have been due to technical factors rather than neoplasia. This possibility was mentioned in our article where we noted the false-negative rate (poor sensitivity—not poor specificity!) inherent in Pap smear screening.

False-negative Pap smears may occur not only because of inadequate specimen collection techniques, as suggested by Dr. Baxley, but also because of problems associated with processing, screening, and interpreting the specimen.[1] The cumulative false-negative error rate, considering all stages of obtaining, processing, and interpreting a Pap smear, may be as high as 25 percent for precancerous lesions and up to 50 percent for malignant lesions.[1,2] These inaccuracies in Pap smear screening, combined with the apparent change in the rate of development of cervical cancer, further support the need for annual cervical cytology screening.

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References

1. Koss LG. The Papanicolaou test for cervical cancer detection. JAMA 1989; 261:737-43.
2. Vander Graaf Y, Vooijs GP, Gaillaard HL, et al. Screening errors in cervical cytology screening. Acta Cytol 1987; 31:434-8.

Rural Obstetric Care

To the Editor: I appreciate very much the vigorously supportive letter from Colonel Camp (April–June 1989). He was and continues to be a strong supporter of his residents, past and present.

I also read with interest and appreciation Dr. Brown's letter and accompanying references (April–June 1989). I strongly agree that Cesarean rates are too high and that shared care is an excellent method of improving them. Physicians are people, too, and subject to the same pressures as other professionals.

Currently, there is no disincentive to performing Cesarean sections, and some strong incentives to perform them. On average, they require less time than a vaginal delivery. Financially, they are much more rewarding. They can be scheduled not to interfere with one's plans, be they clinic or an evening out. If there is a bad outcome, the assumption is the physician did the ultimate—he or she performed surgery in an attempt to rescue the baby. If you do not do a Cesarean and there is a bad outcome, be prepared for a lot of hindsight inspection of the entire pre-intra-post-natal management. In my situation, referring a patient for a Cesarean causes me a loss of income. The loss does not prevent me from seeking consultation if needed, and it does not cause me to persist in hazardous labors, but it does remove one of the simple but potent incentives for a Cesarean section.

I view family practice at or near a crossroads. If family physicians continue to give up obstetrics, I think a critical mass of numbers, role models, and peers will soon be gone, and it will remove obstetrics from family medicine. I believe it would be more efficient if we evolved a system wherein routine, low-risk care was provided entirely by family physicians, and obstetricians provided aggressive care for high-risk, complicated obstetrical patients, largely referred by family physicians. Of course, I am aggressively pro-family practice—I was trained by Dr. Camp. For your information, I have currently performed 94 vaginal deliveries (12 out of hospital [10 in clinic, 2 in cars]) and 2 Cesarean deliveries.

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Epidural Anesthesia

To the Editor: As family practitioners providing obstetrical care, we read with interest the study of epidural anesthesia in labor by Niehaus, Chaska, and Nesse (October–December 1988.) We share the authors' sentiment that natural childbirth should be encouraged, while appreciating that in certain circumstances epidural anesthesia may be of benefit to women in labor.

In interpreting their findings, the authors conclude that the "use of elective epidural anesthesia results in markedly increased odds of instrumental or operative delivery."[(p 238)] We disagree that the study justifies such a strong causal influence.

The study's analysis reveals that much of the increased risk of forceps or Cesarean section delivery for women receiving epidural anesthesia is attributable to the greatly increased odds ratio for women administered epidural anesthesia in the *second* stage of labor. There was no significant increase in the risk of nonspontaneous delivery for the subgroup of nulliparous women receiving epidural anesthesia in stage one.

We question whether epidural anesthesia was truly "elective" when administered in the second stage of labor. In our clinical experience, initiating epidural anesthesia in the second stage of labor is reserved for situations of imminent or anticipated forceps or Cesarean section delivery. The predictably high association between epidural anesthesia and nonspontaneous delivery in this context, then, becomes one of effect-cause rather than cause-effect; that is, the use of forceps or Cesarean section (or anticipation of their use) is the primary decision that results in the selection of epidural anesthesia.

We suspect that the authors incorrectly assigned many patients to the "elective" epidural anesthesia cohort who had second stage epidural anesthesia administered under nonelective conditions, resulting in an erroneously inflated odds ratio for nonspontaneous delivery in this cohort. Alternatively, family physicians in the hospital under study may approach elective pain control in the second stage of labor very differently than those in our community.

We also have reservations about the authors' method of adjusting for confounding variables. In Tables 2 to 4 of their report, the authors list multiple variables such