INFORMATION FOR AUTHORS
First page following cover

EDITORIAL
347 Reaffirming professionalism in medicine Philip Bagshaw, Evan Begg, Peter Moller, Gary Nicholls, Les Toop, Christine Winterbourn

ORIGINAL ARTICLES
349 Screening and diagnostic practices for chlamydia infections in New Zealand Siiri Bennett, Anne McNicholas, Nick Garrett
353 A case of infectious tuberculosis on two long-haul aircraft flights: contact investigation Gary Whitlock, Lester Calder, Hilary Perry
355 Marijuana use in New Zealand, 1990 and 1998 Adrian Field, Sally Casswell
358 Women in rural general practice: the stresses and rewards Raina Elley

CASE REPORT
360 Bartonella henselae neuroretinitis in cat scratch disease Shuan Dai, Stephen Best, Martyn St John

VIEWPOINT
361 New Zealand doctors – a breed apart Jill Jones

MEDICOLEGAL DIARY
363 The Cull report: requiring health providers to report complaints Jonathan Coates
THE NEW ZEALAND MEDICAL JOURNAL

Established 1887 - Journal of the New Zealand Medical Association

Twice monthly except December & January

Copyright New Zealand Medical Association

ISSN 0028 8446

Editor: Gary Nicholls
Deputy Editors: Philip Bagshaw, Evan Begg, Peter Moller, Les Toop, Christine Winterbourne
Biostatistician: Chris Frampton  Ethicist: Grant Gillett
Emeritus: Pat Alley, John Allison, Jim Clayton, Roy Holmes, John Neutze
Editorial Board: George Abbott, Bruce Arroll, Sue Bagshaw, Gil Barbezat, Richard Beasley, Lutz Beckert, Ross Blair, Antony Braithwaite, Stephen Chambers, Barry M Colls, Garth Cooper, Brett Delahunty, Matt Doogue, Pat Farry, Jane Harding, Andrew Hornblow, Geoffrey Horne, Rod Jackson, Peter Joyce, Martin Kennedy, Graham Le Gros, Tony Macknight, Tim Maling, Jim Mann, Colin Mantell, Lynette Murdoch, Bryan Parry, Neil Pearce, David Perez, Anthony Reeve, Ian Reid, Mark Richards, André van Rij, Justin Roake, Peter Roberts, Bridget Robinson, Prudence Scott, Norman Sharpe, David Skegg, Bruce Smaill, Rob Smith, Ian St George, Andy Tie, Ian Town, Colin Tukuitonga, Harvey White

Information for authors

Guidelines for authors are in accordance with the Uniform Requirements for Manuscripts submitted to Biomedical Journals. Full details are printed in NZ Med J 1997; 110: 9-17, Med Educ 1999; 33: 66-78 and are on the NZ Medical Association website – www.nzma.org.nz. Authors should be aware of the broad general readership of the Journal. Brevity and clear expression are essential. Most papers should be 2200 words or less, the maximum being 3000 words and 30 references. For papers accepted for publication which exceed three printed pages (around 3,000 words) there will be a page charge of $450 plus GST for each printed page. Letters should not exceed 400 words and ten references. Case reports must be no longer than 600 words, with up to six references and no more than one Figure or Table. Requirements for letters, obituaries and editorials are on the website. All material submitted to the Journal is assumed to be sent to it exclusively unless otherwise stated. Each author must give a signed personal statement of agreement to publish the paper or letter.

The paper: Papers are to be written in English and typewritten in double spacing on white A4 paper with a 25 mm margin at each side. Send three copies of the paper. Wherever possible, the article should also be submitted on a 3.5-inch disk. Although Word 5.1 (or later version) is the program of choice, other word-processing programs are acceptable. Organise the paper as follows:

Title page – the title should be brief without abbreviations. Authors’ names, with only one first name and no degrees should be accompanied by position and workplace at the time of the study. Corresponding author details with phone, fax and email should be given, and the text word count noted.

Abstract page – this must not exceed 200 words and should describe the core of the paper’s message, including essential numerical data. Use four headings: Aims, Methods, Results, Conclusions.

Body of the paper – there should be a brief introduction (no heading) followed by sections for Methods, Results, Discussion, Acknowledgements and Correspondence.

References – in the text use superscript numbers for each reference. Titles of journals are abbreviated according to the style used by Index Medicus for articles in journals the format is: Bravatved GD. Outcome of managing impotence in clinical practice. NZ Med J 1999; 112: 272-4. For book chapters the format is: Marks P. Hypertension. In: Baker J, editor. Cardiovascular disease. 3rd ed. Oxford: Oxford University Press; 1998. p567-95. Note all authors where there are four or less; for five or more authors note only the first three followed by ‘et al’. Personal communications and unpublished data should also be cited as such in the text.

Tables should be on separate sheets with self-explanatory captions. Footnote symbols must be used in a set sequence (* † ‡ § ¶ # etc).

Figures must be glossy prints or high quality computer printouts. Since these are likely to be reduced in size when printed, use large type and approximately twice column size for the figure.

Conflict of Interest: Contributors to the Journal should let the Editor know whether there is any financial or other conflict of interest which may have biased the work. All sources of funding must be explicitly stated in the paper and this information will be published.

The Journal does not hold itself responsible for statements made by any contributors. Statements or opinions expressed in the Journal reflect the views of the author(s) and do not reflect official policy of the New Zealand Medical Association unless so stated.

Addresses

Editorial: All editorial correspondence is sent to Professor Nicholls, c/o Department of Medicine, Christchurch Hospital, PO Box 4345 Christchurch, New Zealand. Telephone (03) 364 1116; Facsimile (03) 364 1115; email barbara.griffin@chmeds.ac.nz

Advertising: All correspondence is to be sent to the Advertising Manager, Print Advertising, 83-91 Captain Springs Road, PO Box 13 128 Onehunga, Auckland. Telephone (09) 634-4982; Facsimile (09) 634-4951; email printad.auck@xtra.co.nz or PO Box 27194, Upper Willis Street, Wellington. Telephone (04) 801-6187; Facsimile (04) 801-6261; email print.ad.wgtn@xtra.co.nz

Circulation: All correspondence about circulation, subscriptions, change of address and missing numbers is sent to Chief Executive Officer, New Zealand Medical Association, PO Box 136, Wellington. Telephone (04) 472-4741; Facsimile (04) 471-0838, email nzmedjn@nzma.org.nz

Publisher: The Journal is published by Southern Colour Print, PO Box 920, Dunedin. Telephone (03) 455-0554; Facsimile (03) 455-0303.

Subscriptions: New Zealand – standard mail NZ$255.15, fastpost NZ$272.25 (GST incl); overseas surface mail NZ$280.00, overseas airmail – South Pacific/Australia NZ$40.00; America/Asia/India/Europe NZ$420.00, Africa/ Middle East NZ$490.00. All subscription enquiries to NZ Medical Association, as for Circulation above.
Reaffirming professionalism in medicine

Philip Bagshaw, Evan Begg, Peter Moller, Gary Nicholls, Les Toop, Christine Winterbourn: The Editors.

There have been many attempts at defining professionalism in medicine. 7 At the heart of it lies the implicit relationship between doctor and patient, and between the profession and the public. This relationship must be based on mutual trust, if it is to work as it can and should. Patients and the public want to trust their doctors to be strong advocates, to strive to do what is in their best interests, and be committed to ‘go the extra mile’ on their behalf. This trust must be earned, but has been strong and willingly given in New Zealand in the past.

Throughout the Western world, medical professionalism has been under attack from the corporatisation and bureaucratisation of health systems over recent decades. 2 In the USA this attack, in the form of managed care and the like, has been overt. In other countries it has been subtler but the consequent erosion of professionalism has been equally significant. The main attack on medical professionalism in this country came with the Health Reforms of the 1990’s. Their chief architect has conceded that these reforms were seriously flawed. 3 Whilst steps are being taken to reverse some of the excesses, there still remain the dysfunctional processes, and incoherent concepts and attitudes, which sadly led to a reduction in the standing of doctors in the minds of the public. They also led to our professional colleges being viewed by many as vested interests, focussed more on patch protection than on standards of patient care.

With corporatisation came the concept that professionalism and medical expert opinion, not readily categorised and controlled by management, could be downplayed, utilised selectively or even eliminated. Administrators seized the moral high ground by claiming that using Evidence-Based Medicine (EBM) would lead to the construction of clinical protocols that should improve outcomes, reduce and track variances, and increase efficiency. 4 There are obvious errors in this argument. First, it is incorrect to suggest that doctors did not previously have the responsibility to go along with such initiatives or find that they are forced upon them, 5 a cry heard throughout the flawed reforms of the 1990’s. Some colleagues have argued that it is better to cooperate and change the defective systems from within. This cannot be so. Unless the primary aims of any such initiatives are the maintenance and advancement of standards of patient care, 6 then the outcomes will be unpredictable at best and most likely undesirable for patients.

‘Clinical governance’ means different things to different people. 7 It has been running in one form in the UK for some years and has had a chequered history. 8 In this country it is envisaged that clinical governance committees will share decision-making with management, and chiefs of service will be responsible for clinical standards. It appears that management will control appointments to these clinical committees and positions, and hence the partnership will never be a horizontal one. The approach is likely therefore to lead to a further erosion of professionalism. Furthermore, it will not address the problems of de-democratisation, disempowerment and de-energisation of hospital staff that have arisen in the last ten years. To do so will require clinical staff to take back control of clinical processes through the financial independence and accountability of peripheral budget-holding.

The regular credentialing of doctors should help to maintain and advance standards of medical care, help reassure the public, and provide support and career development for clinicians. Before launching into it, however, we must ensure that the aims are uncorrupted, the processes are appropriate, and resources are adequate. None of these three issues is currently resolved. It is clear, however, that the professional colleges should have the major, leading role in credentialing, with input from other key stakeholders, including the public and the Medical Council. Only the colleges have the expertise to achieve genuine peer review, and they have less potential conflicts of interest than hospital management.

We have no one to blame but ourselves for the problems we now face. As a profession, and as groups within the profession, we have responded pusillanimously to each attack on our professionalism. It is vital for us to act now to reaffirm it and to restore what has been eroded away. 9 There is much current debate in the literature about how this might be achieved. One author has listed six initiatives that professional colleges could seize. 10 He recommends that they
should do the following: (i) require rather than recommend standards of behaviour and service, (ii) form alliances with consumer groups to accomplish goals that neither can realise separately, (iii) influence undergraduate and postgraduate curricula to include lectures on professionalism and inculcation of the skills necessary to promote it, (iv) encourage and protect whistle-blowers, (v) expand the agenda for which they lobby and advocate, and (vi) have policies that help professional bodies and institutions to be less dependent on external medical corporate funding. This list is not exhaustive, but it is a start and might hopefully encourage fruitful debate.

As the erosion of professionalism in medicine is a worldwide problem, should not all the professional colleges and societies band together to come up with collective solutions? Clinicians should neither feel defeated nor underestimate the potential of collective action. We should note, for example, what the International Physicians for the Prevention of Nuclear War has achieved (www.ippnw.org). Professionalism in medicine must be defended with all our might and main. The central importance of the patient-clinician relationship needs to be expressed loudly, publicly and unashamedly. Furthermore, our young doctors and trainees must learn why it is so imperative for future generations that they take up the torch of professionalism and carry it forward.11

Screening and diagnostic practices for chlamydia infections in New Zealand

Siiri Bennett, Medical Epidemiologist; Anne McNicholas, Research Associate, Institute of Environmental Science and Research (ESR), Porirua; Nick Garrett, Biostatistician, ESR, Auckland.

Abstract

Aims. To identify screening and diagnostic practices for chlamydia infection in New Zealand.

Methods. Postal survey of doctors and nurses at all sexual health, family planning, youth and student clinics, and randomly selected general practitioners (GPs).

Results. Most respondents recognised chlamydia infection as a cause of pelvic inflammatory disease and infertility in females, and epididymitis and non-gonococcal urethritis in males. Ectopic pregnancy and conjunctivitis were less commonly recognised by GPs and student and youth centre doctors. Sterile pyuria and arthritis were well recognised only by sexual health doctors. Female doctors were significantly more likely to recognise signs and symptoms than male doctors. GPs were less likely than other respondents to screen for chlamydia infection. Sexual health doctors and nurses were more likely to remove cervical secretions prior to taking endocervical specimens. Contact tracing was regarded as very important by only a quarter of family planning respondents, compared with over 80% of other respondents.

Conclusions. While respondents recognised most signs, symptoms, and sequelae of chlamydia infection, some important features were not well recognised. Screening practices varied, and many endocervical specimens were taken incorrectly. Given the long-term health consequences and cost of chlamydia infection sequelae, screening guidelines are urgently required.

NZ Med J 2001; 114: 349-52

Chlamydia trachomatis causes the most frequently diagnosed bacterial sexually transmitted infection (STI) in the developed world,1 and is a major cause of pelvic inflammatory disease (PID), ectopic pregnancy and infertility in women2,3 and non-gonococcal urethritis (NGU) in men.2-4 In New Zealand, chlamydia infection is the most commonly diagnosed bacterial STI at sexual health clinics (SHCs). Chlamydia infections have steadily increased with highest rates in sexually active men and women aged 15-19 years.5 Overall infection rates in the general population have been estimated to be between 256 and 777 per 100 000 population.6-7 Recent laboratory data indicate that the chlamydia infection rates in New Zealand are substantially higher than those reported by other industrialised countries.8-10 However, laboratory data reflect clinician screening practices rather than actual infection rates. There are no national screening or treatment guidelines for chlamydia infection in New Zealand, and little is known regarding clinician knowledge of chlamydia infection and screening practices for chlamydia. This study aimed to identify screening, diagnostic and treatment practices for chlamydia infection in different health care settings.

Methods

Questionnaire design. A self-administered questionnaire requested information on respondent demographics; knowledge of signs, symptoms and sequelae, screening criteria, and risk factors for chlamydia infection; specimen collection practices; and partner follow-up. Information on treatment practices and knowledge of chlamydia laboratory tests will be published separately. Questionnaires were pilot-tested by SHC, family planning (FPC), and student and youth health clinic (SYHC) doctors and ten randomly-selected GPs. No referral to patient files was required and questionnaires took approximately ten minutes to complete.

Administration of the questionnaires. In November 1997, two questionnaires were sent to all (30) SHCs, all (33) student health centres located at tertiary institutions, all (eleven) specialist youth clinics, all (30) Family Planning Association FPCs, and two independent FPCs. All clinics were asked to select a doctor and a nurse to complete the questionnaires. One questionnaire was sent to each of 388 GPs randomly selected from the New Zealand Medical Register. SHCs, FPCs, and SYHCs which did not return questionnaires within two weeks were telephoned and encouraged to respond. Questionnaires were re-posted to GPs who did not respond within two weeks.

Analysis. Clinics of the same type were grouped and analysed together. The responses from two GPs who worked at SYHCs were analysed with SYHC data. Univariate analyses were performed using Epi Info version 6.11 Relative risks (RRs), and 95% confidence intervals (95% CIs) were calculated. Fisher's exact or chi-squared test was used to compare categorical variables, and the Wilcoxon's test for continuous variables.

Results

Response rates. Questionnaires were completed by staff in all SHCs. Of the 57 respondents, 28 were doctors and 29 were nurses. 23 SHCs (76.7%) returned questionnaires from both a doctor and a nurse. Staff in 26 (81.2%) FPCs returned 47 questionnaires, 23 from doctors and 24 from nurses. 20 FPCs (76.9%) returned questionnaires from both a doctor and a nurse.

Four of the 33 student health centres referred sexual health consultations to the local SHC or a GP. Of the remaining 29 student health centres, 25 (86.2%) responded to the survey. Of the eleven specialist youth centres contacted, one did not have a health clinic and two referred sexual health consultations to the local SHC. Seven of the remaining eight specialist youth centres (87.5%) responded to the survey. From these 32 SYHCs, 27 doctors and 30 nurses returned questionnaires. 23 (71.9%) clinics returned questionnaires from both a doctor and a nurse. Of the 388 GPs surveyed, 27 were no longer practising; fourteen were not at the address provided, and one was deceased. Of the remaining, 172 (49.7%) responded, representing approximately 11% of practising GPs in New Zealand.

Knowledge of signs, symptoms and sequelae of infection. Knowledge of signs and symptoms are summarised in Table 1. When scored by assigning one point for each correct answer (maximum seven points), female doctors were significantly more likely to recognise signs and symptoms of chlamydia infection (median six) than male doctors (median five) (p=0.001). Female doctors were significantly more likely to recognise breakthrough bleeding while on the pill (RR 2.13; 95% CIs 1.59, 2.84; p=0.001) and cervical motion tenderness on examination (RR 2.22; 95% CIs 1.28, 3.85; p=0.002) as possible signs and symptoms of chlamydia infection. There was no statistically significant difference between male and female
doctors in their knowledge of sequelae of infection. SCH doctors correctly identified more signs, symptoms and sequelae than other clinic doctors and GPs.

Screening practices. Clinic respondents were more likely than GPs to screen for chlamydia infection in four of six case scenarios (Table 2). Among GPs there was no significant difference by gender or recent training. However, GPs who indicated that they were ‘very’ compared with ‘somewhat’ or ‘not very interested’ in the management of STIs, were significantly more likely to screen asymptomatic sexually active 25 year old females who had two or more partners in the previous year (RR 2.69; 95% CI 1.31,5.5; p = 0.004). When asked if they routinely screened asymptomatic sexually active females during routine Papanicolaou (Pap) smears, 82 (47.7%) GPs did not, although female GPs were more likely to screen than male GPs (RR 1.48; 95% CIs 1.12, 1.96; p = 0.018). GPs did not, although female GPs were more likely to screen for chlamydia infection in four of six case scenarios (Table 2). Among GPs there was no significant difference by gender or recent training. However, GPs who indicated that they were ‘very’ compared with ‘somewhat’ or ‘not very interested’ in the management of STIs, were significantly more likely to screen asymptomatic sexually active 25 year old females who had two or more partners in the previous year (RR 2.69; 95% CI 1.31,5.5; p = 0.004). When asked if they routinely screened asymptomatic sexually active females during routine Papanicolaou (Pap) smears, 82 (47.7%) GPs did not, although female GPs were more likely to screen than male GPs (RR 1.48; 95% CIs 1.12, 1.96; p = 0.018).

Screening for co-existing STIs. Of those who answered the question, all 54 SHIC, 44 of 46 (95.7%) FPC, 53 of 55 (96.4%) SYHC, and 156 of 169 (92.2%) GP respondents said they would screen patients with chlamydia infection for co-existing STIs. GPs were less likely to screen for co-existing infections. A further 2 SYHC respondents and eleven GPs indicated there was no local SHC to refer patients.

Specimen collection. All 78 clinic doctors, 72 of 79 (91.1%) clinic nurses, and 166 of 172 (96.3%) GPs used endocervical swabs to obtain specimens for Chlamydia trachomatis testing in women. Of those who used endocervical specimens, 51 (65.4%) clinic doctors, 51 (70.8%) nurses, and 86 (51.8%) GPs routinely removed secretions and discharge from the cervix prior to obtaining the specimen. SCH respondents were more likely to clean the cervix (82.7%) than those from FPCs (65.2%), SYHCs (55.8%) and GPs (51.8%). A number of SCH, FPC, SYHC, and GP participants reported obtaining cervical mucus swabs (3.8%, 10.6%, 7.0% and 5.2% respectively) and high vaginal swabs (1.9%, 4.3%, 5.3% and 8.7% respectively).

Test of cure. Most respondents (72.4%) performed tests of cure on patients treated for chlamydia infection. Tests of cure were done by 33 of 46 (71.7%) FPC, 48 of 56 (85.7%) SYHC, 37 of 54 (68.5%) SCH respondents, and 115 of 166 (69.3%) GPs.

Partner notification. Of the 327 survey participants responding to questions on partner notification, 318 (97.2%) said they ‘always’, and eight (2.4%) said they ‘often’ told patients with chlamydia infection to tell their partners to seek treatment. When asked if contact tracing for chlamydia infection was ‘very’, ‘somewhat’, or ‘not very important’, 55 of 56 (98.2%) SCH and 50 of 56 (93.3%) SYHC respondents said ‘very important’. Only 135 of 168 (80.4%) GPs and 12 of 47 (25.5%) FPC respondents considered contact tracing to be ‘very important’.

Referral practices. Nineteen of 44 (43.2%) FPC respondents ‘often’ referred patients to a SHC for partner follow-up or contact tracing, compared with 19 of 48 (39.6%) SYHC respondents, and 17 of 147 (11.6%) GPs. Only 5 of 44 (11.4%) FPC, 10 of 53 (18.9%) SYHC, and 4 of 157 (2.5%) GP respondents ‘often’ referred patients to SHCs for screening for co-existing infections. A further 2 SYHC respondents and eleven GPs indicated there was no local SHC to refer patients.

Discussion
New Zealand clinicians appear to be relatively knowledgeable regarding signs, symptoms and sequelae of chlamydia infection. As expected, the level of knowledge was highest amongst SCH staff as they bring significant expertise to the diagnosis, treatment and control of chlamydia infection. However, other health providers also play an important role, especially in areas where there is reduced access to SHCs.

Most survey respondents recognised chlamydia infection as a possible cause of mucopurulent cervical discharge and most correctly identified PID and infertility in females, and epididymitis and NGU in males as possible sequelae of infection. However, a number of SYHC respondents and GPs were unaware of other important sequelae such as ectopic pregnancy, and a high proportion of clinicians working outside SHCs were unaware that conjunctivitis, arthritis, and sterile pyuria could be caused by chlamydia infection. Many also did not recognise that bleeding induced by Pap smear or breakthrough bleeding while on the pill could be caused by chlamydia infection. As other studies have found, female doctors appeared more knowledgeable regarding signs and symptoms of chlamydia infection.

Since the majority of infections in both women and men are asymptomatic and can be prolonged, screening for chlamydia infection is key to the prevention of infection and its sequelae. Recommended screening criteria for chlamydia infection have been published in other countries and

Table 1. Knowledge of signs, symptoms and sequelae of chlamydia infection, by clinic type and type of training.

<table>
<thead>
<tr>
<th>Signs or symptoms</th>
<th>General Practitioners (N=172)</th>
<th>Sexual Health Planning (N=28)</th>
<th>Clinic Doctors Family Planning (N=21)</th>
<th>Student and Youth Health Planning (N=27)</th>
<th>Clinic Nurses Family Planning (N=24)</th>
<th>Student and Youth Health (N=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mucopurulent cervical discharge</td>
<td>149 (86.6%)</td>
<td>27 (96.4%)</td>
<td>21 (91.3%)</td>
<td>25 (92.6%)</td>
<td>26 (89.7%)</td>
<td>20 (83.3%)</td>
</tr>
<tr>
<td>2. Bleeding induced by a Pap smear</td>
<td>50 (29.1%)</td>
<td>18 (64.3%)</td>
<td>12 (52.2%)</td>
<td>9 (33.1%)</td>
<td>20 (69.0%)</td>
<td>18 (75.0%)</td>
</tr>
<tr>
<td>3. Signs and symptoms of PID</td>
<td>168 (97.7%)</td>
<td>28 (100.0%)</td>
<td>23 (100.0%)</td>
<td>26 (96.1%)</td>
<td>28 (96.6%)</td>
<td>24 (100.0%)</td>
</tr>
<tr>
<td>4. Complaint of breakthrough bleeding while on the pill</td>
<td>32 (18.6%)</td>
<td>16 (57.1%)</td>
<td>16 (69.6%)</td>
<td>11 (40.7%)</td>
<td>19 (65.3%)</td>
<td>19 (79.2%)</td>
</tr>
<tr>
<td>5. Cervical motion tenderness on exam</td>
<td>124 (72.1%)</td>
<td>27 (96.4%)</td>
<td>20 (87.0%)</td>
<td>21 (77.8%)</td>
<td>22 (75.9%)</td>
<td>15 (62.5%)</td>
</tr>
<tr>
<td>6. Urethral discharge in a male</td>
<td>162 (94.2%)</td>
<td>28 (100.0%)</td>
<td>23 (100.0%)</td>
<td>27 (100.0%)</td>
<td>24 (82.8%)</td>
<td>18 (75.0%)</td>
</tr>
<tr>
<td>7. Sterile pyuria</td>
<td>124 (72.1%)</td>
<td>26 (92.9%)</td>
<td>15 (65.2%)</td>
<td>17 (60.1%)</td>
<td>12 (41.4%)</td>
<td>7 (29.2%)</td>
</tr>
</tbody>
</table>

Sequelae

| 1. PID | 170 (98.8%) | 28 (100.0%) | 21 (100.0%) | 26 (96.1%) | 28 (96.6%) | 24 (100.0%) |
| 2. Ectopic pregnancy | 152 (88.4%) | 28 (100.0%) | 21 (100.0%) | 22 (81.5%) | 23 (79.3%) | 21 (87.5%) |
| 3. Conjunctivitis | 130 (75.6%) | 26 (92.9%) | 21 (91.3%) | 20 (74.1%) | 23 (79.3%) | 18 (75.0%) |
| 4. Epididymitis | 138 (80.2%) | 27 (96.4%) | 22 (95.7%) | 23 (85.2%) | 24 (82.8%) | 19 (79.2%) |
| 5. Non-gonococcal urethritis in men | 163 (94.8%) | 26 (92.9%) | 21 (100.0%) | 26 (96.1%) | 19 (65.5%) | 21 (87.5%) |
| 6. Arthritis | 99 (57.6%) | 25 (89.3%) | 14 (60.9%) | 13 (48.1%) | 21 (72.4%) | 5 (20.8%) |
| 7. Infertility | 165 (95.9%) | 26 (92.9%) | 23 (100.0%) | 26 (96.1%) | 27 (93.1%) | 23 (95.8%) |
significant reductions in infection rates and sequelae have been demonstrated following the implementation of screening programmes.21-23 Primary care practices without written screening protocols are significantly less likely to screen for infection than practices with written protocols,24 and appropriate management of STIs has been associated with doctor exposure to published guidelines.25

While many of the GPs surveyed recognised that young age, numerous sexual partners, or a change in sexual partner are risk factors for infection,1 a significant portion of GPs did not identify other circumstances, such as pregnancy and IUD insertion, where screening is strongly recommended.2,15,20 As others have found,21 female GPs were significantly more likely than practices with written protocols,24 and those in New Zealand laboratories at the time the survey was conducted, used by the majority of New Zealand laboratories at the time of this study. A large proportion of GPs, SYHC, and FPC respondents who did not diagnose chlamydia infection among infants, pregnant women should be screened for chlamydia during the 1st trimester prevents transmission of the infection and adverse effects of chlamydia during pregnancy, the evidence of adverse effects during pregnancy is minimal. To prevent maternal postpartum complications and chlamydia infection among infants, pregnant women should be screened for chlamydia during the 3rd trimester so that treatment will be completed before delivery (CDC, 1993).

**Table 2. Screening practices in six case scenarios.**

<table>
<thead>
<tr>
<th>Scenario for asymptomatic, sexually active females....</th>
<th>Response</th>
<th>Sexual Health Clinics*</th>
<th>Family Planning Clinics*</th>
<th>Student and Youth Health Centres*</th>
<th>GPs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A 25-year-old patient comes in for a Pap smear and tells you that she’s had two sexual partners during the past year.</td>
<td>Yes</td>
<td>(N=49)</td>
<td>(N=47)</td>
<td>(N=55)</td>
<td>(N=166)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3 (6.1%)</td>
<td>1 (2.1%)</td>
<td>2 (3.6%)</td>
<td>49 (29.5%)</td>
</tr>
<tr>
<td>2. A 16-year-old patient has come in for a sexual health check. She has been using non-barrier contraception.</td>
<td>Yes</td>
<td>52 (98.1%)</td>
<td>46 (100%)</td>
<td>55 (98.2%)</td>
<td>145 (86.8%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1 (1.9%)</td>
<td>0</td>
<td>1 (1.8%)</td>
<td>22 (13.2%)</td>
</tr>
<tr>
<td>3. A patient is coming in for an IUD insertion.</td>
<td>Yes</td>
<td>22 (100.0%)</td>
<td>43 (100.0%)</td>
<td>33 (97.1%)</td>
<td>110 (79.1%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>1 (2.9%)</td>
<td>29 (20.9%)</td>
</tr>
<tr>
<td>4. A patient is seeing you for a routine first trimester examination.</td>
<td>Yes</td>
<td>19 (95.0%)</td>
<td>26 (92.9%)</td>
<td>32 (91.4%)</td>
<td>108 (72.0%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1 (5.0%)</td>
<td>2 (7.1%)</td>
<td>3 (8.6%)</td>
<td>42 (28.0%)</td>
</tr>
<tr>
<td>5. A patient has come in for a health check before a termination of pregnancy.</td>
<td>Yes</td>
<td>42 (100.0%)</td>
<td>41 (100.0%)</td>
<td>48 (100.0%)</td>
<td>155 (99.4%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.6%</td>
</tr>
<tr>
<td>6. A patient says her partner has urethritis.</td>
<td>Yes</td>
<td>51 (98.3%)</td>
<td>45 (100.0%)</td>
<td>54 (100.0%)</td>
<td>170 (100.0%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1 (1.9%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Non-responders and persons indicating the given scenario was not applicable (eg don’t do IUD insertions, don’t see antenatal patients, patients referred elsewhere for TOP health checks) were excluded from this analysis. †CMO’s Expert Advisory Group, 1998. ‡Adapted by Donovan, 1997. §Weyman, 1995. ¶According to Canadian guidelines (Weyman, 1995), indications of high risk include: 1. evidence of mucopurulent cervical discharge 2. ≥15 years of age plus one of the following: (a) more than one sexual partner in the past year; (b) new sexual partner in the last 2 months; (c) no contraception or use of non-barrier contraception; or (d) bleeding induced by endocervical swab 3. patients attending STD clinic who was not given anti-chlamydia treatment 4. other groups (eg family planning clinic attendees) where the estimated prevalence of chlamydia infection ≥7%. **US CDC guidelines state that, although screening during the 1st trimester prevents transmission of the infection and adverse effects of chlamydia during pregnancy, the evidence of adverse effects during pregnancy is minimal. To prevent maternal postpartum complications and chlamydia infection among infants, pregnant women should be screened for chlamydia during the 3rd trimester so that treatment will be completed before delivery (CDC, 1993).
The extremely high rates of chlamydia infection in New Zealand, screening guidelines are urgently required.

Acknowledgements. We thank the general practitioners and staff at the sexual health clinics, family planning clinics, student and youth health centres, and laboratories who responded to this survey. We would also like to thank Maria Turley (ESR), Murray Reid (Auckland sexual health clinic) and Kitty Flannery (Waikato sexual health clinic) for their advice and critique of the manuscript.

Correspondence. Anne McNicholas, Institute of Environmental Science and Research (ESR), Kenepuru Science Centre, PO Box 50 348, Porirua. Fax: 67 4 914 0770; email: anne.mcnicholas@esr.cri.nz

A case of infectious tuberculosis on two long-haul aircraft flights: contact investigation

Gary Whitlock, Research Fellow, Clinical Trials Research Unit, University of Auckland; Lester Calder, Public Health Medicine Specialist; Hilary Perry, Public Health Nurse, Public Health Protection, Community Health Services, Auckland Healthcare, Auckland.

Abstract

Aim. During a five-week period in 1996, a passenger with highly infectious tuberculosis travelled on five long-haul aircraft flights. We investigated passengers and crew on two of these flights to identify whether transmission of Mycobacterium tuberculosis had occurred.

Methods. Crew and passengers were identified from airline and immigration records. Contacts were notified of their exposure and invited to attend their local public health clinic. At the clinic, a questionnaire was administered by a public health worker, and a Mantoux skin test was performed. When indicated, a second test was carried out twelve weeks later. Test positivity and conversion were defined according to the 1996 New Zealand tuberculosis control guidelines.

Results. Data were obtained on 206 (87%) of the 238 contacts. Twenty four contacts had a positive Mantoux test result, four of which were conversions. All of these contacts had at least one other major risk factor for a positive result, such as a previous BCG vaccination (n=17) or having lived in a country in which tuberculosis is endemic (n=15). To our knowledge, no contacts have subsequently developed tuberculosis disease.

Conclusions. The investigation produced inconclusive evidence about the hypothesis that Mycobacterium tuberculosis was transmitted on one or both of these flights.

A number of instances of possible transmission of Mycobacterium tuberculosis on long-haul aircraft flights have been reported. However, there is still uncertainty about how readily such transmission might occur, and therefore also about what public health interventions are appropriate when a person with infectious tuberculosis is found to have travelled on such a flight. This question is becoming more important in New Zealand as the number of flights between New Zealand and countries in which tuberculosis is endemic increases. In this paper, we report the results of an investigation of passengers and crew who travelled on two long-haul flights with a person who was subsequently found to have infectious tuberculosis.

Methods

The two flights took place during a five-week period in 1996. The first flight, from Auckland to Honolulu (flight A), was eight hours long, and the second, from Honolulu to Auckland (flight B), was eight hours and 20 minutes long. Both flights were, according to the airline, on Boeing 767-300 aircraft fitted with high efficiency particulate attenuation filters for cabin air.

The index case travelled on three other long-haul flights (Honolulu-Vancouver, Vancouver-Toronto and Toronto-Honolulu) during this period. However, because of practical and resource constraints, we were not able to investigate contacts on these flights; nor were we able to investigate every contact on flight A (the greater elapsed time between this flight and notification made it harder for contacts to be traced). Consequently, the investigation of flight A was restricted to passengers who had been sitting in the same cabin section (rows 7-17) as the index case, and to the crew on that flight. All passengers and crew on flight B were investigated. (Hereafter, the term ‘contact’ refers only to those passengers and crew who were investigated). The passengers not investigated were sent a letter explaining that they had possibly been exposed to tuberculosis on the flight in question, but that their risk of infection was low, and they therefore were not being asked to take part in the investigation.

New Zealand Immigration provided names and addresses of the passengers, while the airline gave us the names and addresses of the crew, together with the passenger seat assignments. Staff at the Auckland Public Health Office telephoned contacts who lived in the Auckland region to inform them of their possible exposure to tuberculosis, and to request that they attend a clinic to be given a skin test. Contacts in the Auckland region who could not be reached by telephone were sent a letter containing this information. Medical officers of health in other regions of New Zealand, and public health staff in Australia, Canada and the United States, were sent a letter requesting that they carry out the same procedure for the contacts living in their country or region. They were additionally sent the telephone numbers and addresses of the contacts, and copies of the questionnaire used to investigate contacts in the Auckland region.

The questionnaire was interviewer-administered, and had questions about risk factors for a positive Mantoux test (past personal and family history of tuberculosis, past BCG vaccination, and countries lived in), relevant medical conditions, and movement around the aircraft. BCG vaccination status was determined by personal recall and, in most instances, the presence or absence of a scar.

In New Zealand, Mantoux tests (5 tuberculin units) were performed according to Ministry of Health guidelines; while in other countries, local guidelines were used. In Auckland, all of the tests were administered and the readings taken by one or other of two public health nurses (information is not available for other places). Contacts were invited to have a second test at twelve weeks, unless the first test had been performed more than twelve weeks after the relevant flight, or the first test result was 10 mm or greater. Mantoux test positivity and conversion were defined according to the 1996 New Zealand guidelines.

Results

Index case. The index case was a 21-year-old New Zealand woman who had been investigated for suspected tuberculosis when aged fourteen years, but no definite diagnosis had been made or treatment given. During the month before flight A she had experienced a cough and weight loss, and a day after arrival of flight B in Auckland, she had an episode of haemoptysis. The following day she was admitted to hospital where she was diagnosed with pulmonary tuberculosis. She was regarded as highly infectious because a sputum smear obtained five days after the flight was strongly positive for acid-fast bacilli (100+ acid-fast bacilli per high-powered field) and a chest x-ray showed pulmonary cavitation, an apical pneumothorax and signs consistent with extensive pulmonary tuberculosis. The sputum culture grew fully sensitive Mycobacterium tuberculosis. Her case was notified to the Auckland Public Health Office.

Contacts. In total, 238 contacts were investigated on the two flights (67 on flight A, 171 on flight B). The contacts lived in Auckland (n=103), Christchurch (25), Wellington (23), elsewhere in the North Island (50), elsewhere in the South Island (14), Canada (9), Australia (2) and the United States (2). Ten contacts had no recorded domicile address. We were
able to reach 206 of the 238 contacts (ie 87% were ‘respondents’). A completed questionnaire and two Mantoux test results (or one result if only one test was indicated) were obtained from 142 contacts (ie 69% of the respondents had ‘complete data’).

24 of the contacts, all passengers, had positive Mantoux test results (17% of the respondents with complete data: Table 1). Seven of these contacts had travelled on flight A (24% of those with complete data on flight A), and seventeen had travelled on flight B (15% of those with complete data on flight B). However, all contacts with a positive test result had one or more known risk factors for a positive result, the most common being previous BCG vaccination (n=17) and having lived for at least six months in a country in which tuberculosis is endemic (15).

Four passengers (all on flight B) converted their Mantoux test result (Table 1). One of these had recently experienced a non-tuberculosis mycobacterial infection (Mycobacterium marinum), and the other three had previously received a BCG vaccination. In addition, two of the passengers had lived in a country in which tuberculosis is endemic. All four of the conversions could therefore have been booster effects from a previous BCG vaccination or previous mycobacterial infection.4 All four contacts had a normal chest x-ray during the course of contact investigation. Thus, although it is possible that transmission of Mycobacterium tuberculosis occurred on one or both of the flights, there are plausible alternative explanations for all of the positive Mantoux test results, including conversions.

Contacts were managed according to protocols in their region or country. To our knowledge, none of the contacts have thus far shown evidence of tuberculosis disease. Specifically, as of October 2000, none of the contacts had been notified to New Zealand’s national notification database at the Institute of Environmental Science and Research. However, a course of isoniazid chemoprophylaxis was offered to one contact, a seven year old New Zealand boy with no risk factors for Mantoux positivity, whose result nearly converted (0 to 7 mm). He travelled on two flights with the index case: flight B (seated fifteen rows from the index case) and the preceding connecting flight from Vancouver to Honolulu (seating proximity unknown). It was felt that the risk of tuberculosis transmission was moderately low, but nevertheless sufficient to justify isoniazid therapy (although his parents declined the offer). He has been followed up with six-monthly chest x-rays, and has remained well.

**Discussion**

This contact investigation produced inconclusive evidence regarding the hypothesis that Mycobacterium tuberculosis was transmitted on two long-haul flights on which a person with highly infectious tuberculosis had travelled. Although 24 of the 238 contacts investigated had a positive Mantoux test result (four of which were conversions), all had at least one plausible explanation other than recent tuberculosis infection for their test result.

This aircraft-related contact investigation is one of a number of similar investigations to have produced inconclusive findings.1-7 Some other investigations, however, did report that transmission was likely,1,2 or unlikely,5,8 to have occurred during an aircraft flight. Taken together, the evidence from these studies and other sources10-12 implies that transmission of Mycobacterium tuberculosis on aircraft is possible, although unlikely, when a person with highly infectious tuberculosis travels on a long-haul aircraft flight.

Our experience highlights some of the practical difficulties involved in conducting and interpreting investigations of passengers and crew when a person with infectious tuberculosis travels on a long-haul flight. Our experience highlights some of the practical difficulties involved in conducting and interpreting investigations of passengers and crew when a person with infectious tuberculosis travels on a long-haul flight.

### Table 1. Characteristics of the contacts* who had positive Mantoux test results.

<table>
<thead>
<tr>
<th>Contact No.</th>
<th>Age (years)</th>
<th>Flight</th>
<th>Rows from Index Case</th>
<th>Weeks between flight and Mantoux Tests</th>
<th>Mantoux Test First (mm)</th>
<th>Mantoux Test Second (mm)</th>
<th>Conversion†</th>
<th>Risk Factors for a Positive Mantoux Test‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68</td>
<td>B</td>
<td>7</td>
<td>4, 16</td>
<td>0</td>
<td>11</td>
<td>Yes</td>
<td>Known recent Mycobacterium marinum infection</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td>B</td>
<td>1</td>
<td>5, 26</td>
<td>0</td>
<td>15</td>
<td>Yes</td>
<td>Live in South Africa, past BCG (year unknown)</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>B</td>
<td>10</td>
<td>3, 19</td>
<td>2</td>
<td>12</td>
<td>Yes</td>
<td>Live in Micronesia, past BCG (1978)</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>B</td>
<td>18</td>
<td>3, 12</td>
<td>5</td>
<td>20</td>
<td>Yes</td>
<td>Past BCG (1959)</td>
</tr>
<tr>
<td>5</td>
<td>NA</td>
<td>A</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>-</td>
<td>No</td>
<td>Lived in Middle East, health-care worker</td>
</tr>
<tr>
<td>6</td>
<td>72</td>
<td>A</td>
<td>7</td>
<td>11</td>
<td>21</td>
<td>-</td>
<td>No</td>
<td>Live in South Pacific islands</td>
</tr>
<tr>
<td>7</td>
<td>42</td>
<td>B</td>
<td>10</td>
<td>3</td>
<td>20</td>
<td>-</td>
<td>No</td>
<td>Live in Middle East</td>
</tr>
<tr>
<td>8</td>
<td>50</td>
<td>B</td>
<td>27</td>
<td>18</td>
<td>24</td>
<td>-</td>
<td>No</td>
<td>Live in South America, past BCG (1953)</td>
</tr>
<tr>
<td>9</td>
<td>58</td>
<td>B</td>
<td>26</td>
<td>6</td>
<td>18</td>
<td>-</td>
<td>No</td>
<td>Past BCG (year unknown)</td>
</tr>
<tr>
<td>10</td>
<td>57</td>
<td>B</td>
<td>26</td>
<td>4</td>
<td>22</td>
<td>-</td>
<td>No</td>
<td>Past BCG (year unknown)</td>
</tr>
<tr>
<td>11</td>
<td>54</td>
<td>B</td>
<td>28</td>
<td>4</td>
<td>20</td>
<td>-</td>
<td>No</td>
<td>Past BCG (year unknown)</td>
</tr>
<tr>
<td>12</td>
<td>40</td>
<td>B</td>
<td>9</td>
<td>4</td>
<td>20</td>
<td>-</td>
<td>No</td>
<td>Live in South Pacific islands, past BCG (year unknown)</td>
</tr>
<tr>
<td>13</td>
<td>41</td>
<td>A</td>
<td>4</td>
<td>9, 21</td>
<td>10</td>
<td>11</td>
<td>No</td>
<td>Live in South Pacific islands</td>
</tr>
<tr>
<td>14</td>
<td>40</td>
<td>A</td>
<td>5</td>
<td>9, 16</td>
<td>10</td>
<td>10</td>
<td>No</td>
<td>Live in Southeast Asia</td>
</tr>
<tr>
<td>15</td>
<td>33</td>
<td>A</td>
<td>0</td>
<td>10</td>
<td>13</td>
<td>-</td>
<td>No</td>
<td>Live in South America, past BCG (1967)</td>
</tr>
<tr>
<td>16</td>
<td>49</td>
<td>B</td>
<td>11</td>
<td>4</td>
<td>10</td>
<td>-</td>
<td>No</td>
<td>Past BCG (1960), stomach cancer</td>
</tr>
<tr>
<td>17</td>
<td>50</td>
<td>B</td>
<td>28</td>
<td>8</td>
<td>10</td>
<td>-</td>
<td>No</td>
<td>Live in South America, past BCG (1959)</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>B</td>
<td>23</td>
<td>4, 16</td>
<td>7</td>
<td>10</td>
<td>No</td>
<td>Live in Southeast Asia and south America, past BCG (1990)</td>
</tr>
<tr>
<td>19</td>
<td>59</td>
<td>A</td>
<td>3</td>
<td>9</td>
<td>22</td>
<td>-</td>
<td>No</td>
<td>Known past tuberculosis disease</td>
</tr>
<tr>
<td>20</td>
<td>64</td>
<td>A</td>
<td>3</td>
<td>9, 22</td>
<td>10</td>
<td>17</td>
<td>No</td>
<td>Live in Southeast Asia, past BCG (1922)</td>
</tr>
<tr>
<td>22</td>
<td>50</td>
<td>B</td>
<td>1</td>
<td>5</td>
<td>15</td>
<td>-</td>
<td>No</td>
<td>Live in South Africa, past BCG (1967)</td>
</tr>
<tr>
<td>23</td>
<td>39</td>
<td>B</td>
<td>19</td>
<td>4, 18</td>
<td>10</td>
<td>17</td>
<td>No</td>
<td>Past BCG (1970)</td>
</tr>
<tr>
<td>24</td>
<td>48</td>
<td>B</td>
<td>10</td>
<td>3</td>
<td>15</td>
<td>-</td>
<td>No</td>
<td>Live in Melanesia and Polynesia, past BCG (1961)</td>
</tr>
</tbody>
</table>

NA = not available. *All were passengers. †Second Mantoux test result at least 10 mm larger than the first. ‡‘Lived in’ means lived for at least six months.
Marijuana use in New Zealand, 1990 and 1998

Adrian Field, Health Research Council Training Fellow; Sally Casswell, Professor and Director, Alcohol & Public Health Research Unit, Runanga, Wananga, Haurua me te Paekaka, University of Auckland, Auckland.

Abstract

Aims. To examine changes in marijuana use in a metropolitan region and a provincial/rural region in New Zealand between 1990 and 1998.

Methods. Two random sample surveys of people aged 15 - 45 years were carried out in Auckland and Bay of Plenty regions in 1990 and 1998, using a computer-assisted telephone interviewing system.

Results. Use of marijuana in the last twelve months increased in the metropolitan sample from 18% to 22%, but not in the provincial area. Those who had ever tried marijuana increased from 43% of the total sample in 1990 to 52% in 1998. Use was higher among men than women, but had increased among women. There was a trend towards more frequent users of marijuana (ten or more occasions in the previous 30 days), from 2.4% to 3.2%.

Conclusions. Experience of marijuana was slightly more common in 1998 than in 1990, but increases in recent use were small and were found only in the metropolitan area. The increase in use was relatively limited: only one in five of each sample had used marijuana in the past year, and opportunity to use marijuana by non-users had not increased. Use was predominantly casual and social, and most who had tried marijuana no longer used the drug. However, the age at which first use occurred appeared to have declined.

A 1990 survey of a metropolitan area (greater Auckland) and a provincial/rural area (Bay of Plenty) provided a baseline of marijuana use in New Zealand. Marijuana was, in 1990, the most popular illegal drug in New Zealand. In the 1990 regional survey, 43% of the sample aged 15-45 years reported trying marijuana, and 18% reported use in the last twelve months. A follow-up regional survey of the same areas, carried out in 1998 and the focus of this report, provides a picture of changes in marijuana use.

In the news media, suggestions of increasing cannabis use in New Zealand are common. This has included reports of an increase in cannabis use in schools and among young people, signalled by an increase in drug suspensions from previous years, and suggestions of an “epidemic” in cannabis use, particularly among young people. There have also been many reports of extensive cultivation of cannabis in areas such as Northland, Eastern Bay of Plenty and Coromandel. Local cannabis crops are also put forward as important contributors to some regional economies, helping to sustain regional economic activity. The government has signalled its intention to review the legal status of cannabis through a select committee inquiry.

This paper looks at changes in adult use of marijuana between the 1990 and 1998 surveys and examines the different age and gender patterns of marijuana use; the context of marijuana use; and supply of marijuana. It also compares the results with other New Zealand survey data.

Methods

Research design. Two surveys on drug use by people aged 15-45 years were carried out in a metropolitan sample (the greater Auckland region) and a provincial/rural sample (Bay of Plenty) in 1990 (N=5125) and 1998 (N=5250).
Sampling methods. Telephone numbers were selected from the Auckland local calling area, and four Bay of Plenty calling areas. Sampling was stratified so that the sample size achieved in each region was proportional to its population aged 15-45 years in the previous Statistics New Zealand Census. This balance between metropolitan and provincial/rural sample sizes is likely to provide a reasonable indication of drug use across New Zealand, and the results from the 1998 regional survey are similar to those found in a national survey of drug use conducted at the same time. Within each stratum, a two-stage random scheme was employed: random digit dialling was used so that each household within the two regions would have an equal chance of being called; and one person was randomly selected from each household for an interview.

Interviewing methods. The 1990 and 1998 surveys used the Alcohol & Public Health Research Unit’s in-house computer assisted telephone interviewing (CATI) system. All interviews were conducted from a central interviewing facility. A supervisor was present at all times to monitor telephone lines and computer screens to ensure a high degree of quality control. The response rate for the 1990 survey was 68% overall, and 77% in the 1998 survey, both of which were high for telephone surveys.

Statistical analyses. Since only one person was interviewed per household, survey analysis was weighted for household size, and statistical tests were adjusted with a design effect of 1.22, to account for increased statistical error after weighting, compared to a simple random sample of the same size. The survey results were analysed for the Auckland and Bay of Plenty regions combined, but differences between the two samples were also investigated and reported on where significant.

Unless otherwise stated, all differences reported are significant at the p<0.01, using parametric or non-parametric methods. Appropriate transformations were applied to continuous or nearly continuous variables prior to significance testing.

Results
Prevalence. Table 1 shows the changes in ever trying, use in the past year, and current use for the metropolitan and provincial/rural samples. In 1998, 52% reported having tried marijuana, an increase from 43% in 1990. The increase in prevalence of ever trying marijuana was greater in the provincial/rural sample than the metropolitan sample. Use of marijuana in the last twelve months (‘last year marijuana users’) was reported by 18% of the total sample in 1990, and 21% in 1998. However, this reflected a significant increase in use in the last twelve months in the metropolitan sample, but not the provincial/rural sample. Use of the drug was predominantly in private homes, and most never drove under the influence of marijuana. There was no significant change in responses in each survey.

Among last year marijuana users in each survey, use of the drug was predominantly in private homes, and most never drove under the influence of marijuana. The responses to these questions are detailed in Table 2.

Other results suggest that the age at which people first tried marijuana fell between the two surveys. In 1990, 40% of those who had tried marijuana had done so by sixteen years of age. In 1998, 52% of those who had tried marijuana had done so by age sixteen years.

Marijuana use was most commonly an occasional activity. Among those who had used marijuana in the last year, 53% of men in 1990 and 1998, and a clear majority of women (73% in 1990 and 64% in 1998, p<0.05) had done so on fewer than ten occasions.

More frequent marijuana use was defined as using the drug on ten or more occasions in the last month. There was a trend towards an increase in this level of use, from 2.4% to 3.2% of the total sample (p<0.05). In each survey, men were more likely to be more frequent users than women (3.9% versus 0.9% in 1990, and 4.6% versus 1.7% in 1998). The average number of joints smoked on a typical occasion by last year marijuana users was about two-thirds of a joint per person and did not change between 1990 and 1998. The largest amount, getting closer to a whole joint per person, was reported by 15-17 year olds.

Context of marijuana use. Participants were asked about the extent of their use of marijuana in a variety of situations: in private homes, in public places, at work, and driving. There was no significant change in responses in each survey. For most last year marijuana users in each survey, use of the drug was predominantly in private homes, and most never drove under the influence of marijuana. The responses to these questions are detailed in Table 2.
Current users were asked if getting marijuana is easier, harder or the same as a year ago. Fewer in 1998 than in 1990 said access to marijuana was getting harder, declining from 24% to 11%. Current users (who purchased at least some of their marijuana supply) were asked about the price they would expect to pay for an average bag of marijuana. These responses show a substantial change in the pattern of prices between the two surveys, with two clusters of bag pricing emerging. In 1990, 60% of respondents suggested prices in the $150-$350 range. In 1998, only 25% suggested prices in the $150-$350 range, and a further 46% suggested $50. Responses of this group of current users suggest that prices were stable in the 1997-98 period. In 1990, 50% said prices were higher than a year earlier, compared to 18% in 1998. 45% in 1990 said prices were the same, while 76% gave this response in 1998.

Opportunity to try marijuana by non-users. People who had never tried marijuana were asked if they had had the opportunity to use the drug in the last twelve months. There were no significant changes over the two surveys: 27% of this group in 1990 had the opportunity to use marijuana, falling slightly to 25% in 1998.

Discussion

The 1998 survey found a significant increase in the proportion of respondents who had ever tried marijuana. At least in part, this was a cohort effect. In 1990, respondents aged 35-45 years were among those least likely to have tried marijuana. By 1998, most of those who were in this age group in 1990 were outside the age range of the survey. The 1990 prevalence levels among respondents aged 25-34 years were not significantly different to the levels among those aged 35-45 years in the 1998 survey. This occurred in both the metropolitan and provincial/rural samples.

Both the 1990 and 1998 surveys point towards marijuana use as a casual and social activity. Most people who had tried marijuana had since stopped using the drug, and a majority of those using the drug did so less than once per month on average.

In the combined samples, there were only small increases in prevalence of last year and current use, and a significant increase was found only in the metropolitan area surveyed. In both the metropolitan and the provincial/rural samples, marijuana use was a minority activity, and the findings do not support suggestions of a sizeable increase in marijuana use, of the 'epidemic' proportions indicated in some media reports. However, trends in marijuana use do point to increased use. This was indicated not only by the small increases in last year and current use in the metropolitan samples, but also more people trying the drug at a younger age. The average number of joints smoked by younger respondents remained relatively high, although this did not change significantly between the two surveys. Despite controls on supply, fewer frequent users found access harder in 1998 than in 1990, suggesting greater availability. However, there was no increase among non-users in reported opportunities to try marijuana, so increased access may have been confined to those already in social networks that use the drug.

Two price brackets for marijuana had emerged by 1998: the higher price bracket of $150-$300 is in line with media reports of the approximate cost of an ounce bag, while the $50 bag price indicates a market responding to those wishing to buy smaller quantities.

The patterns of marijuana supply indicate differences between current marijuana users, and more frequent users. From these results, it is likely that the marijuana market was dominated by the small percentage who were regular users, with casual users obtaining the drug through others’ generosity rather than their own purchase. However, even among more frequent marijuana users, obtaining marijuana for free had become more common, and suggests a high level of sharing between users.

A longitudinal study of Dunedin-born people suggested higher prevalence of marijuana use than found in the 1990 regional survey. It reported that cannabis use in the previous twelve months was 52% among 21 year olds, surveyed in 1993/94. This compared with 29% of 21 year olds in the 1990 regional survey, and 32% of 21 year olds in the 1998 survey. The variation is likely to be due to the differences in the studies: the 1993/94 data were based on a longitudinal study, and the long-term involvement of the participants in the study may have encouraged greater honesty. A more important difference may have been the different response rates. Although high for telephone surveying, the response rate of the 1998 regional survey was 77%. This was lower than the response rate of the longitudinal survey, at over 95% of the original cohort. Because illegal drug users are particularly hard to reach for research purposes, the actual prevalence of use could therefore be higher than shown by the 1990 and 1998 regional survey results. However, by using the same methodology in 1990 and 1998, and achieving similar response rates, the monitored trends in the telephone surveys are likely to reflect the actual trends.

Another longitudinal study, this time of 990 Christchurch-born children (representing 75% of the original cohort), examined respondent’s experiences between ages fifteen and 21 years. The study found that 69% of the cohort had tried marijuana by age 21. In the 1998 regional survey, 49% of 21 year olds had tried marijuana. One in four participants (24%) in the Christchurch study had used marijuana on fewer than ten occasions; this compares with 34% of 21 year olds in the 1998 regional samples (difference of p<0.05 between the two studies). As with the Dunedin survey, long-term involvement of participants may be an important factor in these differences.

In conclusion, the results of the 1990 and 1998 regional New Zealand surveys point to marijuana use remaining a minority, albeit common, activity. Although by 1998, more than half the sample had tried marijuana, in each survey only one in five respondents had used the drug in the previous year. Trends in use showed only limited changes, with only a 3% increase in the total sample in last year use, a smaller increase in more frequent use, and no increase in opportunity to use the drug by non-users. However, this sample did not include respondents below fifteen years, and the results suggest that the period between 1990 and 1998 saw marijuana ‘bedding in’, with people starting use at a younger age and more past experience among older respondents. These survey results suggest New Zealand policy makers face a significant challenge to reconcile current levels of marijuana use with the need to address the potential harm associated with use of the drug.

Acknowledgments. This comparison survey was a project of the Alcohol & Public Health Research Unit (APHRU), funded as a core programme of the Health Research Council and the Alcohol Advisory Council. The Health Research Council provided the funds for data collection of this sample as an investigator initiated grant to Professor Sally Casswell. The quality of the data collected depended on the dedication of the team of CATI interviewers, and of their supervisors: Brendan Dacey and Francesca Holibar coordinated the CATI team and the data collection process. Jia-fang Zhang, Michael Ford and Dr Krishna Bhatta carried out data management and statistical analysis. We acknowledge the time and willingness of participants to respond to the survey, without which the project could not have taken place.

Correspondence. Professor Sally Casswell, Alcohol & Public Health Research Unit, University of Auckland, Private Bag 92019, Auckland. Fax: (09) 373 7057; email: aphru@auckland.ac.nz

10 August 2001

New Zealand Medical Journal

357

Women in rural general practice: the stresses and rewards
Raina Elley, rural general practitioner, Te Aroha.

Abstract

Aims. There is a shortage of general practitioners (GPs) in New Zealand rural areas, especially women GPs. An exploratory study was undertaken to ascertain why some women become rural GPs and to identify some of the significant stresses and rewards of rural practice for women.

Methods. Qualitative interviews were carried out with fourteen rural women GPs from around the North Island during 1999.

Results. Major issues identified from the interviews included on-call duty, locums, isolation, continuing medical education and the difficulty combining a family with the demands of rural practice.

Conclusions. Based on the findings, recommendations are made to aid recruitment and retention of rural GPs, particularly women rural GPs.

For over 20 years, there have been difficulties in recruiting and retaining rural general practitioners (GPs) in New Zealand. Women, in particular, are under-represented in rural practice. While 24% of New Zealand’s population live in rural areas, only 14% of GPs are rural. 40% of members of the Royal New Zealand College of General Practitioners (RNZCGP) are now women, but only 4.6% (124) are women rural GPs (Information Manager, RNZCGPs, personal communication 1999). Women in rural communities are significantly less likely to have access to a female GP than their urban counterparts, and yet it has been suggested that many women prefer to be seen by a female practitioner. The literature in New Zealand and overseas has identified some of the stresses rural GPs face. These include heavy workloads, lack of anonymity, difficulty unwinding, lack of time with family, limited educational and occupational opportunities for family members, frequent after-hours work, the obligation to work when sick, the difficulty of obtaining locums, lack of holidays, lack of other medical backup nearby, and inadequate financial compensation for these disadvantages. The Medical Practitioners Bill and the health reforms in New Zealand have added to the burdens of rural general practice, in the form of increased accountability, accreditation, the requirement of continuing medical education and distances required to travel to courses and lectures, the PRIMEX examination, and the down-grading or closure of local rural hospitals.

Rural GP shortages have been documented internationally. However, countries such as Australia have committed substantial funds to address some of the problems and attract rural GPs. The US and Canada have developed specific educational, governmental and community initiatives to promote recruitment and retention of family physicians in rural areas. In New Zealand, regional initiatives have been tried, such as the South Island rural locum scheme, a pilot nurse-operated telephone triaging system in the Waikato, undergraduate and post-graduate medical education rotations in rural practices, and the Northern Consortium, designed to assist locum cover and educational needs of rural practitioners in Northland. National initiatives are also underway such as the development of a ‘Centre for Rural Health’ in Christchurch, and the Rural Health Directorate of Aotearoa, which will also be advising the Ministry of Health. Despite these initiatives, the exodus of rural doctors continues. There is little written about this rural GP crisis from the perspective of rural women GPs. This study explores issues for women rural GPs in the North Island of New Zealand using qualitative interviews undertaken during 1999.

Methods

Both purposive and convenience sampling methods were used to locate fourteen interviewees, in order to represent a diversity of viewpoints. Interviewees were found through professional contacts, telephone directories, contact with the Northern Consortium of rural GPs, searching of RNZCGP conference attendance lists, and through personal contacts of the author. Respondents were chosen from different areas of the North Island ranging from the far North to the Wairarapa, and from very isolated areas (eg married couple GPs working alone) to less isolated areas (1 in 4-8 on-call roster).

All fourteen women were interviewed using a semi-structured interview format that asked how they came to be rural GPs, and what they found most rewarding and stressful about their jobs. Most interviews were one-to-one, and undertaken at the homes or surgeries of the interviewees. Interviews were audio-taped and lasted 45-60 minutes. Transcripts of the tape recordings were read several times, themes identified and coded according to themes and reorganised to allow description of all material relating to each theme. Transcript quotations and summaries of the themes generated were sent to each interviewee to check for accuracy and agreement of interpretation.

Results

Thirteen women were married with children. Six were full-time GPs or had been until recently, while the others were part-time. Many had partially or fully trained in other specialties such as anaesthesia, emergency medicine, paediatrics and surgery, prior to becoming rural GPs. Experience in rural practice varied from 2-12 years. Main themes identified included:

1. The Choice. Nine of the fourteen women were trained overseas so rural positions were frequently the only ones open to them when they came to New Zealand.

“At the time we were told that we would have to do a rural job if we wanted residency.”
Many of the overseas-trained women had not originally intended to become rural GPs but did so because of their husband’s occupation. By contrast, all of the New Zealand-trained women made active choices to become rural GPs, some doing so during medical school. Being brought up in small or rural communities helped many of the women GPs cope with the isolation of their present position and was a significant reason for them practising in rural areas. One woman wanted to return something to her rural Maori community. Others had extended family living near-by, which provided child care and domestic and emotional support. Many of the overseas-trained women lamented a lack of family support.

2. On-call Duties. These were often cited as the most demanding part of the job and particularly difficult while bringing up a family.

“Trying to combine on call with children is one of the most impossible things that anyone asks of themselves...”

“At times, I’ve dragged (my son) along with me... He has to wait in the waiting room if I haven’t been able to find anyone to look after him. Or if it’s in the early hours of the morning and there’s no one around. I have to bring him along with me.”

Security was a major issue for some women, as call-outs to strangers in the middle of the night were unpredictable and sometimes potentially physically dangerous. Being on call while still getting up to small children or breast feeding through the night was particularly stressful and exhausting. Women often spoke of feeling torn between spending time with their children and the demands of the job.

“And the other stress is the call that comes at bed time. In the middle of reading a bedtime story and the telephone goes, and you’re on duty. And you have to say, “I’m sorry, someone’s sick, I have to go.”

Some women, who did not have young children, or had a larger number of GPs to share the on-call roster with, enjoyed on-call work.

3. Locums. Many of the women spoke of the difficulty finding locums for breaks and the stress this caused themselves and their families.

“As long as you knew, that some time during the year, you could have a break... Last year... I didn’t have a break.”

Maternity leave was particularly difficult to find locums for because of the long duration of the leave. It sometimes meant that the woman returned to full medical duties after the birth earlier than she would have chosen to do, and working longer hours with more after hours call than she would have liked. One woman commented that their supply of locums dried up a few years ago when the Medical Council Regulations for temporary registration of visiting doctors became more stringent. She also said that locums cost more than the practice could earn, and paying for a locum sometimes put them into debt. Financial difficulties of practising in poorer areas were overcome by salaried positions for two women.

4. Small Town and Isolation. While small communities were often supportive, close friends were difficult to make because most friends were also patients. ‘Street consultations’ were common at the play centre, school, supermarket or at social functions. Many felt they were never off duty, could never “let their hair down” or be anonymous, and some avoided shopping locally or participating socially in order to have a break from being ‘the doctor’. Having to cope with all medical emergencies, without near-by back-up, was seen as nerve-wracking at times but also rewarding. Caring for whole families or communities was also seen as rewarding. The beauty of the environment and lack of commuting time were major advantages.

5. Continuing Medical Education (CME) and Vocational Training. CME was thought to have improved greatly with distance learning options and the increased flexibility of registration requirements for part-time or rural doctors. Some rural women commented how part-time training positions in the GP vocational training programme (GPVTP) had not been available to them. Nor had distance training or local supervision been available. They were required to do significantly more clinical time than their urban registrar counterparts before being accepted as fellows of the RNZCGP. They found that these policies did not promote rural general practice and unfairly disadvantaged them as rural and as part-time practitioners. There was also a view expressed that because women with families sometimes chose to work part-time, they were not considered to be as committed to their profession.

Discussion

Having come from a rural area, or having family resident in the rural area, made adjusting to rural GP life easier and childcare during after-hours work less problematic, for some. Recruiting medical students from rural areas has aided rural GP recruitment overseas, as has increasing rural rotations at an undergraduate and postgraduate level. On-call duties were particularly stressful, especially when combined with bringing up young children. Security was also an issue. Amalgamation of adjacent towns for after hours cover, subsidised local or telephone nurse triaging and basing after-hours services at local hospitals where other staff are around, may help address these issues and are being tried in some towns.

The difficulty of finding locums for holidays, maternity-leave, sick leave or conference and education leave, was a significant stress. A rural locum scheme has been approved in New Zealand based on a pilot scheme, but has not been implemented. The extra financial burden in very small towns, of paying a locum’s minimum wage, was also an issue for some GPs. Financial assistance or salaried positions in more isolated or poorer areas may be justified. Part-time training available locally or by distance learning would allow rural women doctors to qualify as GPs in their own environment, without involving an upheaval to their families.

The issues raised are exploratory and generalisability is limited by the small sample size and potential bias, both from the author’s own views as a part-time rural GP and from possible selection bias. Themes explored here are important in view of the dwindling numbers of rural GPs and are reflected in other local and international research about rural practice. Addressing these issues and those raised elsewhere in the literature may go some way to relieving the shortage of rural GPs, both male and female.

Acknowledgements. I thank the women GPs who gave their time freely to contribute to this study. I also thank Drs Ngaire Kerse and Ron Janes for their comments on the final draft.

Correspondence. Dr Raina Elley, Miles Road, RD3, Te Aroha. Email: rainaclive@xtra.co.nz

Neuroretinitis is an uncommon disorder characterised by abrupt loss of vision, optic disc swelling and macular star lipid exudates. Cat scratch disease (CSD) has long been implicated as a cause of neuroretinitis, but the specific organism has only been identified recently. Bartonella henselae is now recognised as the cause of CSD. The reported prevalence of neuroretinitis associated with CSD varies from 2% to 26%. It is often unilateral, but bilateral involvement has been reported. Patients usually recover over a period of several months, although some may sustain permanent visual loss.

Case report
A five-year old Caucasian girl was referred to us with a history of sudden loss of vision in both eyes of three weeks duration. She had intermittent headache for a period of 4-6 months prior to seeking medical attention. Papilloedema was noted by her paediatrician and repeated lumbar punctures showed an opening pressure between 20-30 cms H2O with normal protein and cellular morphology. Ophthalmology review confirmed papilloedema presumed secondary to idiopathic intracranial hypertension. CT and MRI scans of head were non-contributory. Liver function tests and serum lead levels were normal. She had been treated for idiopathic intracranial hypertension for twelve days with acetazolamide during which time she also had five days of frusemide and followed by seven days of prednisone. There had been no improvement in her vision or resolution of papilloedema. A shunting procedure to lower the intracranial pressure was proposed to the child's parent prior to being seen for a neuro-ophthalmology consultation.

Neuro-ophthalmology examination showed best-corrected visual acuity of 6/24 in each eye. There was no afferent pupillary defect. She had a normal visual field and colour vision. Fundus examination showed bilateral marked disc swelling with macular star lipid exudates (Figure 1A). CSD associated neuroretinitis was strongly suspected and further history taking revealed that the child had close contact with kittens at home prior to the illness. Subsequent serology testing showed positive Bartonella henselae titres (IgG 1: 1024), and the diagnosis of Bartonella henselae neuroretinitis associated with CSD was confirmed. All systemic medications were discontinued. At follow up review four weeks later, the child was well and had unaided visual acuities of 6/9 on the right and 6/12 on the left. Fundus examination showed significant resolution of papilloedema and macular star lipid exudates (Figure 1B).

Discussion
CSD neuroretinitis should be considered in children who present with sudden loss of vision, papilloedema and macular star, particularly in the presence of history of contact with a cat or kitten. Neuroretinitis may be the sole expression of CSD, which may only become evident during the follow up period.

Recent development of an indirect immunofluorescent antibody test for Bartonella henselae has simplified the diagnosis of CSD. It is highly sensitive (88%) and specific (94%). Lumbar puncture and imaging studies add little information to the diagnosis of neuroretinitis associated with CSD, and should be used selectively for patients who have neurological symptoms and signs in addition to ocular features.

The optimal treatment for Bartonella henselae neuroretinitis associated with CSD remains controversial. Most evidence in the published literature suggests that, in otherwise healthy subjects, the disease is benign and spontaneous recovery occurs within a few months of initial exposure. The spontaneous resolution of neuroretinitis and improvement of vision in our patient lends support to observation alone as being the appropriate approach.

Acknowledgements. We thank Alex Fraser for the fundus photography.


**Correspondence.** Shuan Dai, Department of Ophthalmology, Auckland Public Hospital, Grafton Road, Auckland. Email: shuandai@hotmail.com


**VIEWPOINT**

**New Zealand doctors – a breed apart**

**Jill Jones, Lecturer in Law, Manukau Institute of Technology, Auckland.**

NZ Med J 200; 114: 361-2

**Liability to litigation**

New Zealand doctors are a breed apart. The Damoclean sword of litigation hangs further from their heads than those of their overseas colleagues. Now shielded in part by the Accident Compensation legislation, they have been protected from civil liability for negligence by the so-called Bolam test. In 1954, when John Bolam entered Friern psychiatric hospital suffering from depression, he agreed to be treated by electro convulsive therapy (ECT). No one informed him of the risks of undergoing the treatment without muscular relaxant or adequate manual restraint. He suffered severe injuries when the head of both femora were driven through the acetabulae. Mr. Bolam alleged that the defendants were negligent. He lost his case. The judge directed the jury as follows:

“A doctor is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that particular art. Putting it another way round, a doctor is not negligent if he is acting in accordance with such a practice, merely because there is a body of opinion that takes a contrary view.”

This came to be known as the Bolam test. The Australian courts have now rejected it. It should be discarded in New Zealand. The test builds on the scrap heap of medicolegal history, not only because it is offensively paternalistic, but also because it does nothing to engender public confidence in the medical profession.

45 years after Bolam, a medical practitioner would have difficulty persuading a court that a responsible body of medical opinion advocates the use of ECT without muscular relaxant or anaesthesia. The doctor who administered ECT to John Bolam without muscular restraint was wrong. Being wrong does not, of course, amount to negligence. The point is that the court should have set the standard of what is, and is not, an acceptable standard of care. Instead it left it to the medical profession. Janet Frame has written eloquently about the experience.

Regrettably, the Bolam test is still part of New Zealand law. It is based not on what should be done, but on what was done. The courts put themselves in the hands of expert witnesses with opposing sides advancing different points of view. The court is not required to choose between them. In many cases all the defendant doctor has to do is to find witnesses prepared to say that the defendant had acted in accordance with a ‘responsible’ body of medical opinion. He or she then escapes liability.

In an ideal world expert witnesses would appreciate that their first duty is to the court. In reality, he who pays the piper calls the tune. Only the naive or the wilfully blind would think that medical witnesses differ from any other type of witness in this respect.

Historically, medical practitioners, in jurisdictions that applied the Bolam test, were allowed to set the standard of acceptable care. Judges, seduced into the idea that medical opinion is based on scientific knowledge, did not recognise fads and fashions, or the wide range of ability ranging from exemplary to abysmally incompetent. The Bolam test elevates doctors to a plane that few doctors, except those with megalomaniac tendencies, would desire to occupy.

**Responsibility to inform**

In New Zealand courts, ACC legislation now protects doctors from civil liability for medical negligence. However, it is important to realise that this applies to failure to reach an acceptable standard in diagnosis and treatment. Failure to provide a patient with sufficient information so that consent is valid, is a different matter, where the Code of Health and Disability Consumers’ Rights defines professional standards of conduct amongst health professionals in New Zealand. In terms of the Code, a patient has the right to the information that a reasonable patient in that patient’s circumstances, would expect to receive. A doctor is not in breach of the Code if he or she has taken “reasonable action” in the circumstances to give effect to the patient’s right to receive sufficient information. The onus is on the medical practitioner to prove that he or she has taken such reasonable action.

In Sidaway v Board of Governors of the Bethlehem Royal Hospital and the Maudsley Hospital, the defendant relied upon evidence that a body of skilled and experienced neuro-surgeons would have regarded it as acceptable practice not to warn of a slight, but well recognized, risk of serious damage to the patient’s spine after surgery. As it happened, the patient, a Mrs Sidaway, did suffer this damage. It was held that the Bolam test applied. Lord Diplock saw the duty to inform the patient of the risk as an integral part of treatment. His Lordship said:

“In matters of diagnosis and the carrying out of treatment the court is not tempted to put itself in the surgeon’s shoes; it has to rely upon and evaluate expert evidence, remembering that it is no part of its task of evaluation to give effect to any preference it may have for one responsible body of professional opinion over another, provided it is satisfied by the expert evidence that both qualify as responsible bodies of medical opinion.”

It is difficult to see this statement for anything more than what it is: a triumph for medical paternalism. Lord Scarman, in Sidaway delivered what amounted to a dissenting judgment. According to His Lordship:

“It was a strange conclusion if our courts should be led to conclude that our law...should permit doctors to determine in what circumstances...a duty to warn arose.”
Not all common law jurisdictions embraced *Bolam* with enthusiasm. The Canadian courts adopted a common sense approach as early as 1949 when the Manitoba Court of Appeal held that, if the defence that a medical practitioner had acted in accordance with accepted practice was to serve as a complete answer to any claim against him, "... a group of operators by adopting some practice could legislate themselves out of liability for negligence ... by adopting or continuing what was obviously a negligent practice." As to the question of informed consent, in *Reihl v Hughes* the Canadian Supreme Court was unequivocal. When giving information to a patient so as to obtain consent to treatment, it is the doctor's duty to impart that information which a reasonable patient would wish to know.

The Australian High Court, in *Rogers v Whittaker* departed from the English approach. This case made it clear that the standard of care was for the Court to determine, not the medical profession. The question, in Australian law, of whether a patient has been given sufficient information to consent to treatment does not generally depend on current medical practice. Medical practitioners have a duty to warn of material risks that are inherent in the proposed procedure. In *Smith v Auckland Hospital Board* the court found that the duty to impart information requires due care. If, in answering a question, the doctor fails to use due care and, as a result of submitting to the treatment or procedure the patient suffers injuries, the doctor will be liable to the patient. Turner J accepted that if not asked a particular question, in accordance with commonly accepted practice, a doctor would have no duty to warn of any risk involved in the treatment concerned. In effect, this sanctioned an approach in terms of which a patient could be manipulated into consenting to treatment.

The position of patients who are not in a rational state to give consent to risk of injury, is problematic. This issue arose in a fairly recent case, namely *Re MP*: Did the medical practitioner breach the statutory requirement to provide appropriate medical treatment by prescribing lithium carbonate whilst the applicant was pregnant? The complainant miscarried. In assessing the standard of care required by the doctor, the court applied the *Bolam* test. It was found that the doctor had not breached the statutory duty.

**The social dimension**

No group within society should be accountable only to itself. It is the law that should set the standard for what is and is not negligent conduct. If the legal system allows the medical profession to dictate standards in legal issues, there is a danger that it will trespass on issues beyond its normal sphere of influence. It is not difficult to think of examples. The reader may recall that consent was not generally sought from parents of the babies involved in the 'chest cupping' tragedy at the Neonatal Intensive Care Unit of National Women's Hospital. Five babies died and eight were brain damaged. When the parents of three-year-old Liam Williams Holloway spent weeks evading the police to avoid subjecting their child to court ordered chemotherapy the parents, in the popular media at any rate, acquired folk hero status. Sandra Coney, in a paper entitled "*Parents, Children and Doctors: Who's got it right?*" quotes Sir Geoffrey Rose who puts it as follows: "If the patients share in decisions then the decisions will often be different because their values and ours are often different. Doctors regard health, and especially survival, as paramount and they tend to favour vigorous investigation and action. For patients, health is only one of a number of values and is often not the highest."

**Bolam thinking and social inequity**

The tragic saga of Rau Williams the 63 year old Maori who died in 1997, after being denied life saving kidney dialysis, attracted a great deal of media attention. Northland Health stopped dialysis on Mr Williams who had renal failure, diabetes and dementia. Interim dialysis was stopped on 17 September. On 19 September a member of Mr Williams' family instituted judicial review proceedings in the High Court for the hospital to continue treatment. In his judgement the following day, Salmon J concluded: "It is inappropriate for me to make an order in this case. There is no evidence that the respondent's medical staff is acting in bad faith. That being the case, they must be allowed to act in accordance with their clinical judgment. It is totally inappropriate for the Court to attempt to direct a doctor as to what treatment should be given to a patient."

One hears the voice of Bolam and Sidaway here.

Mr Williams’ relative complained to the Human Rights Commission. After mediation in which the family, clinicians and the Human Rights Commissioner participated, the matter was withdrawn. On 9 October the relative made a further application to the High Court. The judge was satisfied that the decision not to accept Mr Williams on the program was a clinical one.

The day after the High Court case, the matter went to the Court of Appeal. It was claimed that Northland Health's decision was not purely clinical but involved resource allocation. The Court of Appeal concluded that although administrative factors regarding the availability of resources were involved, these factors were treated correctly as guidelines in the decision-making process. They did not dictate the final decision. The court noted evidence on affidavit that a decision to place Mr Williams on the end stage renal program would have no detrimental impact on Northland Health's budget. Mr Williams died on 10 October 1997. The appeal court commented that Northland Health had conformed to established standards, practices, procedures and traditions that had general approval in the medical profession. This is clearly *Bolam* type reasoning. The court found that the decision to sentence Mr Williams to death was not based on the allocation of resources. How difficult is it, the thinking public no doubt asked itself, to hide a decision on the allocation of resources behind the veil of 'clinical judgment?'

In considering whether a doctor is in breach of his or her duty of care the issue should not be whether the medical practitioner concerned conformed to the practice of a responsible body of the medical profession. Rather it should be whether the conduct in question conforms to the standard of care required by the law. After all, according to that much hallowed principle of the rule of law, we are, in theory at any rate, ruled by the law, not by men. To allow medical practitioners to set the standard of care amounts to a subversion of this most basic principle of our legal system.

**Correspondence.** Jill Jones, Manukau Institute of Technology, Private Bag, 94006 Manukau City, Auckland; email: jjones@manukau.ac.nz

---

1. *Bolam v Friern Hospital Management Committee* [1957] 2 All England Law Reports 1 WLR 182.
The recently released Cull report into processes concerning adverse medical events1 makes a number of recommendations that will assist in improving the current processes, and which will hopefully have a flow-on effect to improve outcomes for patients. However, one recommendation in the report’s ‘long-term solution’ causes some concern, both from the aspect of reducing adverse medical events, and from the aspect of designing a process which is both practical and fair to all involved.

The Cull report proposes that there be a requirement on health providers eg District Health Boards (DHBs) to refer all ‘complaints of adverse medical outcomes involving potential breaches of the Code of Health and Disability Services Consumers’ Rights’, negligence or error’ to the Health and Disability Commissioner’s office for possible investigation. The suggestion is that risk managers, and management in general, will have the responsibility to refer the “potential breaches”.

There are four points for readers’ consideration made in response to this proposal:

1. In order to learn from mistakes and ensure they are not repeated (and consequently, health services are continuously improved), a non-punitive, non-legalistic environment needs to be created in which mistakes can be openly discussed and analysed. Clinical staff will be reluctant to disclose mistakes to management, if they know that management will be required to report the matter to the Health and Disability Commissioner. Such an environment is unlikely to encourage an open, two-way dialogue between clinicians and management. The arguments against requiring DHBs to report, are similar to the arguments against the mandatory reporting by health professionals of colleagues practising below an acceptable standard. These arguments were outlined previously.2 Comments made by the Health and Disability Commissioner in his report into Gisborne Hospital indicate support for a less punitive reporting culture. The Commissioner stated:

“To minimise risk and maximise patient safety, staff at Gisborne Hospital need to experience the educative benefits of reporting incidents in a learning culture. They currently experience reporting incidents in a blaming culture.”3

The Cull recommendation requiring health providers to report all ‘potential breaches’ appears to be far nearer to the ‘blaming culture’ than a ‘learning culture’. The Commissioner welcomed the recommendations of the Cull report in general, and called for the report to be swiftly followed up.4 However, to the writer’s knowledge, the Commissioner has not specifically addressed the recommendation considered in this article.

2. An obligation to report a “potential breach” effectively amounts to a requirement on health providers to self-incriminate. The Commissioner has the power to make a finding that a health provider has breached the Code. Such a finding will have repercussions for the health provider, and may result in proceedings being issued against either the health provider, the individual health professional, or both. There should be great caution before an obligation to report on oneself is imposed on health providers.

3. The recommendation includes a requirement to report “potential breaches” of the Code of Health and Disability Services Consumers’ Rights (“the Code”). This suggests that if a patient complains about something, and the complaint, if proved, would amount to a breach of the Code, then there is a requirement to report that complaint. The fact that there may be other evidence to suggest there has been no breach, does not appear relevant. The responsibility for weighing up the issues to determine whether there has been a breach would fall on the Commissioner.

Much of the Code is framed in very general terms. For example, right 4(1) provides that every consumer has the right to have services provided with reasonable care and skill. Most patient complaints, by definition, will challenge the way services were provided. Does this mean that a DHB would have the obligation to refer all these complaints to the Health and Disability Commissioner? Is it really appropriate that the Commissioner considers virtually all patient complaints that a busy DHB receives? What would the funding implications be for the Commissioner’s office?

In the Gisborne report, the Commissioner indicated that disciplinary action following complaints should be reserved for serious breaches of standards. “An internal investigation of a complaint or review of a reported incident should lead to internal disciplinary processes or mandatory training only where there is evidence of repeated poor performance that breaches professional standards of conduct or constitutes a major departure from the standard of care and skill reasonably to be expected in the circumstances.”

Adopting the Commissioner’s approach, and from a practical viewpoint, it may also be inappropriate for one-off ‘potential breaches’ of the Code to be reported to the Commissioner.

4. There is no mention of the consequences for failing to refer a potential breach. Will the Health and Disability Commissioner be given authority to impose a penalty on the non-compliant health provider? Presumably some sort of punishment would be required to discourage others from failing to report.

The criticism of this aspect of the Cull report should not detract from the many good recommendations made. However, close attention needs to be paid to the detail of the recommendations before implementation. A law that effectively requires health providers to report all patient complaints to the Health and Disability Commissioner may not be in either the patients’, or the health providers’ interests.

**Correspondence.** Jonathan Coates, Buddle Findlay, PO Box 2694, Wellington. Email: jonathan.coates@buddlefindlay.com

---