

of our data including school holiday periods as a potential confounding factor did not appreciably alter our results in either the continuous (revised incidence rate ratio [IRR], 1.26; 95% CI, 1.12–1.41, compared with original IRR, 1.20; 95% CI, 1.09–1.34) or categorical analysis (see Table).

1. Johnston FH, Kavanagh AM, Bowman DMJS, Scott RK. Exposure to bushfire smoke and asthma: an ecological study. *Med J Aust* 2002; 176: 535–538.
2. Schwarz J, Spix C, Touloumi G, et al. Methodological issues in studies of air pollution and daily counts of deaths or hospital admissions. *J Epidemiol Community Health* 1996; 50: S3–S11.
3. Gill AM, Moore PHR, Williams RJ. Fire weather in the wet dry tropics of the World Heritage Kakadu National Park, Australia. *Aust J Ecology* 1996; 21: 302–308.
4. Lumley T. Statistical training for epidemiologists: a view from afar. *Australas Epidemiologist* 2001; 8(4): 5–7.
5. Storr J, Lenney W. School holidays and admissions with asthma. *Arch Dis Child* 1989; 64: 103–107. □

Work-related stress: care and compensation

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TO THE EDITOR: The editorial by Steven and Shanahan on work-related stress¹ indicated that claiming Medicare benefits for a workers compensation injury is specifically precluded. It also identified a need for guaranteed certainty of cost reimbursement for treatment.

Medicare benefits are payable for professional services that are wholly covered by workers compensation, unless there is a reimbursement arrangement with the insurer.² The patient may be bulk billed or given a private account. The recovery of any benefits paid once a settlement or judgement is made does not involve the practitioner.

It is not claiming the benefit which is precluded, but keeping it if an outcome favourable to the plaintiff ensues. My understanding is that unsuccessful claims are rebatable under Medicare for clinically relevant medical services. The medico-legal expenses incurred, for example for reports, do not qualify, as they are not medically necessary. The fees are a private matter, as are any treatment charges in excess of the Medicare rebate. Herein lies the uncertainty.

1. Steven ID, Shanahan EM. Work-related stress: care and compensation [editorial]. *Med J Aust* 2002; 176: 363–364.
2. Medicare benefits schedule book. General explanatory notes. Section 3.6. Canberra: Department of Health and Aged Care, 1 November 2001. □

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IN REPLY: What Carroll says is correct, but Section 3.6 of the general explanatory notes of the *Medicare benefits schedule book* also states that "The only exception to this is where a person has entered into a *reimbursement arrangement* with a compensation insurer. In such cases a Medicare benefit is not payable".¹

While it may be arguable as to what actually constitutes a *reimbursement arrangement*, the situation is further clarified by Section 13.2.1 of the same schedule, which states:

"Medicare benefits are not payable in respect of a professional service in the following circumstance:

(b) where the medical expenses for the services are in relation to a compensable injury or illness for which the patient's insurer or compensation payer has accepted liability. However, if medical expenses relate to a compensable injury or illness and the insurer or compensation payer is disputing liability, Medicare benefits are payable until liability is accepted".

1. Medicare benefits schedule book. General explanatory notes. Section 3.6. Canberra: Department of Health and Aged Care, 1 November 2001. □

The Avoid Stroke as Soon as Possible (ASAP) general practice stroke audit

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TO THE EDITOR: In an article in the 1 April issue of the Journal,¹ Sturm et al reported

on a GP-based stroke audit ("ASAP") and stated that "the information obtained is likely to be representative of most Australian general practice environments". Without further information, we cannot be as confident.

First, their sampling strategy was unconventional. Of all registered GPs from five Australian States and one Territory who were initially approached in May 2000, only 10.2% ($n = 1850$) of eligible GPs expressed interest in participating in the study. From each of 22 "geographical regions", up to 18 GPs were recruited, initially by random sampling and then by replacement, to obtain a sample of 396 GPs, of whom 321 (81%) provided data. No GP data by State and Territory or "geographical region" were provided to allow readers to judge the possibility of sampling bias. Unpublished data from our own GP survey about stroke issues in New South Wales raise this possibility. We conducted a postal survey of 490 randomly selected GPs from November 2000 to February 2001 (response rate, 60%). None of the 296 participating GPs stated they were enrolled in a stroke clinical audit.

Second, although patients were clustered within GPs, no intracluster correlations (ICCs) were reported. Outcomes (eg, disease morbidity and risk factors) for patients recruited from general practices tend to be correlated at the GP level.² ICCs quantify the extent to which individuals within clusters (such as a GP's practice) are similar to each other relative to individuals from other clusters. Conventional formulas for calculating confidence intervals assume that the ICC is zero (ie, no clustering). Yet, where correlation within clusters does exist (ie, $ICC > 0$), the effective sample size is reduced and the associated CIs are inevitably wider. For any given ICC greater than zero, larger cluster sizes also further reduce the effective sample size. Applying appropriate formulas,³ we calculated effective sample sizes for risk factors in the ASAP

Effective sample size, assuming three different magnitudes of intracluster correlation (ICC)

Risk factor	Actual n	Effective n if ICC = 0.015	Effective n if ICC = 0.05	Effective n if ICC = 0.1
Total				
Hypertension	14 280	8643	4499	2670
Hypercholesterolaemia	12 516	7973	4317	2608
Smoking	14 297	8649	4500	2670
Diabetes	13 767	8455	4449	2653
Atrial fibrillation	14 194	8611	4490	2667
Stroke/transient ischaemic attacks	14 321	8657	4502	2671