of Sheps and colleagues are not incompatible. Both studies observed that physicians certified in family medicine were more likely to be involved in maternity care than their noncertified colleagues. Yet some correlates of certification in family medicine observed in our study were not seen in Sheps and colleagues' study. Speculation on the reasons for these discrepancies may help us develop testable hypotheses about the reasons for the differences observed.

We agree that the main difference between the two studies appears to centre on how full-time work status was defined and whether those not meeting the definition used were excluded from the analysis (as in Sheps and colleagues' study) or included in the analysis along with a dummy variable for work status (as in our study). We attempted to control for the effect of differences in work status in the regression equation; they chose to eliminate all that did not meet their criterion. We also tested for an interaction between work status and certification, but no significant interaction was observed.

Our definition of full-time work status (earning at least one-half the median for the group) classified 88.9% of the men and 68.4% of the women as working full-time in 1986. Sheps and colleagues' definition (earning 0.75 of the mean for the group in each of 1984 through 1986) eliminated about 50% of otherwise eligible physicians from their study. When we applied their definition to the physicians we studied, only 75.8% of the men and 41.5% of the women were classified as full-time for 1986. Further, more loss is likely: we did not have billing data for the previous 2 years and thus could not apply this part of their definition.

Unfortunately, in neither study were the physicians actually asked whether they worked full-time. Both studies used anonymous data obtained from provincial health insurance plans and arbitrarily defined full-time work status. In the CMA's last manpower survey (*Can Med Assoc J* 1989; 140: 212-221) 94.8% of male physicians aged 44 years or less and 68.9% of female physicians in the same age group reported full-time work status. When those retired, out of the work force or not reporting activity level were excluded, 98.4% of these men and 75.3% of these women said they worked full-time. Thus, our more lenient definition is likely to have misclassified as working part-time some physicians who would describe themselves as working full-time.

To definitively answer the questions raised by our study and that of Sheps and colleagues a new study is required that would examine the impact of different definitions of full-time work status on observed differences in the billing patterns of primary care physicians who are or are not certified in family medicine. In such a study it would be useful to know the extent of agreement between self-designated work status and arbitrary definitions. Such a study might shed light on the factors involved in the differences observed between our two studies and teach us more about how certification is associated with practice behaviour as reflected in billing patterns.

As for Dr. Mittelsteadt's comments, sex was entered into the regression equation before the effect of certification was examined, as stated in our article. Thus, differences attributable to the imbalance in sex do not account for the differences observed between certified and noncertified physicians.

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Myocardial lesions in pheochromocytoma

Dr. Dan Sadowski and colleagues' case report "Reversibility of catecholamine-induced cardiomyopathy in a woman with pheochromocytoma" (*Can Med Assoc J* 1989; 141: 923-924) is interesting. However, I am concerned that the authors' unbiased comment on the findings of Van Vliet, Burchell and Titus[1] may leave readers with a false impression of the pathological features of this condition.

Although it is true that in their 1966 paper Van Vliet and associates reported finding "active myocarditis" at autopsy in 15 of 26 patients with pheochromocytoma, we now know, as Sadowski and colleagues report, that excess catecholamine induces focal myocardial necrosis. This "contraction band" necrosis invokes a mononuclear cell inflammatory response that in mild form and at a certain angle of histologic section may be mistaken for active myocarditis. Nevertheless, the pathological process is neither toxic nor immune-mediated myocarditis. It is catecholamine-induced myocardial necrosis with associated chronic inflammatory cell reaction, leading (in healing) to focal myocardial fibrosis.

Considering the ease of endomyocardial biopsy I was disappointed that the paper lacked "before-and-after" histologic illustrations.

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[One of the authors replies:]

We thank Dr. Silver for his comments regarding the cardiac abnormalities seen in patients with pheochromocytoma. We agree