



## Motel kids syndrome

Because of the rising demand for housing and the scarcity of low-income housing, there has been an alarming increase in the number of homeless people in Canada, particularly in Toronto.<sup>1</sup> Many of these people are single parents, mainly mothers with young children.

These unfortunate families are often shunted from one shelter to another or to suburban motel rooms until suitable housing is found. At the moment, none is available.

Because of financial constraints, the children of the homeless are poorly fed and clothed. They are at higher risk of illness and many of the children have behavioural and learning problems because of a lack of parental stability.<sup>2</sup> I have coined the term "motel kids syndrome" to describe the global symptomatology of these unfortunate children, who are in essence products of communal neglect.

Social workers, teachers, physicians and others are all aware of the plight of homeless people, but they cannot properly deliver the services needed because of financial constraints at all levels of government.

We must not allow the situation of ever-increasing poverty among Canadians to continue. As a nation we can begin by creating social programs that provide a basic income and affordable housing for all, and programs that address the needs of all children, including those who are homeless and disadvantaged.

It's the least our children deserve.

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### References

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2. Ross DP, Roberts P. *Income and child well-being: a new perspective on the poverty debate*. Ottawa: Canadian Council on Social Development; 1999.

## The real costs of screening mammography

I read with interest the article on the Screening Mammography Program of British Columbia (SMPBC) by Ivo A. Olivotto and colleagues.<sup>1</sup> On the basis of my experience as a screening radiologist since 1988 and as a centre administrator since 1991, I wish to comment on 3 areas.

First, the average cost per screening examination quoted in the article excludes significant direct screening costs including capital costs, hospital costs, hospital occupancy costs and some administrative costs that are incurred by publicly administered facilities in hospitals and are paid for by public funds outside of the SMPBC. Only the costs for the privately administered centres are close to being all-inclusive.

Second, the authors state that "the radiologists read the films in batches of 50 to 100 examinations per hour." The average reading rate in the SMPBC is likely below 50 per hour because most of the patients have previous films and it is often necessary to compare the new films with multiple previous examinations or with outside films.

Third, the authors excluded unilateral mammograms from their analysis of cost savings despite the fact that many unilateral mammograms done in diagnostic facilities are work-ups of abnormal SMPBC mammograms. When additional views are required as a result of screening in a diagnostic facility,

they are not billed separately because they are included in the medical services plan fee for diagnostic mammography (see the BC Medical Association's *Guide to Fees*). Thus, exclusion of screening-generated unilateral mammograms exaggerates the cost savings of the shift from diagnostic facilities to the SMPBC.

BC has the lowest screening mammogram reading fee and the lowest average screening examination cost in Canada. The program's administration and the radiologists and employees providing services within the program deserve credit for achieving these cost efficiencies. In addition, the program has always been a cooperative effort among hospitals, the diagnostic imaging community, the Ministry of Health and the BC Cancer Agency, and it also benefits from their monetary, and other, contributions.

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### Reference

1. Olivotto IA, Kan L, Mates D, King S. Screening Mammography Program of British Columbia: pattern of use and health care system costs. *CMAJ* 1999;160(3):337-41.

I was surprised by the absence of financial statements in an article whose primary claim is that the SMPBC is more cost-effective than the service provided by radiologists in private clinics.<sup>1</sup> In fact, Olivotto and col-



leagues provide no documentation about their accounting methodology or the cost centres included in their determination of provincial costs.

Does the BC provincial accounting include the expenses related to capital acquisition, maintenance, depreciation and the monetary time value of debt? Does it include salaries related to payroll preparation and recruitment of volunteers and costs related to fax and telephone communication? Does it include unfunded pension liability? Some government screening staff will eventually draw an indexed pension for a period longer than their employment.

Another serious problem appears to be the improper comparison of mass screening mammography within the SMPBC against the screening and much more comprehensive diagnostic mammography performed in clinics; the 2 are significantly different examinations. This is suggested by the markedly superior detection rate within the clinics compared with the detection rate within the provincial program. The SMPBC, which undertook 65% of the examinations (167 221 examinations) identified only 21% (505) of all cancers. The other 79% of cancers were apparently detected or evaluated during the 88 860 examinations (the other 35% of examinations) undertaken by the clinics. Using this determination, the cost per cancer found is \$15 211 through the SMPBC and just \$3445 through the private radiology clinics.

I urge the authors to provide detailed financial statements that are open to independent audit before making the claim that the SMPBC is more cost-effective than clinic radiology services. Considering the apparently erroneous comparison of government screening with private clinic screening and diagnostic facilities, they may wish to withdraw their conclusion.

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#### Reference

1. Olivotto IA, Kan L, Mates D, King S. Screening Mammography Program of British Columbia: pattern of use and health care system costs. *CMAJ* 1999;160(3):337-41.

[One of the authors responds:]

**W**e entirely agree with Dr. Thurber that the ability to provide high-quality, low-cost screening mammography for women in BC is a collaborative effort of many partners including the radiologists who read the mammograms and manage many of the screening centres, the centre staff, volunteers and the Ministry of Health. In particular, we value the close cooperative relationship we have enjoyed with BC radiologists since the inception of the SMPBC in 1988.

The purpose of our analysis was to examine the impact of the SMPBC on the use of, and health system expenditures for, bilateral mammography. Although some capital depreciation in public facilities does not appear in the SMPBC budget because the Ministry of Health directly funds it, the SMPBC does pay for heat, light, cleaning, tube replacement and administrative costs, among other items, in the public facilities.

Screens are interpreted in daily batches, the number depending on each centre's volume. Feedback from several senior radiologists confirms that 50 to 100 screens can be read per hour. Outside films are obtained only when a potentially benign abnormality is identified and comparison with previous films might avoid calling the screen result abnormal. This is done for a minority of clients.

To answer Dr. Levant, expenses attributable to the SMPBC include promotion and recruitment activities, payroll, a professional reading fee, information system support, costs to mail results to women and their physicians, capital depreciation and leasehold improvements in private centres, travel and accommodation for mobile service staff and central services including administration, quality control, Canadian Association of Radiologists accreditation and outcome evaluation. The SMPBC costs were taken directly from previously published, independently audited financial statements (SMPBC annual reports, 1991-1997).

Dr. Levant seems to have missed the point of screening mammography. In 1995, 52.8% of newly diagnosed breast cancers in BC were found by the

woman herself, 10.6% by physicians and 36.6% by screening mammograms either through the SMPBC or diagnostic offices (unpublished data). His simplistic calculation of the partial costs for diagnostic mammography to investigate symptomatic cancers is not at all comparable to the cost per screen-detected case of developing and providing a population-based breast screening program for asymptomatic women. If data were collected systematically within the diagnostic sector, it would be possible to estimate the cost efficiency of screening outside organized programs.

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## Euthanasia's never an answer

**T**he first-prize Logie essay by Daniel Gorman<sup>1</sup> very nicely outlined some of the ethical and management dilemmas facing modern medicine, especially the issue of palliative care in the ICU setting. However, Gorman has placed great emphasis on the difference between active and passive euthanasia, a difference that can be considered simply semantic or even irrelevant when palliative care is practised properly.

I am a surgeon and intensive care physician. I have been in the difficult situation of withholding or withdrawing care to allow death on numerous occasions. This is an extremely difficult process for everyone, but when curative or supportive medical care fails, becomes futile or contravenes the individual's autonomy, then good medical care mandates consideration to withhold or withdraw care that merely prolongs the dying process.

This does not relinquish the duty of care but, rather, changes it to provide a peaceful, pain-free and dignified death.

Such palliative care requires the health care team to support and prepare the individual for the impending death. Properly administered medications and other therapies can be used to relieve



suffering, even if such therapies may shorten life. This satisfies society's laws and morality and is consistent with ethical medical care.

This is in stark contrast to euthanasia, which is a deliberate act to end life. Relief of suffering does not enter into the definition and may or may not be a goal. The distinction between good palliative care and euthanasia (active or passive) or physician-assisted suicide is clear and important, not just semantics. Considerate palliative care respects the guiding philosophies of patient care and medical ethics, above all by protecting individual autonomy and dignity while doing no harm. The aim is to allow the inevitable. Most important, good palliative care makes euthanasia and assisted suicide unnecessary.

Palliative care is hard to do well. Society has allowed a mechanism to evolve that works extremely well when applied correctly. The cases mentioned by Gorman do not cry out for euthanasia or legislative and medical change, but they do demonstrate what can happen when people do not do their jobs properly. These cases show the importance of continued medical education, awareness and proper training. As Gorman suggests, euthanasia can have "adverse social consequences" and would put the profession and society on a slippery slope.

**Peter Lovrics, MD**  
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#### Reference

1. Gorman D. Active and passive euthanasia: the cases of Drs. Claudio Alberto de la Rocha and Nancy Morrison. *CMAJ* 1999;160(6):857-60.

### To screen: perchance to treat

The strong impression one gets from reading the article by Pierre I. Karakiewicz and Armen G. Aprikian in the *CMAJ* prostate cancer series<sup>1</sup> is that serum prostate-specific antigen (PSA) screening is beneficial. Their initial teaching point reads "Early detection of prostate cancer is of utmost importance, given that localized disease represents the only curable stage." Does the evidence support this view, or is it a manifestation of wishful thinking?

On the basis of the authors' own words, I would submit it is the latter. Karakiewicz and Aprikian admit that there is no direct evidence that treatment of prostate cancer is effective, but they also state that "definitive studies to prove that early detection and treatment lower the mortality rate have been initiated" (emphasis mine). Surely the studies referred to were designed to determine whether or not early detection and treatment lower mortality.

At present no one knows whether PSA screening for prostate cancer is beneficial. This should have been the initial teaching point in the article.

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1. Karakiewicz PI, Aprikian AG. Prostate cancer: 5. Diagnostic tools for early detection. *CMAJ* 1998;159(9):1139-46.

### Rooted in the country life

In their study of the effect of rural background and clinical rural rotations on subsequent practice location, Mark Easterbrook and colleagues failed to address a factor that is intuitively important in determining whether physicians choose to practise in a rural area: influence of the physician's spouse.<sup>1</sup> Practice location has been shown to be determined in part by the spouse's preferences.<sup>2-5</sup> A 1985 study showed that, in addition to physician background (including the size of the community where the physician grew up and the size of the physician's high school graduating class), the background of the physician's spouse was a significant factor affecting recruitment and retention of physicians in rural practice.<sup>2</sup> Rural communities appear to appeal to spouses who are from rural communities themselves and who find job opportunities in the area.<sup>2,5</sup>

I am a rural physician, and my wife is from a rural area. We have been very happy living in small communities in Canada. Future studies should take spousal factors into account to determine what rural communities can do to

become more attractive to prospective physicians and their spouses.

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#### References

1. Easterbrook M, Godwin M, Wilson R, Hodgetts G, Brown G, Pong R, et al. Rural background and clinical rural rotations during medical training: effect on practice location. *CMAJ* 1999;160(8):1159-63.
2. Leonardson G, Lapierre R, Hollingsworth D. Factors predictive of physician location. *J Med Educ* 1985;60(1):37-43.
3. Woodward CA, Ferrier BM. Career development of McMaster University medical graduates and its implications for Canadian medical manpower. *CMAJ* 1982;127(6):477-80.
4. Riley K, Myers W, Schneeweiss R. Recruiting physicians to rural practice. Suggestions for success. *West J Med* 1991;155(5):500-4.
5. Anderson EA, Bergeron D, Crouse BJ. Recruitment of family physicians in rural practice. *Min Med* 1994;77(7):29-32.

#### [One of the authors responds:]

I thank Dr. Poradzisz for his comments on our article.<sup>1</sup> We looked at the relative effects of a physician's exposure to rural communities, comparing the effect of having grown up in a rural community with the effect of exposure to rural communities during training. We found that prior residence in a rural community was a stronger predictor of practice location. As Dr. Poradzisz points out, the origins of the spouse have also been shown to be an important factor. Since we also had these data we looked at the effect of having a spouse from a rural community (10 000 or fewer people) and found that it was an independent predictor of a physician deciding to practise in a rural community (crude odds ratio 31, 95% confidence interval 1.5-6.4,  $p = 0.003$ ). This does not change our results, but rather it strengthens the finding that rural background influences rural practice decisions.

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#### Reference

1. Easterbrook M, Godwin M, Wilson R, Hodgetts G, Brown G, Pong R, et al. Rural background and clinical rural rotations during medical training: effect on practice location. *CMAJ* 1999;160(8):1159-63.



## Death in a hobble restraint

A *CMAJ* paper on unexpected death related to physical restraint<sup>1</sup> has attracted interest in Europe following a tragic death here. A 25-year-old Nigerian man who had sought asylum in Austria died in restraint on a flight from Austria to Bulgaria; he had been under the observation of 3 police officers. He was on the flight because his application for asylum had been rejected by Austrian authorities and he was being deported. The man had been violently agitated and hyperactive because he strongly opposed being forced to leave Austria. The main risk factors cited by Micheal S. Pollanen and colleagues<sup>1</sup> for unexpected death in restraint (a psychiatric disorder or cocaine-induced psychosis causing excited delirium) were not reported by police authorities in this case.

We have investigated cardiopulmonary response to hobble restraint in the upright and prone position in 6 male volunteers in a randomized crossover trial.<sup>2</sup> The subjects remained calm during the study protocol. After hobble restraint in the prone position the mean forced vital capacity decreased by 39.6%, the mean forced expiratory volume dropped by 41.0%, and the mean end tidal carbon dioxide increased by 14.7%. The mean heart rate dropped by 21.3%, the mean systolic blood pressure decreased by 32.3%, the mean diastolic blood pressure fell by 26.1% and the mean cardiac output decreased by 37.4% (for all reported changes,  $p < 0.01$ ).

The use of hobble restraints in the prone position clearly leads to a dramatic impairment of hemodynamics and respiration even in nonagitated subjects, and this should probably be considered as a main contributing factor in cases involving restraint-related deaths. As Pollanen and colleagues recommend, restraints should be used only when the situation clearly justifies their use and when there is no other way to

prevent physical harm to the person in custody or others. In all such cases, careful observation is mandatory. If these recommendations had been followed, the life of this young Nigerian man would probably have been saved.

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### References

1. Pollanen MS, Chiasson DA, Cairns JT, Young JG. Unexpected death related to restraint for excited delirium: a retrospective study of deaths in police custody and in the community. *CMAJ* 1998;158(12):1603-7.

2. Röggl M, Wagner A, Muellner M, Bur A, Röggl H, Hirshl MM, et al. Cardiorespiratory consequences to hobble restraint. *Wien Klin Wochenschr* 1997;109:359-61.

## Correction

In the abstract of a recent article by Sylvie Perreault and colleagues<sup>1</sup> units were mistakenly introduced for the ratios of total cholesterol to high-density lipoprotein cholesterol. The ratios should be dimensionless. We apologize for this error.

### Reference

1. Perreault S, Dorais M, Coupal L, Paradis G, Joffres MR, Grover SA. Impact of treating hyperlipidemia or hypertension to reduce the risk of death from coronary artery disease. *CMAJ* 1999;160(10):1449-55.

## CMAJ index L'index du JAMC

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