



impact on health care utilization. Unfortunately, they have added little to our current understanding and may in fact have created some confusion.

First, the authors could have used the NPHS in a more meaningful and creative way. Most of the tables and figures were adapted from published resources, so the paper does not present any new findings. The results are reported in an inconsistent manner because the authors were limited by the formats of the original publications. For example, the data in the tables and Figs. 1 and 2 were for people aged 55 years and over, presented in 10-year intervals, whereas those in Fig. 3 were for people aged 50 years and over, presented in 5-year intervals. No statistical tests or 95% confidence intervals were presented for any of the data.

Second, there are problems with the multiple logistic regression results shown in Table 5 (which appears to be the only table based on the authors' own analyses). Might the negative "odds ratios" in this table be regression coefficients that should have been further manipulated to generate the real odds ratios? It is disturbing that these values are then discussed as if they really were odds ratios.

The puzzling results are also reflected in the statistically significant associations between decreased GP consultations and some chronic conditions, such as arthritis or rheumatism and back problems. Apart from the problem with the odds ratios, the authors include disability in their model and treat it as a confounder. Disability is an intermediate variable lying between chronic conditions (cause) and increased GP consultations (effect). Including it in the model means that the true association between chronic conditions and increased health care utilization would be artificially underestimated. This is especially true for arthritis as the leading cause of disability.

Finally, the authors fail to describe

how they selected variables for and fitted the logistic regression model. Some of the included variables have a very low frequency: for example, among those aged 65 and over, only 22 reported epilepsy. Not only is the inclusion of low-frequency conditions such as epilepsy in conflict with the NPHS statistical analysis guidelines, but it also contributes noise to the model. The authors do not state the age range to which the model applies: aged 50 and over, aged 55 and over, or aged 65 and over? Other questions include whether age was used as a categorical variable (nominal v. ordinal) or a continuous variable, how income was defined and which level was used as the baseline, and how weight and design effects were treated in the regression.

We tried to replicate the results shown in Table 5 of the published paper using the 1994-95 NPHS data set, but the agreement between our findings and those of Rosenberg and Moore was disappointing.

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[The authors respond:]

We acknowledge that there was a problem in Table 5, which we missed during proofreading — odds ratios are indeed always positive.

As Drs. Wang and Badley point out, the values in Table 5 are regression coefficients, not odds ratios. They were derived according to a procedure similar to the one Dr. Finkelstein outlines, not logistic regression. The heading for column 2 of Table 5 is mislabelled and should read instead "Added number of vis-

its." In our model the dependent variable was the number of added visits to a GP and the independent variables were the medical conditions and the socioeconomic variables identified in Table 5. When all other independent variables are controlled for, the analysis yields the regression coefficients shown in Table 5. The interpretation of the numbers is consistent with the text on page 1030. For example, having Alzheimer's disease increases the number of annual visits to a GP by 1.87, when all other conditions and socioeconomic circumstances are controlled for. The crucial point is that this correction does not change the general argument that specific conditions increase the likelihood that elderly people will make more visits to their GP. We might also add that even though Dr. Finkelstein was working with different data, his results complement ours.

We apologize to *CMAJ* readers for any confusion caused by Table 5 and the corresponding discussion but would remind them that this unfortunate error in no way negates either the general argument we make about health and socioeconomic conditions of the elderly population and their meaning for the utilization of physician services or any of the other aspects of our article.

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Kudos for land-mine ban

Foreign Affairs Minister Lloyd Axworthy introduced a bill recently that will ban the use, manufacture and export of land-mines. Singer Bruce Cockburn was the first to bring this issue to my attention, and I learned more about the work being done to ban them through Physicians



for Global Survival. It has been amazing to watch the evolution of public awareness and the development of a strong movement toward an international ban, which led more than 100 countries to sign a landmine treaty in Ottawa last December.

Land-mines are brutal, indiscriminate weapons that continue to maim for years after conflicts end. Even if a mine doesn't kill, severe wounds usually result in traumatic or surgical amputations. For the wounded, there is often a need for antibiotics, blood, long hospital stays, costly prostheses and extensive rehabilitation. These are merely the medical consequences; the social and economic costs are also huge.

Canada is one of the few countries in which medical professional organizations such as the CMA have passed resolutions concerning landmines. As we work toward the abolition of these weapons by the year 2000, physicians — and physicians-to-be — can be proud of the role their profession has played in building a more peaceful society and more peaceful world.

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Screening for cervical cancer

Although we agree with many of the points raised in the editorial "Cervical cancer: screening hard-to-reach groups" (*Can Med Assoc J* 1997;157[5]:543-5), by Dr. Eva Grunfeld, the overall impression is that there is still some doubt about the success of Pap testing in reducing the incidence of and mortality rates associated with cervical cancer. The editorial emphasizes recruitment of underscreened and hard-to-reach groups, although Grunfeld acknowledges that 50% of women with inva-

sive cancer of the cervix have undergone Pap testing. In their article "Review of the screening history of Alberta women with invasive cervical cancer" (*Can Med Assoc J* 1997;157[5]:513-9), Dr. Gavin C.E. Stuart and colleagues document factors associated with the development of cervical cancer in such women. They stress the need for high-quality laboratory and information systems and a program to ensure that all women at risk undergo at least one Pap test and enter a cervical screening program.

After the last Canadian Workshop on Cervical Screening,¹ the Cervical Cancer Prevention Network (CCPN) was formed to facilitate the development of provincial screening programs for cervical cancer. Three working groups have been created, one each for information systems, quality management and recruitment. I am writing in my capacity as chair of the Recruitment Working Group.

With support from Health Canada, we commissioned a literature review to identify successful strategies that targeted women aged 15 to 69 years, hard-to-reach women and health care professionals. The review, which will be submitted for publication, demonstrated that a single strategy was unlikely to be effective, confirming results presented in the article "Effectiveness of a call/recall system in improving compliance with cervical cancer screening: a randomized controlled trial" (*Can Med Assoc J* 1997;157[5]:521-6), by Drs. Sharon K. Buehler and Wanda L. Parsons. A combination of strategies and approaches is more likely to be effective,² although it is also expensive.³ Because of the cost, it is vital that we in Canada take advantage of the networking opportunity offered at the national level through the CCPN and establish similar collaborative efforts at the provincial level, such as the Ontario Cervical Screening Collaborative Group.⁴ The Recruitment Working Group has encouraged submissions of proposals to

the Federal Population Health Fund focusing on recruitment of 3 hard-to-reach groups: socially and economically disadvantaged women, immigrants and native women.

The statement in Grunfeld's editorial attributed to Hislop and associates⁵ — that the rate among native women is 6 times that of the general population — is misleading. The "general population" in the cited article is that of British Columbia, which has the lowest rates of cervical cancer in Canada. According to a recent study, the incidence of cervical cancer among status Indians in Ontario was slightly less than twice that of the general population of Ontario, and between 1968 and 1991 the rates in both groups declined (Dr. L.D. Marrett, Cancer Care Ontario, Toronto: personal communication, 1997).

As the editorial stresses, cost-effective interventions are the order of the day. Those of us working to develop cervical screening programs know that if the incidence of cervical cancer is reduced, the savings in treatment and long-term care will quickly result in a net cost savings to the health care system, quite apart from preventing unnecessary suffering for hundreds of women and their families.

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