

## LETTERS

---

- 491 **Hepatitis E virus: overseas epidemics and Victorian travellers**  
Benjamin C Cowie, Alan Breschkin, Heath Kelly
- 491 **Two linked cases of legionellosis with an unusual industrial source**  
Noelene S O'Keefe, Kristina A Heinrich-Morrison, Bruce McLaren
- 492 **Health development assistance works: a Pacific example**  
Osman Mansoor, Nick Wilson
- 492 **Sight-seeing in the Solomon Islands**  
Stephen E Cains
- 493 John L Szetu
- 493 Michelle L Baker, Geoffrey T Painter
- 494 **"GP Psych Opinion": evaluation of a psychiatric consultation service**  
Graham K Wong, John W G Tiller
- 494 **Vision loss in Australia**  
Umberto Boffa
- 495 Konrad Pesudovs, Douglas J Coster
- 495 Jill E Keeffe, Hugh R Taylor
- 496 **Adult domiciliary oxygen therapy. Position statement of the Thoracic Society of Australia and New Zealand**  
Heather Cleland

## Hepatitis E virus: overseas epidemics and Victorian travellers

Benjamin C Cowie,\* Alan Breschkin,†  
Heath Kelly‡

\* Infectious Diseases Physician, † Senior Scientist, Infectious Disease Serology, ‡ Head of Epidemiology, Victorian Infectious Diseases Reference Laboratory, 10 Wreckyn Street, North Melbourne, VIC 3051. Benjamin.Cowie@mh.org.au

**TO THE EDITOR:** Hepatitis E virus (HEV) infection is uncommon in Australia. The HEV cases detected are almost always in patients who have recently arrived from HEV-endemic regions of the world.<sup>1</sup> We previously reported a significant increase in highly reactive serology results for anti-HEV IgG antibodies measured by enzyme immunoassay (EIA) at the Victorian Infectious Diseases Reference Laboratory (VIDRL) in the first 6 months of 2004.<sup>2</sup>

Nine of the 10 Victorian patients with highly reactive samples in the previous report had had a history of recent clinically compatible illness and travel in a disease-endemic region within the incubation period (2–9 weeks). This indicated a strong association between highly reactive anti-HEV IgG measured by EIA and acute HEV infection, as has been shown previously.<sup>3</sup> At the time, we hypothesised an association with overseas HEV epidemics, particularly

in India, as seven of the nine patients with acute HEV infection had travelled there.

We have now reviewed HEV serology results at VIDRL for the subsequent 9 months and compared them with our experience of the past 5 years (Box). In the first quarter of 2005, we recorded the highest quarterly number of highly reactive anti-HEV serology results since testing commenced at VIDRL. Also marked on the figure are the dates, over the same time period, when an outbreak of hepatitis in India (either suspected or confirmed to be caused by HEV) was reported on ProMED-mail, the global electronic reporting program for emerging diseases hosted by the International Society for Infectious Diseases (<http://www.promedmail.org>).

It would appear that epidemic HEV activity in India is reflected in significant increases in the number of highly reactive anti-HEV serology results in our laboratory. In fact, as shown in the Box, increases in highly reactive anti-HEV serology at VIDRL have sometimes preceded an outbreak notification on ProMED-mail, and may provide early warning of such an event. A similar association is not observed for epidemics in other countries.

Travellers to developing countries must be advised of preventive measures against HEV and other enterically transmitted diseases, and a diagnosis of HEV infection should be

considered in any febrile traveller recently arrived from an HEV-endemic area, particularly if jaundice or abnormal liver function tests are present. This is especially important in pregnant women because of the risk of fulminant hepatitis, with maternal mortality in excess of 20% in the third trimester.<sup>4</sup> All cases should be notified to state health authorities.

**Acknowledgement:** Benjamin Cowie is supported by a PhD scholarship from the National Health and Medical Research Council Centre for Clinical Research Excellence (Infectious Diseases).

- 1 Moaven LD, Fuller AJ, Doultree JC, et al. A case of acute hepatitis E in Victoria. *Med J Aust* 1993; 159: 124-125.
- 2 Cowie BC, Adamopoulos J, Carter K, Kelly H. Hepatitis E infections, Victoria, Australia. *Emerg Infect Dis* 2005; 11: 482-484.
- 3 Zaaijer HL, Kok M, Lelie PN, et al. Hepatitis E in the Netherlands: imported and endemic [letter]. *Lancet* 1993; 341: 826.
- 4 Yarbough PO. Hepatitis E virus: diagnosis. In: Zuckerman AJ, Thomas HC, editors. *Viral hepatitis*. 2nd ed. London: Churchill Livingstone, 1998: 411-416. □

## Two linked cases of legionellosis with an unusual industrial source

Noelene S O'Keefe,\*  
Kristina A Heinrich-Morrison,†  
Bruce McLaren‡

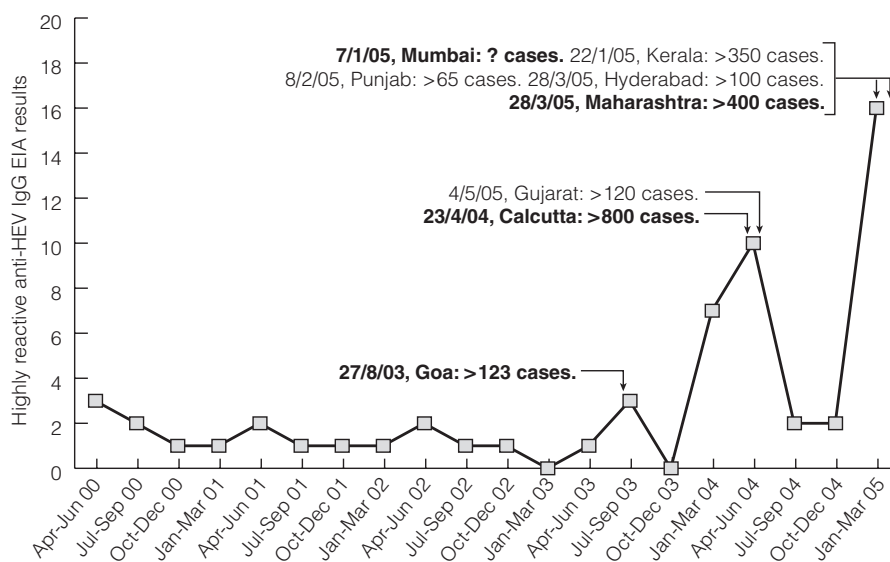
\* Project Officer, Legionella Program, Environmental Health, † Public Health Nurse, ‡ Medical Officer, Communicable Diseases Section, Department of Human Services, 17/120 Spencer Street, Melbourne, VIC 3000. bruce.mclaren@dhs.vic.gov.au

**TO THE EDITOR:** A 23-year-old man presented to a Victorian hospital with a 4-day history of fever, rigors, confusion and malaise. A chest x-ray showed left lower-lobe pneumonia, and *Legionella pneumophila* serogroup 1 antigen was detected in his urine. No respiratory specimens were obtained. He recovered completely after treatment for community-acquired pneumonia, including intravenous ampicillin and oral roxithromycin, and returned to work 16 days after onset.

Investigations for the source of the infection included environmental review and sampling of cooling towers near his workplace, home, and other sites visited during the incubation period.

Active workplace surveillance prompted testing for and detection of *L. pneumophila* serogroup 1 urinary antigen in a second employee, a 53-year-old man who had presented 2 days earlier than the patient

Highly reactive anti-HEV IgG EIA results at VIDRL per quarter, 1 Apr 2000 to 31 Mar 2005. Also marked are confirmed (in bold) or suspected epidemics of HEV in India listed on ProMED-mail\* during the same period



EIA = enzyme immunoassay. HEV = hepatitis E virus. VIDRL = Victorian Infectious Diseases Reference Laboratory. \* Available at <<http://www.promedmail.org>>.

above to another Victorian hospital with fever, abdominal pain and diarrhoea. Legionellosis was not suspected on presentation. He had no symptoms, signs or radiological evidence of pneumonia. Treatment, including intravenous ampicillin and oral roxithromycin, began when the antigen result was obtained, and he was discharged after 10 days in hospital, although he felt unwell for 2 or 3 weeks after discharge.

The two men worked near each other in a welding area. A water tank was placed at the entrance to the area, with the cover left open. This acted as a heat exchange for the welding cooling system. A high count of *L. pneumophila* serogroup 1 (1300 colony-forming units/mL) was grown from a sample of this water. It was common on hot days to cool the work place with an industrial fan. The open water tank was between the fan and the two employees during the incubation period. No *L. pneumophila* isolates were found in any linked cooling towers.

Remedial action included commencing a disinfection program for the water reservoir, and a request to fit the cover correctly and move the fan. No further cases were detected. Because no clinical isolates were obtained, a direct subtype match between clinical and environmental specimens was not possible. Urine antigens are considered definitive laboratory tests given a compatible illness (fever or cough or pneumonia).<sup>1</sup>

Outbreaks of Legionnaire's disease and Pontiac fever (legionellosis without pneumonia) with industrial sources other than cooling towers have been reported.<sup>2,3</sup> This outbreak demonstrates that a simple change in the environment (adding a fan) and an apparently low-risk source (a warm water bath) have the potential to give rise to significant disease. It also shows the value of active workplace surveillance after a single case.

1 Communicable Diseases Network Australia. Legionellosis case definition. Available at: [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/cda-surveil-nndss-casedefs-cd\\_legion.htm](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/cda-surveil-nndss-casedefs-cd_legion.htm) (accessed Aug 2005).

2 Allan T, Horgan T, Scaife H, et al. Outbreak of Legionnaires' disease among automotive plant workers — Ohio, 2001. *MMWR Morb Mortal Wkly Rep* 2001; 50: 357-359.

3 Castor ML, Wagstrom EA, Danila RN, et al. An outbreak of Pontiac fever with respiratory distress among workers performing high-pressure cleaning at a sugar-beet processing plant. *J Infect Dis* 2005; 191: 1530-1537. □

## Health development assistance works: a Pacific example

Osman Mansoor,\* Nick Wilson†

\* Public Health Physician, Public Health Consulting Ltd, Wellington, New Zealand; † Senior Lecturer, Department of Public Health, Wellington School of Medicine, Otago University, PO Box 7343, Wellington South, New Zealand. [nwilson@atrix.gen.nz](mailto:nwilson@atrix.gen.nz)

**TO THE EDITOR:** How marvellous to see the recent editorial by Zwi and colleagues on Australian overseas aid.<sup>1</sup> They elegantly (and disturbingly) make the case for increasing development aid, and more specifically, for AusAID support of health programs. They suggest investments are needed in health and education primarily because we care about other people. But there are many other reasons (including enlightened self-interest) for Australia and New Zealand to increase health development assistance, especially in the South Pacific region.<sup>2</sup> One reason for reluctance of donors to provide aid is concern that the aid will not be effective or sustainable. Therefore, we would like to briefly report about a joint Australian and New Zealand aid project that has not only been very successful and effective, but has probably saved the taxpayers of both countries millions of dollars in future costs.

The two countries jointly funded a 5-year Pacific hepatitis B project that successfully integrated hepatitis B vaccine into the immunisation program of 10 Pacific island countries. The project provided technical support and 5 years' funding for hepatitis B vaccine on a reducing scale: from 100% (1996–1998) to 75% (1999) to 50% (2000). Since 2001, the Pacific island countries have taken over the funding of hepatitis B vaccine (as they do for the other Expanded Programme on Immunization vaccines).

Thus this short-term intervention has provided sustainable gains in hepatitis B control in the Pacific — one of the areas with the highest rates of hepatitis B infection in the world.

An initial evaluation in four Pacific island countries demonstrated reduced transmission as a result of the project. For these four countries, the program was estimated to have reduced chronic hepatitis B virus (HBV) infection among preschool children by 81% (95% CI, 69%–88%), with an estimated cost of US\$190 per premature death prevented.<sup>3</sup>

Reducing HBV transmission in the Pacific is likely to reduce disease transmission in Australia and New Zealand (associated with

travel movements and migration). But it will also affect health services, as some people born in Pacific island countries will either become long-term residents of these developed countries or travel there for specialist care. The cost of a single case of chronic HBV infection to a developed country's health services is likely to cover several years of vaccine cost for many of the smaller Pacific island countries.

In summary, Australians and New Zealanders should be proud of this particular project. It supports Zwi and colleagues' call for much more investment in development assistance in health.

**Competing interests:** Osman Mansoor has previously worked for the World Health Organization on assessing this hepatitis B project and Nick Wilson participated in the project when on contract to the New Zealand Ministry of Foreign Affairs and Trade.

1 Zwi AB, Grove NJ, Ho MT. Keeping track to keep Australia's overseas aid on track [editorial]. *Med J Aust* 2005; 183: 119-120.

2 Wilson N, Mansoor O, Thomson G. Key arguments for increasing New Zealand's health development assistance in the Pacific. *N Z Med J* 2004; 117: U831. Available at: <http://www.nzma.org.nz/journal/117-1191/831> (accessed Sep 2005).

3 Wilson N, Ruff T, Rana BJ, et al. The effectiveness of the infant hepatitis B immunisation programme in Fiji, Kiribati, Tonga and Vanuatu. *Vaccine* 2000; 18: 3059-3066. □

## Sight-seeing in the Solomon Islands

Stephen E Cains

Medical Director, The Fred Hollows Foundation, Locked Bag 3100, Burwood, NSW 1805. [scains@hollows.org](mailto:scains@hollows.org)

**TO THE EDITOR:** I read with interest the personal perspective by Baker, describing her recent visit as part of an ophthalmic surgical team.<sup>1</sup> Such teams from Australia have a long and creditable record of service in the Pacific, and their work has been of great value to the people in the countries involved, and of considerable personal satisfaction to those who have taken part in them.

The experience of ophthalmic surgeons working with The Fred Hollows Foundation in developing countries certainly confirms Baker's observations that the density of the cataracts found in these circumstances commonly makes them unsuitable for phacoemulsification. This does not, however, lead to the conclusion that modern small-incision surgery is not suitable for cataract patients in the developing world.

Sutureless small-incision cataract surgery (SSICS) by manual means has been practised in many parts of the developing world for many years, with a range of techniques being used to extract the nucleus without phacoemulsification.<sup>2,3</sup> Such techniques have been shown to give better uncorrected vision when compared with standard extracapsular surgery, and are quick<sup>4</sup> and economical, with fewer problems requiring follow-up than extracapsular surgery.<sup>5</sup> The Fred Hollows Foundation, along with many other non-government organisations and authorities, is actively teaching and promoting the use of SSICS in its programs as the operation of choice for cataract extraction in the developing world.

In light of this, I was surprised to see mention of the introduction of phacoemulsification to the Solomons by the team. Not only is this procedure not suitable for a large proportion of the presenting cataracts, but the cost of equipment and consumables in phacoemulsification is several times that of SSICS, and the time taken for surgery is often longer.

In an environment where people suffer vision impairment simply from lack of glasses, and where surgeons are available who can perform modern small-incision sutureless cataract surgery, I wonder if this is an appropriate technology to introduce to the region.

1 Baker ML. Sight-seeing in the Solomon Islands. *Med J Aust* 2005; 182: 633-644.

2 Ruit S, Paudyal G, Gurung R, et al. An innovation in developing world cataract surgery: sutureless extracapsular cataract extraction with intraocular lens implantation. *Clin Exper Ophthalmol* 2000; 28: 274-279.

3 Hennig A. Sutureless non-phaco cataract surgery: a solution to reduce worldwide cataract blindness? *Community Eye Health* 2003; 16: 49-51.

4 Balent LC, Narendrum K, Patel S, et al. High volume sutureless intraocular lens surgery in a rural eye camp in India. *Ophthalmic Surg Lasers Imaging* 2001; 32: 446-455.

5 Gogate PM, Deshpande M, Wormald RP. Is manual small incision cataract surgery affordable in the developing countries? A cost comparison with extracapsular cataract extraction. *Br J Ophthalmol* 2003; 87: 843-846. □

### John L Szetu

Ophthalmologist, Vanuatu National Eye Care Program, Port Vila, Vanuatu.  
fhfvaneye@vanuatu.com.vu

**TO THE EDITOR:** I am the ophthalmologist from Vanuatu referred to in Baker's recent article, *Sight-seeing in the Solomon Islands*,<sup>1</sup> who teamed up with the Pacific Islands Project surgeon in Honiara. I am currently working in Vanuatu with the Fred

Hollows Foundation (New Zealand) and the Ministry of Health, developing a national eye care program, and continue to make two Fred Hollows Foundation-funded ophthalmic service trips annually to the Solomon Islands. At the end of this year, I will be returning to Honiara to help set up a regional ophthalmic training centre, and again manage and develop the national eye program.

The article's title, while aimed at highlighting the rehabilitation of vision resulting from the visit of a Pacific Island Project ophthalmic team, points ironically to the problem of "medical tourism".

Medical tourism is common in the Pacific, and I speak for many indigenous Pacific doctors when I say that we are trying to discourage the practice because of the patient expectations it raises that cannot be fulfilled, the opportunity cost, and the post-visit cleanup that is often required. Medical tourism is usually well-intentioned and can be seen by those involved as a well earned break from private practice at home. However, it is often not anchored to the real needs and conditions of the countries in which it occurs.

The use of phacoemulsification for cataract extraction, as reported in Baker's article, is a case in point. With due respect, the Pacific Islands Project (PIP) surgeon managed to perform fewer than three phacoemulsifications, while I did 116 "low technology" manual small-incision cataract surgeries during the 3 days available to us in Honiara. The appropriate backup was not available for "high technology" phacoemulsification. The unit could not be made fully functional, and the surgeon eventually resorted to a manual technique. While quantity is important, so is quality of outcome, for which there is no long-term difference between the high and low technology techniques used in Honiara.

Before the civil unrest, the Solomon Islands Eyecare Program was a Pacific leader in terms of facilities, mid-level (nursing and refraction) human resources and overall productivity. I had trained a network of 14 ophthalmic nurses. These workers have held services together in my absence, and been largely responsible for "screening" and organising patients to be seen by visiting teams (PIP, New Zealand-based Volunteer Ophthalmic Services Overseas, and Surgical Eye Expeditions from the United States) and myself. Credit should also go to these workers and the other teams.

Medical team visits are valuable, but many Pacific Island nations now see that resources could be better used if they targeted appropriate development of eye care systems and programs, and built local capacity (such as the Solomon Island ophthalmic nurses) rather than delivering services in an ad hoc manner.

Visiting service teams need to become aware of this, be prepared to take direction from local authorities, take responsibility for monitoring and evaluating their own clinical activities and outcomes as they would at home, and contribute in an organised and agreed manner to building local resources.

1 Baker ML. Sight-seeing in the Solomon Islands. *Med J Aust* 2005; 182: 633-644. □

### Michelle L Baker,\* Geoffrey T Painter†

\* Resident Medical Officer, Neurosurgery Department, Royal Melbourne Hospital, 46-58 Drummond Street, Carlton, VIC 3053. † Ophthalmology Coordinator, Royal Australasian College of Surgeons Pacific Islands Project, Melbourne, VIC.  
michellelouisebaker@yahoo.com

**IN REPLY:** Despite increased efforts over the last decade, the burden of blindness due to cataract is still immense. With over 18 million people in the world blind because of cataract<sup>1</sup> there is an obvious need for an affordable and efficient cataract surgery technique.

We agree that sutureless small-incision cataract surgery (SSICS) does have an important place in cataract surgery in the developing world. It has advantages over extra-capsular cataract extraction (ECCE) in the longer term, such as decreased cost,<sup>2</sup> reduced astigmatism and decreased surgery time.<sup>3</sup> There is increasing interest in SSICS among Australian ophthalmologists, and instruction courses are to be held at the forthcoming Royal Australian and New Zealand College of Ophthalmologists meeting. On the other hand, SSICS can be more difficult to learn, and for inexperienced surgeons, there are risks of complications when it is used for a bulky dense cataract.<sup>3</sup> ECCE is continuing to evolve, with modern surgical blades giving significantly shelved wounds, which are potentially safer and require fewer sutures, and still has a place.

In the Solomon Islands, ECCE and SSICS are the predominant techniques because phacoemulsification is unsuitable for most patients as their cataracts are too dense.<sup>3</sup> SSICS was used successfully for suitable cases by Szetu, who is very experi-

enced in the technique. The phacoemulsification machine was brought to Honiara to perform vitrectomy (which the machine is capable of) for diabetic retinopathy in patients who otherwise would have needed expensive treatment in Australia. Phacoemulsification was purposely used only as a trial (hence, in only three patients), but in the subsequent Pacific Islands Project (PIP) visit, six children with congenital and traumatic cataracts were successfully treated with phacoemulsification/lensectomy and the insertion of folding intraocular lenses (these were six of a total of 260 operations). In this group it is an ideal technique.<sup>4</sup> Currently, it is sustainable to use phacoemulsification because of generous donations. With the advent of low cost phacoemulsification machines (as presented at the Australasian Society of Cataract and Refractive Surgeons conference in Broome in 2004) and low cost disposables, it is likely the technique will be increasingly used when the backlog of dense cataracts are reduced.

Phacoemulsification is the accepted standard of care for cataract surgery in the developed world,<sup>2</sup> and there are valid reasons for introducing it into developing countries. Professional development is important, and we must consider the aspirations of our colleagues; the appropriate introduction of phacoemulsification can aid this. We are pleased to hear of Szetu's return to Honiara, and are sure this technology will have a small, but useful, place in his clinical practice in the future.

We cannot agree more strongly that so-called "medical tourism" is wrong. It provides no significant benefit to the community and is disruptive, unhelpful and is, at worst, a burden to the local medical and nursing staff. Unrequested, unhelpful and short-term visits should not be undertaken.

The PIP was specifically set up to avoid the abovementioned problems by providing aid that was substantial and well funded (by AusAID), and teaching trips to countries that have made specific requests at the government level for assistance. Such assistance is provided only with the total cooperation and support of local ophthalmic staff, and is run to the highest standards by experienced and committed volunteers. It has been well received in all Pacific countries visited.

Ultimately, PIP was intended only as a transitory phase in Pacific development and, as each country achieves self-sufficiency through infrastructure develop-

ment, visits will be scaled down. We are looking forward to the Solomon Islands regaining the place it once had in Pacific ophthalmology before the civil unrest, and look forward to continuing to help develop the Eye Department in the years ahead. We hope that the close to 1500 operations the PIP team have performed over the eight visits since 2000 have been of help during this troubled time.

**Acknowledgement:** We thank Richard Le Mesurier, VISION 2020 Regional Coordinator, Western Pacific Region for editorial input.

- 1 Resnikoff S, Pascolini D, Etya'ale D, et al. Global data on visual impairment in the year 2002. *Bull World Health Organ* 2004; 82: 844-851.
- 2 Gogate PM, Deshpande M, Wormald RP. Is manual small incision cataract surgery affordable in the developing countries? A cost comparison with extracapsular cataract extraction. *Br J Ophthalmol* 2003; 87: 843-846.
- 3 Hennig A. Sutureless cataract surgery with nucleus extraction: outcome of a prospective study in Nepal. *Br J Ophthalmol* 2003; 87: 266-270.
- 4 Minassian DC. Extracapsular cataract extraction compared with small incision surgery by phacoemulsification: a randomised trial. *Br J Ophthalmol* 2001; 85: 822-829. □

## "GP Psych Opinion": evaluation of a psychiatric consultation service

Graham K Wong,\* John W G Tiller†

\* Psychiatrist, † Professor of Psychiatry, Albert Road Clinic, University of Melbourne, 31 Albert Road, Melbourne, VIC 3004. [wonggraham@mh.org.au](mailto:wonggraham@mh.org.au)

**TO THE EDITOR:** We were interested in the recent finding of Simpson and colleagues that a public hospital-based psychiatric assessment service was poorly utilised by general practitioners.<sup>1</sup> We established a comparable service in a private setting, with very similar results.

In 2002, the senior psychiatry trainee at the Albert Road Clinic (a private psychiatric hospital in Melbourne) established a GP psychiatric assessment service in response to a previously established need.<sup>2</sup> The additional aim was to reduce waiting times and patient costs of seeing a private psychiatrist. There were no out-of-pocket expenses for patients. The service was promoted to 300 local GPs with an individually addressed flyer; a notification was published in the local Division of General Practice newsletter; and discussions were held with the local public mental health service to redirect appropriate referrals from GPs. A survey evaluated GPs' subse-

quent satisfaction with the service after a patient was referred and seen.

Over a recruitment period of 15 weeks, an average of only one patient per week was referred. The referring GPs were happy with waiting times (well within a week), the quality of the service, and the communication received by the assessing senior psychiatry trainee.

The similarity between these independently established services and the findings are striking. Of note, was the paucity of referrals from GPs despite clearly expressed needs. We wonder to what extent GPs' perceptions of difficulties accessing psychiatric assessment from the private sector are the result of a small subset of difficult patients, rather than the general rule.

There are numerous GP and psychiatrist-focused initiatives to overcome reported difficulties accessing specialist psychiatric input for GPs. Most recent of these is a new Medicare Benefits Schedule item that increases remuneration for psychiatrists to outline a detailed management plan for the GP to continue care of the patient.

The findings of these types of psychiatric services directed at GPs highlight the limitations of GP uptake of such incentives. At the very least, there is a requirement for adequate promotion, education and ongoing reinforcement of the referral model to psychiatrists, GPs and practice managers alike.

- 1 Simpson AE, Emmerson WB, Frost ADJ, Powell JL. "GP Psych Opinion": evaluation of a psychiatric consultation service. *Med J Aust* 2005; 183: 87-90.
- 2 Joint Consultative Committee In Psychiatry. Primary care psychiatry: the last frontier. Melbourne: Royal Australian College of General Practitioners, Royal Australian and New Zealand College of Psychiatrists, 1997. □

## Vision loss in Australia

Umberto Boffa

Medical Director, BUPA Australia Health Insurance, 600 Glenferrie Rd, Hawthorn, VIC 3122. [umberto.boffa@hba.com.au](mailto:umberto.boffa@hba.com.au)

**TO THE EDITOR:** Taylor and colleagues have provided an excellent analysis of the prevalence and causes of vision loss in Australia.<sup>1</sup> However, their conclusion that vision loss in Australia is a much bigger problem than is usually recognised and requires "save your sight" public promotion bears some discussion.

The main outcome measure used was impairment in visual acuity. Impairment does not necessarily equate with disability.

Disability has been defined as an alteration of an individual's capacity to meet personal, social or occupational demands, or statutory or regulatory requirements, because of an impairment.<sup>2</sup> An impaired person is not necessarily disabled.

The study of Taylor et al did not use measures of visual disability, such as the VF-14 (Visual Function Index). Participants were asked to complete a questionnaire that included information about "symptoms of eye disease", but it is not clear that the questionnaire explored self-perceived problems with vision. Nor does the study seem to have looked at the level of cognitive impairment within this aged population. Tielsch et al, in a similar study,<sup>3</sup> made the point that whether people who have both a treatable loss of vision and cognitive impairment should receive ophthalmological intervention depends on the cause and severity of the cognitive deficit.

Further, Taylor and colleagues stated that, after undercorrected refractive error, cataract is the most common cause of low vision and is also comparatively easily treated, but they did not objectively evaluate the relative risks and benefits of such interventions.

The study provides interesting data on the extent of visual impairment in Australia, but the authors are presupposing that the uncovered prevalence of visual impairment necessarily constitutes a social problem requiring "save your sight" public health measures. Reference should be made to patient goals and needs, and an objective cost-benefit analysis, before such a conclusion can be reached.

1 Taylor HR, Keeffe JE, Vu HT, et al. Vision loss in Australia. *Med J Aust* 2005; 182: 565-568.

2 American Medical Association. Guides to the evaluation of permanent impairment. 4th ed. Chicago: AMA, 1993:2.

3 Tielsch JM, Javitt JC, Coleman A, et al. The prevalence of blindness and visual impairment among nursing home residents in Baltimore. *N Engl J Med* 1995; 332: 1205-1209. □

### Konrad Pesudovs,\* Douglas J Coster†

\* Deputy Director, † Director, NHMRC Centre for Clinical Eye Research, Department of Ophthalmology, Flinders Medical Centre and Flinders University, Bedford Park, SA 5042. Konrad.Pesudovs@flinders.edu.au

**TO THE EDITOR:** The timely report of Taylor and colleagues of large numbers of Australians suffering visual impairment caused by refractive error raises some important questions.<sup>1</sup>

Firstly, is it reasonable to assume that visual acuity of less than 6/12 is disabling and demands intervention? The correlation of visual acuity and visual disability is tenuous.<sup>2-4</sup> This is not surprising. Visual acuity measures a narrow domain of visual function. Different abnormalities differentially impact across wide domains of visual function. Everyday sight-dependent functions will be affected differently. For example, people with cataracts may experience reduced contrast sensitivity and colour discrimination, while those with advanced glaucoma will lose visual field, but those losses will affect a person's life independent of visual acuity. Conversely, myopia acquired in old age may reduce visual acuity to less than 6/12 but may also provide spectacle-free near vision adequate for reading and other daily tasks. This may not cause any disability for an elderly person whose life is spent predominantly indoors.

Therefore, it seems inappropriate to assume that the 62% of people with visual impairment caused by refractive error suffer visual disability to the extent of those with glaucoma or age-related macular degeneration. A better approach to measuring visual impairment would be to use patient-centred measures, which consider the impact of eye disease on visual performance, rather than the convenient but narrow measure of visual acuity. If visual acuity is to be used, its limitations as an indicator of visual disability should be considered, and inferences about visual impairment should remain constrained by these limitations.

The second question which follows from the report that uncorrected refractive error is responsible for 62% of visual loss below 6/12 is: why do people so affected not wear spectacles? Perhaps there are barriers to acquiring spectacles, such as access. However, this seems unlikely as there is an optometrist in every major shopping centre. Certainly, cost may be a barrier, and a study from our Centre has shown that spectacle correction may reduce quality of life in the domains of wellbeing, convenience, and economic concerns.<sup>5</sup> Therefore, it seems likely that the cost-benefit balance is such that these people are not sufficiently disabled by their vision to go to the inconvenience and expense of acquiring spectacles.

The authors have raised important issues which require clarification. Is it that visual acuity overestimates the impact of refractive error on visual disability, or is the

system for supplying spectacles to Australians failing?

**Acknowledgement:** Konrad Pesudovs is supported by the National Health and Medical Research Council Sir Neil Hamilton Fairley Fellowship 0061. The Quality of Life Impact of Refractive Correction project was supported by the National Health and Medical Research Council Centre of Clinical Research Excellence Grant 264620.

1 Taylor HR, Keeffe JE, Vu HT, et al. Vision loss in Australia. *Med J Aust* 2005; 182: 565-568.

2 Chia EM, Wang JJ, Rochtchina E, et al. Impact of bilateral visual impairment on health-related quality of life: the Blue Mountains Eye Study. *Invest Ophthalmol Vis Sci* 2004; 45: 71-76.

3 Keeffe JE, Jin CF, Weih LM, et al. Vision impairment and older drivers: who's driving? *Br J Ophthalmol* 2002; 86: 1118-1121.

4 Valbuena M, Bandeen-Roche K, Rubin GS, et al. Self-reported assessment of visual function in a population-based study: the SEE project. Salisbury Eye Evaluation. *Invest Ophthalmol Vis Sci* 1999; 40: 280-288.

5 Pesudovs K, Garamendi E, Elliott DB. The Quality of Life Impact of Refractive Correction (QIRC) questionnaire — development and validation. *Optom Vis Sci* 2004; 81: 769-777. □

### Jill E Keeffe,\* Hugh R Taylor†

\* Director, Population Health Division, Department of Ophthalmology, University of Melbourne, and Royal Victorian Eye and Ear Hospital, Locked Bag 8, East Melbourne, VIC 8002; † Professor, Centre for Eye Research, University of Melbourne, VIC. jillek@unimelb.edu.au

**IN REPLY:** Boffa and Pesudovs and Coster all correctly point out that a reduction in visual acuity does not always lead to disability, and that not all people with impaired vision are disabled or report impaired quality of life. Large Australian and American population-based studies have shown that visual acuity below a critical level of 6/12 is associated with disability and affects participation in chosen activities and quality of life.<sup>1</sup> When compared with people with normal vision ( $\geq 6/12$ ), those with impaired vision have an increased risk of falls and hip fractures, depression, difficulties with activities of daily living and social functioning.<sup>1</sup>

Not all people with reduced visual acuity are affected in the same way at any vision threshold, even if there is a demonstrated statistically significant association between poor vision and visual function and quality of life. For example, not all people with severe visual impairment (visual acuity  $< 6/60$ ) report an impact on their own visual functioning or quality of life. The impact of poor vision on functional ability is similar for conditions such as cataract or acute macular degeneration as for refractive error. The impact has been shown with

both correctable and uncorrectable vision impairment.<sup>2</sup>

The VF-14 (Visual Function Index) can be used as a measure of visual disability, as suggested by Boffa. It was used in the Melbourne Visual Impairment Project and confirmed the functional implications of vision impairment (visual acuity < 6/12).<sup>3</sup> Studies show unequivocally that vision impairment is a social<sup>3</sup> and economic<sup>4</sup> problem, and suggest the need for health promotion campaigns.

Pesudovs and Coster ask why, in a country such as Australia, with optometrists "in every major shopping centre", do people with refractive error not have the correct spectacles? They suggest some barriers of access to care. The Brotherhood of St Laurence has shown that affordability of glasses and rural disadvantage are barriers to access and equity of use of eye care services.<sup>5</sup>

Our report highlighted the fact that cataract is an important cause of vision loss that is highly amenable to surgical intervention.<sup>6</sup> We did not discuss the relative risks and outcomes of cataract surgery, which is well documented to be highly successful, with low complication rates (< 2% for most complications),<sup>7</sup> and very high cost-effectiveness.

1 Taylor HR. Eye care for the future: the Weisenfeld Lecture. *Invest Ophthalmol Vis Sci* 2003; 44: 1413-1418.

2 Chia EM, Wang JJ, Rochtchina E, et al. Impact of bilateral visual impairment on health-related quality of life: the Blue Mountains Eye Study. *Invest Ophthalmol Vis Sci* 2004; 45: 71-76.

3 Weih L, McCarty CA, Taylor HR. Functional implications of vision impairment. *Clin Experiment Ophthalmol* 2000; 28: 153-155.

4 Access Economics. Investing in sight. Strategic interventions to prevent vision loss in Australia. Melbourne: Eye Research Australia, 2005. Available at: <http://www.cera.org.au/new/clearinsight/clearinsight.html> (accessed Aug 2005).

5 Brotherhood of St Laurence. Seeing clearly. Access to affordable eyecare for low-income Victorians. In: Changing pressures. Bulletin no. 13. Melbourne: Brotherhood of St Laurence, 2004. Available at: <http://www.bsl.org.au/main.asp?PageId=60> (accessed Sep 2005).

6 Taylor HR, Keeffe JE, Vu HT, et al. Vision loss in Australia. *Med J Aust* 2005; 182: 565-568.

7 Powe NR, Schein OD, Gieser SC, et al. Synthesis of the literature on visual acuity and complications following cataract extraction with intraocular lens implantation. *Arch Ophthalmol* 1994; 112: 239-252. □

## Adult domiciliary oxygen therapy. Position statement of the Thoracic Society of Australia and New Zealand

Heather Cleland

Director, Burns Unit, The Alfred Hospital, Commercial Road, Prahran, VIC 3181. [burnsunit@alfred.org.au](mailto:burnsunit@alfred.org.au)

**TO THE EDITOR:** While mention is made in the recent position statement<sup>1</sup> of the inappropriateness of home oxygen use in association with continued smoking, I wish to highlight the fact that the dangers of this activity — and indeed of any open flame in proximity to oxygen delivery units — constitutes significantly more than a theoretical hazard.

In the past 4 months, the Victorian Adult Burns Service at The Alfred Hospital, Melbourne, has admitted two patients with severe burns sustained in fires caused by smoking in association with domiciliary oxygen use. Both these patients died of their burn injuries, and the cases have been reported to the coroner. I am aware of at least one other fatality that occurred under similar circumstances in the same time period in Victoria.

If patients or people living with them continue to smoke, oxygen therapy should be withdrawn. I also suggest that the position statement should emphasise the need for adequate and regular domiciliary assessments of people using this therapy and the importance of ongoing education about the dangers of oxygen use in association with any open flame.

1 McDonald CF, Crockett AJ, Young IH. Adult domiciliary oxygen therapy. Position statement of the Thoracic Society of Australia and New Zealand. *Med J Aust* 2005; 182: 621-626. □

## Editor

Martin Van Der Weyden, MD, FRACP, FRCPA

## Deputy Editors

Bronwyn Gaut, MBBS, DCH, DA

Ruth Armstrong, BMed

Mabel Chew, MBBS(Hons), FRACGP, FACHPM

Ann Gregory, MBBS, GradCertPopHealth

**Manager, Communications Development**

Craig Bingham, BA(Hons), DipEd

**Senior Assistant Editor**

Helen Randall, BSc, DipOT

**Assistant Editors**

Elsina Meyer, BSc

Kerrie Lawson, BSc(Hons), PhD, MASM

Tim Badgery-Parker, BSc(Hons), ELS

Josephine Wall, BA, BAppSci, GradDipLib

**Proof Readers**

Christine Binskin, BSc; Sara Thomas, BSc;

Rivqa Berger, BSc(Hons)

**Editorial Administrator**

Kerrie Harding

**Editorial Assistant**

Christine Hooper

**Production Manager**

Glenn Carter

**Production Coordinator**

Peter Humphries

**Web Assistant**

Peter Hollo, BSc(Hons), BA, LMusa

**Librarian**

Jackie Treadaway, BAComm(Info)

**Consultant Biostatistician**

Val Gebiski, BA, MStat

**Content Review Committee.** Leon Bach, PhD,

FRACP; Adrian Bauman, PhD, FAFPHM; Flavia

Ciuttini, PhD, FRACP; Jonathan Craig, PhD, FRACP;

Marie-Louise Dick, MPH, FRACGP; Mark Harris,

MD, FRACGP; Paul Johnson, PhD, FRACP; Jenefer

Martin, MEd, FRACS; Adrian Mindel, MD, FRACP;

Campbell Thompson, MD, FRACP; Tim Usherwood,

MD, FRACGP; Owen Williamson, FRACS, GradDip-

ClinEpi; John Wilson, PhD, FRACP; Jane Young, PhD,

FAFPHM; Jeffrey Zajac, PhD, FRACP

**Australasian Medical Publishing Co Pty Ltd**

**Advertising Manager:** Peter Butterfield

**Media Coordinators.** Kendall Byron; Julie Chappell

*The Medical Journal of Australia (MJA)* is published on the 1st and 3rd Monday of each month by the Australasian Medical Publishing Company Proprietary Limited, Level 2, 26-32 Pyrmont Bridge Rd, Pyrmont, NSW 2009. ABN 20 000 005 854. Telephone: (02) 9562 6666. Fax: (02) 9562 6699.

E-mail: [medjaust@ampco.com.au](mailto:medjaust@ampco.com.au). The Journal is printed by Offset Alpine Printing Ltd, 42 Boorea St, Lidcombe, NSW 2141.

**MJA on the Internet:** <http://www.mja.com.au/>

None of the Australasian Medical Publishing Company Proprietary Limited, ABN 20 000 005 854, the Australian Medical Association Limited, or any of its servants and agents will have any liability in any way arising from information or advice that is contained in *The Medical Journal of Australia (MJA)*. The statements or opinions that are expressed in the Journal reflect the views of the authors and do not represent the official policy of the Australian Medical Association unless this is so stated. Although all accepted advertising material is expected to conform to ethical and legal standards, such acceptance does not imply endorsement by the Journal. All literary matter in the Journal is covered by copyright, and must not be reproduced, stored in a retrieval system, or transmitted in any form by electronic or mechanical means, photocopying, or recording, without written permission.

Published in 2 volumes per year.

Annual Subscription Rates for 2005 (Payable in Advance) to:

AMPCo, Locked Bag 3030, Strawberry Hills, NSW 2012

Individual Subscriptions (includes 10% GST)

Australia: \$A319.00, Medical students (Australia only): \$A60.00

Overseas: \$A410.00

Indexes are published every 6 months and are available on

request as part of the current subscription.

Single or back issues contact: AMPCo (02) 9562 6666.

**Advice to Authors—**

<http://www.mja.com.au/public/information/instruc.html>



28,010 circulation as at  
29 April, 2005



ISSN 0025-729X