ever, errors introduced by definitional differences may be randomly distributed among the various legislative status groups and thus balance out. Furthermore, even restricting Washington State to the narrowest possible definition of lay midwifery (home delivery by a licensed midwife), it still ranks twelfth in the country in "lay midwife" deliveries compared to other states; some of the other states are likely to have more inclusive definitions.

I conclude that there is no evidence of lower lay midwife use rates for states with enabling legislation. This issue can have significant ramifications for the midwives and for states considering enabling legislation. Thus, more data with comparable definitions are needed before any conclusion can be drawn about the impact of legislation on opportunities for midwives. In particular, it would be very useful to see if Washington State's experience of proportionately high lay midwife deliveries is shared by other states with enabling legislation.

REFERENCES

1. Butter I, Kay BJ: State laws and the practice of lay midwifery. Am J Public Health 1988; 78: 1161–1169.
2. National Center for Health Statistics: Vital Statistics of the United States, 1985, Volume I—Natality. Hyattsville, MD: NCHS, 1988; Section 2:87–104.
3. Washington State Department of Licensing: An Assessment of Childbirth Outcomes in Washington. Olympia, WA: WSDL, 1988; 15.

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Response from Drs. Butter and Kay

In response to Dr. Starzyk's letter we wish to emphasize the following:

1) The National Center for Health Statistics data do not distinguish between lay midwife and certified nurse midwife out-of-hospital deliveries. Thus, using "midwife-nonhospital deliveries" as a measure of lay midwife deliveries is not valid. For example, this category would include midwife-supervised deliveries at birthing centers. Few, if any, lay midwives work in these settings.

2) Nine of the 10 states with enabling legislation require that the midwife have physician back-up. The 10th state requires that the midwife inform her clients on a disclosure form whether or not she has physician back-up. Physicians are often unwilling to enter into these relationships with lay midwives because of restrictions on home birth specified in their malpractice insurance policies. This has posed a restriction for midwives who want to establish such relationships regardless of the state in which they work. Specifying physician back-up in a law, given current malpractice policies, is inherently restrictive.

3) Nine out of 10 states specify the type of client lay midwives are permitted to work with. Four specify "low risk" cases only as determined by a physician. Two state "low risk" clients only, except when no physician is available in an emergency. The other three limit clients to "low risk" and provide definitions of "low risk." Reliance on physicians for an evaluation presumes their willingness to work with lay midwives. Refer to #2 above. These data are available from us on request.

4) We refer Dr. Starzyk to the last paragraph in our paper where we suggest that enabling legislation can be a mixed blessing. There is disagreement among midwives about the pros and cons of legal recognition. The issue is complex. Whether in the future the advantages (however defined) outweigh the disadvantages or vice versa depends on other changes emerging in the dominant health care system as well. In any event, we concur with Dr. Starzyk about the importance of the above issues and the desirability of further discussion.

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Comments from Taffel at NCHS

Dr. Starzyk errs in using National Center for Health Statistics figures on midwife-nonhospital deliveries as a surrogate for deliveries by lay midwives. A number of freestanding birthing centers (e.g., the Maternity Center Association of New York City), where deliveries are by certified nurse-midwives, are included in the NCHS out-of-hospital category. According to a recent survey of nurse-midwifery practice in the United States, 14 per cent of certified nurse-midwives conduct deliveries in private homes and 12 per cent in non-hospital birth centers. The proportion of nurse-midwives who deliver babies in non-hospital settings varied by 20-fold among states.[1,2]

At this time, many state birth certificates do not make the distinction between lay and certified nurse-midwife deliveries. Hence, it is not possible to determine from NCHS data what proportion of midwife out-of-hospital deliveries are by law midwives or how this proportion varies from state to state. This problem will be corrected beginning in 1989 with the implementation of the revised US Standard Certificate of Live Birth, which distinguishes between lay and certified nurse-midwives, and separately identifies freestanding birthing centers.

REFERENCES

1. American College of Nurse-Midwives: Nurse-Midwifery in the United States: 1982. Washington, DC: ACNM, 1984.
2. Adams CJ: Nurse-midwifery practice in the United States, 1982. Am J Public Health 1984; 74:1267–1270.

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Smokeless Tobacco: Less Seen at 1988 World Series

We were interested in observing longer range effects of anti-smokeless tobacco use activism on displays of smokeless tobacco use in the televised 1988 World Series. We did this in response to Dr. Rhys Jones' observations of the 1986 World Series.[1] He observed much display of use just subsequent to the initiation of several anti-smokeless tobacco activities and policy. In our replication study, we observed all five games and established inter-rater agreement of independent observations made from the time of the national anthem until the last out. Observations included number of times players or coaches made explicit shows of gum (a signal that players were not using smokeless tobacco or at least were hiding it in their mouths), number of spitting events that occurred, or any show of smokeless tobacco or smokeless tobacco packaging. Inter-rater agreement was r=.94 across categories and mean ratings