbody>
</table>

Although the CV of DEXA machines is quoted at 1%, this precision is generally relevant to repeated measurements in young healthy persons where positioning is
optimal, confounding issues such as movement artefact are minimal, and the scan is technically easy to analyse with clear bone / non-bone discrimination—the test is most often used in older persons with thinning bones and degenerative changes in the spine and aorta.

In this small series, reproducibility was adequate with a trend to increasing difference with increasing age. Measuring three sites rather than the standard spine and hip appears to give greater confidence regarding outlying values.

Alan Doube
Rheumatologist
Midland Osteoporosis Group Ltd
Hamilton
Professional misconduct

Charge:

A CAC charged that a doctor was guilty of professional misconduct.

The CAC alleged that during the course of his clinical management and treatment of the patient between October 2001 and April 2002 the Doctor:

(1) Made frequent inappropriate telephone contacts with the patient, outside normal office hours and for reasons unrelated to her clinical need; and/or

(2) During the course of the telephone contacts and on other occasions, made inappropriate repeated references to the use of the provisions of the Mental Health Act such that the patient felt she was being threatened with being re-admitted to hospital under the provisions of the Mental Health Act; and/or

(3) During the course of the telephone contacts attempted to develop a personal relationship with the patient by inviting her, during those telephone contacts with her, to lunch and dinner; and/or

(4) During a professional consultation with the patient, offered her work as his housekeeper and then, when she was at his home, tried to embrace her; and/or

(5) In professional consultations with the patient and contrary to the therapeutic relationship, began to disclose to her his personal problems and issues.

Background:

The patient first came under the Doctor’s care in late 1999 when she was admitted to her local hospital’s mental health ward. Over the next two years she was admitted to hospital a further three times. The longest admission was for twenty days. During the admissions the patient was under the Doctor’s care with whom she had a good therapeutic relationship.

The Doctor saw the patient in an outpatient’s facility on 7 December 2001. The patient’s marriage had begun to deteriorate in July 2001 and by this time the patient’s husband was not staying at their home. A further outpatient’s consultation occurred on 13 December 2001 and from 28 December 2001 to early April 2002 the patient regularly saw the Doctor, primarily to discuss her marital problems. These consultations occurred almost every week.

On the evening of 6 February 2002 the Doctor telephoned the patient at her home. The patient felt slightly uncomfortable about the Doctor contacting her but she was reassured when he explained he was concerned about her. During the course of this telephone call the Doctor invited the patient to “come for a cuppa”. The patient noted this call in her journal and that the telephone call was for “three hours or so”.

The patient’s evidence was that the Doctor telephoned her at home on approximately 4 or 5 occasions after 6 February 2002. Two of these telephone calls were noted by
the patient in her journal (8 and 10 March 2002). She found it difficult to terminate the telephone calls. The patient was feeling very uneasy about the telephone calls and also thought the calls were threatening. She said that on three occasions the Doctor said words to the effect that he did not want to have to put her back in the ward. The patient thought these comments meant the Doctor was threatening to use the Mental Health Act to have her re-admitted to hospital.

The patient was at this time suffering financial stress as a result of her marriage breakup. She told the Doctor that she would like to do some housework, or similar activities to try and improve her financial position.

During a consultation with the Doctor on 25 January 2002 the patient raised the possibility of her doing some of the Doctor’s housework. Subsequently the Doctor asked the patient if she would go to his home to iron his shirts. On about 7 March 2002 the patient went to the Doctor’s house and she noticed it was “neglected and dishevelled”. The Doctor and the patient discussed the possibility of the patient working for the Doctor on a regular basis at his home. It was during the course of this discussion the Doctor placed his hands on the patient’s shoulders and then kissed her. After this incident the patient resolved not to return to the Doctor’s house.

On 8 March 2002 the Doctor telephoned the patient at her home. During this call the Doctor invited the patient to dinner at a restaurant. When this offer was declined the Doctor invited the patient to lunch. The patient also declined this invitation.

The patient was by this time becoming increasingly uneasy. On 11 March 2002 the patient spoke to her lawyer and explained her concerns about the Doctor. The patient advised her lawyer that she did not want her lawyer to take matters further, that she believed she could deal with the situation herself. The patient said she simply wanted her lawyer to be aware of the situation.

At the next consultation the Doctor asked her on two occasions why she had not accepted his invitation to go to dinner or lunch. The patient told the Doctor that she thought going to dinner or lunch would be inappropriate because of their doctor/patient relationship. At this consultation the patient told the Doctor she would not be returning to his home to do his housekeeping. There were two further consultations between the patient and the Doctor after which she was transferred to the care of another clinician.

**Finding:**

The Doctor pleaded guilty to the charge at the commencement of the hearing. The Tribunal found the Doctor guilty of professional misconduct.

The Tribunal was satisfied particular one was established and it constituted a serious departure from the standards ordinarily expected of a psychiatrist in the Doctor’s circumstances.

There was no doubt the Doctor made a number of evening telephone calls to the patient at her home. The Tribunal considered there are occasions when it is necessary for a psychiatrist to make contact with a patient at their home and outside of normal working hours. Occasions of that kind are rare and only arise out of clinical necessity.
None of the telephone calls which the Doctor made to the patient during the time in question were based upon clinical need.

The Tribunal was satisfied particular two was established and his breaches of his professional responsibilities in this regard were serious. The Tribunal considered the Doctor did make comments to the patient that led her to believe she was being threatened with being re-admitted to hospital under the provisions of the Mental Health Act.

The Tribunal was very clear that it is not appropriate for a psychiatrist to threaten a patient with admission to hospital under the mental health legislation unless there are sound clinical reasons for doing so. There was no evidence the patient was displaying any signs or symptoms that would have justified the Doctor raising the possibility of the patient being re-admitted to hospital during the time in question.

The Tribunal was satisfied particular three was established. It is a cardinal principle that a psychiatrist should not indulge in social interaction with a patient. When the Doctor invited the patient to dinner, and then to lunch on 8 March 2002, the Tribunal considered he committed a serious breach of the standards ordinarily expected of a psychiatrist.

The Tribunal was satisfied particular four was established and the Doctor’s behaviour constituted a significant serious breach of standards. The Tribunal considered it totally inappropriate for a medical practitioner to employ a patient to undertake domestic duties. When the Doctor embraced his patient he breached a fundamental tenet of the doctor/patient relationship.

The Tribunal was satisfied the Doctor’s conduct was particularly dangerous because:

- He breached the trust which the patient had developed in him. The patient trusted the Doctor to discharge his professional responsibilities in an objective and professional way. That trust was breached when the Doctor endeavoured to embrace the patient;
- By trying to develop a personal relationship with the patient the Doctor compromised his ability to objectively discharge his clinical responsibilities to his patient;
- The patient was clearly a vulnerable person, highly susceptible to suffering significant harm if she had allowed herself to succumb to the Doctor’s attentions.

The Tribunal was satisfied particular five was established. The patient’s evidence was that during both formal consultations and during the course of his telephone calls to the patient, the Doctor told her various things about his personal life. The Tribunal considered it was not appropriate for the Doctor to use the patient as a “sounding board” for his personal problems. The Doctor’s breaches of his professional responsibilities in this regard were unacceptable.
**Name Suppression:**

The Doctor is very unwell. The Tribunal was satisfied that if the Doctor’s name was published there was a serious risk of the Doctor suffering significant medical harm as a direct consequence of his name being published. 

The Tribunal concluded by a very narrow margin to grant the Doctor name suppression.

**Penalty:**

The Tribunal ordered the Doctor:

- not to practise medicine for a period of three years except under the supervision of a vocationally registered psychiatrist who is available on site to ensure that he is closely monitored;

- to pay costs in the sum of $12,448.23.

The Tribunal further ordered publication of the hearing in the *New Zealand Medical Journal* in a way which did not name or identify the doctor or the complainant.

The full decisions relating to the case can be found on the Tribunal web site at [www.mpdt.org.nz](http://www.mpdt.org.nz) Reference No: 04/122C.
Jack Dilworth Haslett Matthews

Jack Matthews, New Zealand’s pioneer neonatal paediatrician, died in the Auckland City Hospital on 22 June 2004.

Jack was born in Mount Albert, Auckland in 1917, and was educated at Takapuna Primary School and Takapuna Grammar School.

He graduated from Otago University in 1940 and was attached to the Auckland Hospital Board as a Resident for 2 years and then Senior Medical Registrar.

Jack was a keen sportsman who enjoyed playing tennis and cricket, and represented his school and university in athletics. In 1943, he joined the New Zealand Army Medical Corps and served in the Middle East and Central Mediterranean until his transfer to London where he was discharged in 1946.

Remaining in London, he undertook postgraduate study at the Hammersmith Hospital; Princess Louise Hospital for Sick Children; Hospital for Sick Children, Great Ormond Street London; and the National Hospital for Nervous Diseases, Queens Square. He gained his Diploma in Child Health and Membership of the Royal College of Physicians of London in 1947. He married his fiancée Jo Speedy in London and returned to New Zealand a year later as a Ship’s Medical Officer on the New Zealand Star Line.

In Auckland, Jack went into private practice as a general physician and paediatrician, and in 1950 was appointed paediatrician to the recently established O&G Unit at Cornwall Hospital, which in 1954 was renamed the National Women’s Hospital. In 1951, the Postgraduate School of Obstetrics and Gynaecology opened there as New Zealand’s first and only postgraduate obstetrical training hospital.

The first paediatrician appointed specifically to an obstetric service in this country, Jack was on call every day, night, and weekend (except for 2 weeks’ annual holiday) until he was joined by a second paediatrician in 1955. He was appointed Senior Paediatrician at Green Lane Hospital and Honorary Visiting Physician to Karitane Hospital in 1960.

In 1964, Jack was awarded the Heinz Travelling Fellowship in Paediatrics by the British Paediatric Association and spent 3 months’ postgraduate work in Britain, United States, Canada, and Australia. He was appointed as a Clinical Reader in Paediatrics in the Medical School, University of Auckland in 1970; awarded a Fellowship of the Royal College of Physicians London in 1972; and Membership (1972) and Fellowship (1975) of the Royal Australasian College of Physicians. He was a keen member of both the NZ O&G Society and the Paediatric Society of New Zealand, being Secretary of the latter for 10 years and President for 3 years.
Jack was an enthusiastic and effective teacher of undergraduate and postgraduate doctors and nurses. For example, in 1964, he was the prime mover in setting up a post-certificate course in newborn nursing, the first of its kind in Australia or New Zealand. He was a team man who gave strong support to his colleagues and fostered the development of nurses and young doctors. It was an exciting time in neonatal paediatrics and his Unit was involved in the development and evolution of significant advances, which included the world’s first successful intrauterine transfusion for Rhesus disease by Dr (later Professor Sir) William Liley in 1963, and later with Dr (later Professor Sir) Mont Liggins and Dr Ross Howie in the prevention of lung disorders of premature babies by means of corticosteroids given before birth.

At his retirement in 1982, Jack reflected on the enormous advances he had seen in the care of children during his time. These ranged from the introduction of antibiotics and vaccines for infectious diseases and surgery for congenital disorders to recognisably modern newborn intensive care.

Jack’s interests were not only scientific and medical: he encouraged and witnessed radical changes in society’s attitudes to the relationship between children and their parents. Parenting became less rigid and authoritarian with a more human approach and understanding. He championed the change from the practice of separating mothers and newborn babies in Cornwall Hospital, encouraging “rooming in” (now standard practice) and breast-feeding. He was a strong supporter of the New Zealand Plunket Society and its Karitane Hospitals because they provided essential continuing support of mothers and their young children in the community. Furthermore, he encouraged a comprehensive approach to the prevention and early diagnosis of disability, and the multidisciplinary management of disabled children and their families.

Jack was at National Women’s Hospital at its inception, and he remained intensely proud of the institution and the principles it stood for. He retired from that hospital in 1982 but continued as an Honorary Consulting Paediatrician at St Helens Maternity Hospital until 1986.

Jack was an exceptionally dedicated and caring doctor—an unassuming man who made an outstanding contribution to the improvement in the standards of care for the newborn and older children in New Zealand.

In all of this work Jack was strongly supported by his wife, Jo. He is survived by her and by his daughter Mrs Jill Crockett, son Dr John Matthews, and four grandchildren.

We are grateful to Drs Ross Howie and John Matthews for this obituary.
Edward Bassett

Edward (Ted) was General Practitioner for Wakefield, Nelson and the surrounding rural areas for 38 years. He was very involved with local community affairs in Wakefield and the wider Nelson region as well as in the Royal New Zealand College of GPs (RNZCGP).

He was awarded an OBE in the Queen’s Birthday Honours List for Services to Medicine and the Community in 1988; Fellowship of RNZCGP in 1980, the College Gold Medal in 1988; and Honorary Fellowship of both RCGP and RACGP in 1989.

Born in Levin in 1926, his early schooling was at Levin and Fielding and subsequently Wanganui Technical School where he was Head Prefect.

He then attended Otago University where he initially started a science degree and went on to Medical School, graduating in 1953.

While in Dunedin, he met Myra Collier and they were married in 1951.

Myra played an integral role in his subsequent life when his many activities and care for others took him away from home a lot. They were very much a partnership.

After graduation from Otago, he worked as House Surgeon at Nelson Hospital, Registrar at Buller Hospital in Westport, and undertook a year’s general practice in the Collingwood Special Area, a time in which he and Myra made long-lasting friendships.

He also took up solo General Practice at Wakefield in 1957, covering a large rural area with one other GP, Dr John Davis, and John’s wife, Gladys.

He attained Membership of RCGP in 1962 and was a foundation Member of NZCGP in 1974. He held many positions of responsibility within the College and kindly hosted trainee interns and GPTP registrars.

In Nelson, he was Secretary of the RNZCGP Subfaculty for many years, and was responsible for organising regular meetings of GPs which were very well appreciated by his colleagues and were a forerunner of the present day peer-review groups.

He helped many new GPs coming in to the area with practical advice and encouragement and initiated a GP training programme in Nelson; he also continued to be active in the Subfaculty as Treasurer and as a mentor after his retirement from practice in 1994. He was also President of the Nelson Division of NZMA for some years.

He was a member of the Nelson Hospital Board for 15 years, being Deputy Chair for 8 years and Acting Chair for 1 year.
He had a particular interest in the care of the elderly; for example he was:

- Chairman of the Nelson Regional Coordinating Committee for Accommodation for the Aged for 20 years from its foundation.
- Chairman of Nelson Area Health Board Service Development Group for Care of the Aged.
- Member of Green Gables Home and Hospital Management Committee and Trust Board.
- Part of the Establishment Committee for the Wakefield Village Rest Home, and subsequently on the Management Committee.
- And, in 1989, he was awarded the Christian Hospital Trust Study Award for Geriatrics which he used to explore various forms of residential care for the elderly, resulting in him introducing the Abbeyfield concept to NZ. He was Chairman of Abbeyfield Nelson from its formation in 1992–96 and subsequently Chairman of Abbeyfield NZ 1996–99. The first home in NZ was built in Nelson in 1994 and there are now several others built or planned throughout the country.

Ted was very active in the local community in Wakefield, being the instigator and one of the driving forces in the concept and building of the Wakefield and Districts Community Health Centre with its combination of the General Practice team, publicly-funded services and community input.

Ted was also Secretary of the Wakefield Methodist Church Trust for 30 years and of the Combined Wakefield Churches for 12 years, and was lay representative to the Methodist Church Conference and Synod.

At St Arnaud, where the family has a bach, he was Chairman of the Community Association and Chairman of the Lake Rotoiti Chapel Trust, and a medical assessor for the Trust’s rest units. The family spent many good times at “the Lake” although Ted always took his medical bag, and was often called upon while there. He very much enjoyed tramping in the Lakes area. It remains a special place for the family.

As you can see, his committee work has been very extensive (he had great vision and an ability to assess new ideas, adapt these to local conditions and then drive a project through to completion) and he has made a major impact on those organisations with which he was involved, yet that is only a small part of his legacy. Of much greater significance is the personal contact he had with many individuals—whether they be patients, work colleagues, friends, or other acquaintances.

Ted enjoyed gardening, and maintained a large and productive vege garden at home. He was a member of the Wakefield Country Players for many years taking part in several productions—and he had a well regarded baritone voice and sang for many years with the Nelson Male Voice Choir and various smaller groups. Favourite performances (often impromptu) included “Shortnin’ Bread” and “the Bold Gendarmes” and his duets with fellow GP John Davis playing violin mirrored their working relationship in Wakefield.

His colleagues describe him as “an archetype rural GP”, “an iconic figure in general practice”; “a great representative of the profession”; “a very fine man and an excellent doctor”; “nothing but praise for his work, his ability, his temperament, and his


devotion to his patients”; and “despite all his achievements he struck me as being very humble and down-to-earth”.

Ted is remembered by many for his kindness, caring, sincerity, and humility. He never appeared rushed or stressed and was always willing to take time to listen. He could make each individual feel special. Indeed, there are many people who recall with great affection his help through difficult times and many who credit his help with positive changes in their lives.

Ted’s wife, Myra, died in July 2004. He is survived by his 3 children (David, Wendy, and Rosalind) and 4 grandchildren.

We are grateful to Tony Eames for the text of this obituary as well as Ted’s daughter, Rosalind, who provided the photograph.
Alan Kevin Mark Simpson

It is with a sad heart that I inform you that Alan died unexpectedly while out running in Cornwall Park, Auckland on 11 January 2005, 5 days short of his 38th birthday.

Always full of enthusiasm and energy, he was able to direct this to maintain a balanced life where his family and friends came first.

He and his wife, Sally, met during a summer break while Alan was the Rainbow’s End chicken and with the stability of a consultant’s position they started their long-desired family. Alan doted on his two gorgeous boys, Sebastian aged 3 years and Oscar aged 21 months, and had the utmost pride in their developmental achievements.

Far from detracting from his career, this family-first philosophy enhanced his effectiveness as a community paediatrician and superb clinical teacher that saw him held in high regard by his colleagues and the many families he worked for.

Alan was born in England; his family immigrated to New Zealand during his formative years. His academic aptitude saw him excel during his secondary education at Manurewa High School, where he gained a junior scholarship. Alan took this love of learning into medicine and achieved a medical degree at the University of Auckland in 1990. He was quick to channel his medical interest into Paediatrics and he completed his Diploma of Paediatrics in 1992 and RACP Paediatrics examination in 1996, the latter being delayed when his father died after becoming seriously ill. He always spoke with gratitude of those involved in his training in Auckland and Waikato. He was particularly appreciative of the extra lengths the paediatric staff from Waikato went to in assisting him with his preparation for the clinical examination.

As was the way with Alan, his focus and clarity of purpose saw him pursue specialist practice in Community Paediatrics and Population Health and, before his admission to FRACP in 1999, he and Sally returned to England. Here he trained in Community and Developmental Paediatrics first at the Royal Hampshire County Hospital then Great Ormond Street Hospital for Sick Children during which he finished a Master of Science in Community Paediatrics at the Institute of Child Health, London.

On his return from England in 2000, Alan took up his role with Kidz First in Community Paediatrics and Population Health and in 2002 he became the Clinical Leader for Community Health. His unassuming manner and thoughtful approach saw him excel in this role and his leadership, support, humour, and advice for the multidisciplinary team combined with his outstanding clinical skills and support for medically fragile children and their families saw him have the respect of all concerned. His passion for Population Health saw him involved with several projects including an Oral Health Plan as well as an Injury Prevention and Needs Analysis of
the Health Status of Children that will have a lasting effect for the children of South Auckland and the wider Auckland region.

Not satisfied just with his clinical role, Alan re-established the position of Senior Lecturer in General Paediatrics in South Auckland, and in 2002, his commitment to medical education was recognised when he was the recipient of the University of Auckland’s Dennis Pickup Clinical Teacher Award.

A devoted husband, father and family man, respected colleague and friend, committed and skilled clinician, Alan’s death will leave a large void for all who knew him.

When I have moved beyond you
In the great adventure of life
Gather in some pleasant place
And there remember me
With spoken word old and new

_Ekuhuna ai te miro ma, te miro pango, te miro whero, I muri kia mau ki te aroha, ki te ture mete whakapono._

(There is but one eye of the needle through which the white, black and the red threads must pass. After I am gone hold fast to love, the law and trust.)

_ King Tawhiao_

We are grateful to Dr Ross Drake for this obituary.
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