

Obstetric Care Among Family Physicians in Pennsylvania

Trends, Association with Residency Training, and Policy Implications

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A study was designed to investigate the status of obstetric practice by Pennsylvania family physicians and its relationship to family practice residency training. A 50% probability sample of all family and general physicians and of all graduates of Pennsylvania family practice residency programs was surveyed by mail. Ten percent of Pennsylvania family physicians and general practitioners reported currently practicing obstetrics, 44% of whom said they planned to stop within 3 years. Telephone survey information from nonresponders suggests that even fewer (5%) of the state's family physicians may actually be practicing obstetrics. Family practice residency training, postresidency obstetric training, and small community size were the best predictors of current obstetric practice. Family physicians in the smallest communities, however, were also those most likely to be planning to stop, and graduates of residency programs were increasingly choosing not to practice obstetrics. Cost of liability insurance and fear of lawsuits were primary reasons cited for stopping obstetrics.

*Family physicians have been major providers of obstetric care in the nation's rural areas. Now, increasingly firm evidence that fewer family physicians are practicing obstetrics signals increasing shortages in obstetric care for women in rural communities. Changes in the practice climate and obstetric training programs for family physicians seem essential to help reverse these trends. **J FAM PRACT 1990; 31:281-286.***

Training in obstetrics has been required for board certification in family practice since the American Board of Family Practice was established in 1969. This requirement is consistent with the belief that maternal and obstetric care is part of the comprehensive and continuous health care that characterizes family practice. Studies of selected groups of family physicians in several states (California, Arizona, Washington, Alabama, and Ohio)¹⁻⁵ and

nationally,^{6,7} however, have found that large numbers of family physicians have stopped providing obstetric care. Moreover, fewer family practice residency graduates have been reported to be including obstetrics when they begin practice.⁵ Most of these surveys have been criticized for including only members of professional associations and for not providing information on nonresponders.⁸ Nevertheless, each survey of selected groups of family physicians has cited the high cost of medical liability premiums, fear of lawsuits, and limited time as major reasons for stopping or not starting an obstetric practice.^{1,4,6,7} In addition to the concern that this decline in obstetric care by family physicians indicates a move away from comprehensive care for the family, there is also concern about the availability of obstetric care in underserved, rural areas.^{7,9-12}

A survey was conducted to assess the status of obstet-

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ric practice among all family physicians and general practitioners in Pennsylvania. The study had three purposes: (1) to investigate the status of obstetric care provided by family and general physicians practicing or trained in Pennsylvania (ie, how many were providing care and how many had stopped or planned to stop); (2) to examine the relationship between obstetric practice by nonobstetrician physicians and physician characteristics (eg, age and sex), practice characteristics (eg, practice type, community size), and family practice training characteristics (eg, year of graduation, postresidency obstetric training); and (3) to explore the influence of the practice environment, as perceived by family physicians trained or practicing in Pennsylvania, on their choice about practicing obstetrics.

METHODS

In September 1987 a 50% random sample of all allopathic and osteopathic physicians identified as family physicians* practicing in Pennsylvania and all graduates of Pennsylvania family practice residency training programs, regardless of current practice site, was selected. The sampling frame was developed from lists, which included nonmembers, obtained from the American Medical Association, American Osteopathic Association, American Academy of Family Physicians, and Pennsylvania Academy of Family Physicians. Self-administered questionnaires, accompanied by cover letters requesting cooperation and guaranteeing anonymity, were mailed to the sample of 2696 physicians. A second mailing to all nonresponding physicians was sent in January 1988. In addition, to learn about the nonresponders, a 10% sample of physicians who did not initially respond was randomly selected for telephone follow-up.

The questionnaire, designed to take less than 5 minutes to complete, included questions on the physician's age, sex, practice environment, residency training, and board certification. Physicians were asked about deliveries performed since residency training and whether obstetrics was currently included in their practice. If they were currently performing deliveries, they were asked to characterize the number and type, coverage and consultation for obstetrics, the reasons for their decision to practice obstetrics, and plans, if any, to discontinue obstetric practice. Family physicians who indicated either that they were not performing deliveries or that they planned to discontinue obstetric care were asked to assess the im-

*Family physicians and general practitioners, henceforth referred to as "family physicians." Residency-trained family physicians are specifically identified as such throughout the text.

TABLE 1. COMPARISON BETWEEN RESPONDERS TO MAILED SURVEY AND PHYSICIANS IN SAMPLE

Characteristics	Responders to Mailed Survey (n=1254)	Physicians in Sample (n=2696)
Medical Doctors (%) (vs Doctors of Osteopathy)	82	78
Age, mean (years)	47.0	47.8
Sex, male (%)	89	87
Family practice residency graduate (%)	28	21
Current practice in Pennsylvania (%)	89	91

NOTE: Except for age, $P < .05$ by chi-square for all comparisons between responders and nonresponders.

portance of several factors and to cite the most important factor contributing to their choice.

Data from the questionnaires were analyzed using SYSTAT and SAS.^{13,14} The analyses focused on allopathic physicians practicing in Pennsylvania and on graduates of Pennsylvania family practice residency programs. Bivariate relationships were evaluated using chi-square and Student's *t* tests. Multiple linear and logistic regression models were used to explore the relative importance of factors associated with obstetric practice. These factors included age, sex, community size, extent of residency training, and type of medical degree. For family practice residency graduates, regression models also considered year of completion, site of training, number of deliveries done during residency, and additional postresidency obstetric training.

RESULTS

Survey Response

Of the 2696 physicians initially identified for the study, 188 physicians (7%) were able to be confirmed as unreachable or ineligible, leaving an effective sample size of 2508. A total of 1254 physicians responded to the survey, a crude response rate of 50%. The crude response rate for family practice residency graduates was 61%. The telephone survey of 190 initial nonresponders found that 18% of the effective sample was deceased, retired, in residency training, no longer practicing medicine, or not able to be located. These findings suggest the effective response rate was at least 57% among all eligible respondents and 70% among family practice residency graduates.

Information available from the sampling lists comparing additional characteristics between responders and the total targeted sample is shown in Table 1. Because few osteopathic physicians who responded to the survey re-

TABLE 2. PENNSYLVANIA FAMILY PHYSICIANS CURRENTLY PRACTICING OBSTETRICS

Characteristics	All Pennsylvania Family Physicians (n=763) No. (%)	Family Practice Residency Graduates (n=319) No. (%)
Total practicing obstetrics	72 (10)	47 (15)
Sex		
Male (87%)	63 (10)	39 (15)
Female (13%)	9 (9)	8 (13)
Age (years)		
Younger than 45 (45%)	50 (15)*	47 (16)†
45 or older (55%)	21 (5)	0 (0)
Type of practice		
Solo (47%)	26 (7)	11 (12)
Other (53%)	46 (11)	36 (16)
Community size		
Fewer than 10,000 (28%)	29 (14)*	16 (19)†
10,000-49,999 (36%)	33 (13)	23 (18)
50,000 or greater (36%)	10 (4)	8 (8)
Additional postresidency obstetrics training		
Yes (6%)	12 (26)*	9 (39)†
No (94%)	60 (9)	38 (13)

*P < .05 by chi-square for age group, community size, and additional obstetrics training for all Pennsylvania family physicians.
†P < .05 by chi-square for age group, community size, and additional obstetrics training for family practice residency graduates.

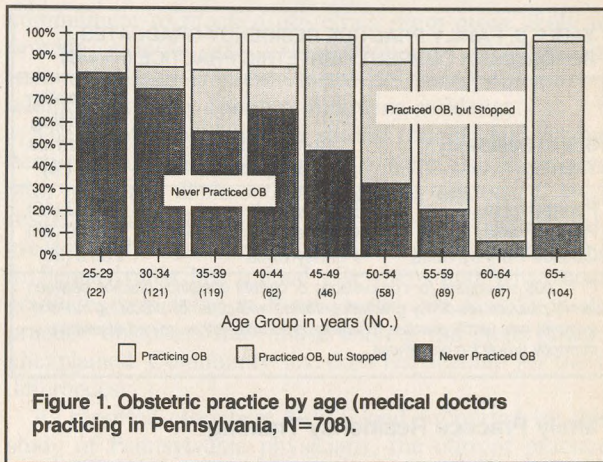


Figure 1. Obstetric practice by age (medical doctors practicing in Pennsylvania, N=708).

ported obstetric practice, they are not included in subsequent tables or in the discussion of results.

Obstetric Practice Patterns

Table 2 displays the relationship between current obstetric practice and personal, practice, and training characteristics for all family physician respondents practicing in Pennsylvania. Ten percent reported they were currently practicing obstetrics (performing deliveries). Almost one half (44%) of this group reported plans to discontinue within the next 3 years. There was no significant difference in obstetric practice between the state's male and female physicians, and solo practitioners in Pennsylvania were less likely than others to be currently providing obstetric care (7% vs 11%). Very few family physicians performed cesarean sections (n=2) or home deliveries (n=3).

Age is inversely related to obstetric practice, with only 5% of physicians older than 45 years reporting practicing obstetrics. Younger physicians, as shown in Table 2, primarily family practice residency graduates with mandated training in obstetrics, were more likely to be practicing obstetrics (15%). As shown in Figure 1, however,

younger physicians are increasingly not including obstetrics when they begin practice.

The percentage of Pennsylvania family physicians practicing obstetrics varied inversely with community size. In communities with populations of 50,000 or more, only 4% of family physicians said they currently provided obstetric care. In communities of 10,000 to 49,999 people, 13% of physicians said they were practicing obstetrics, but 42% had plans to discontinue within 3 years. In the smallest communities, those with fewer than 10,000 people, 14% of physicians reported currently providing obstetric services. Approximately three fifths (59%), however, indicated plans to stop within the next 3 years. Community size remained a significant predictor of current obstetric practice when other factors were controlled for in regression analyses.

Within Pennsylvania there were geographic variations in obstetric practice. Very few family physicians practiced obstetrics in Philadelphia, Pittsburgh, and their surrounding suburban counties. Excluding these metropolitan areas, 21% of the respondents practicing in the central one third of the state performed deliveries, compared with 13% and 8% in the western and eastern portions of the state, respectively.

There were 47 family physicians practicing in Pennsylvania who reported additional obstetric training. They were more likely than others to have ever practiced obstetrics (83%), and 26% were still doing so. One third of this group, however, reported plans to discontinue within the next 3 years. For residency graduates, 39% of those who reported postresidency obstetric training were still practicing obstetrics. Additional obstetric training was the best predictor of current obstetrics practice when other factors were controlled for in regression models.

TABLE 3. FAMILY PRACTICE RESIDENCY GRADUATES REPORTING A CURRENT OBSTETRIC PRACTICE (n=449)

Site of Residency Training	Current Site of Practice	Currently Practicing Obstetrics No. (%)
Pennsylvania	Pennsylvania	24/243 (10)
Pennsylvania	Outside Pennsylvania	32/130 (25)
Outside Pennsylvania	Pennsylvania	23/76 (30)

P < .005 chi-square for comparisons of current obstetrics practice between family practice residency graduates trained and currently practicing in Pennsylvania and family practice residency graduates either trained elsewhere or currently practicing elsewhere.

Family Practice Residency Training

Family medicine residency graduates were more likely to be currently providing obstetric care (15% as compared with 6% for those not completing family medicine residency training), but were less likely to have delivered babies sometime in their careers (34% as compared with 69%). For family practice residency graduates currently practicing obstetrics in Pennsylvania, the mean number of deliveries reported during the 12 months prior to the survey was 35.7 (SD=23.6). Physicians practicing in Pennsylvania who graduated from family practice residency programs before 1981 were more likely to have practiced obstetrics at some point than those graduating in 1981 and after (46% and 30%, respectively).

As shown in Table 3, more Pennsylvania family practice residency graduates practicing outside Pennsylvania (25%) reported currently practicing obstetrics than those remaining in Pennsylvania (10%). Moreover, 30% of graduates of family practice residency programs outside the state practicing in Pennsylvania at the time of the survey reported doing obstetrics, compared with the 10% of those trained within the state. Pennsylvania family practice residency graduates practicing in Pennsylvania were also less likely to be practicing obstetrics than those practicing in other northeastern states (24%).

The mean number of deliveries reported during resi-

dency for family physicians currently practicing in Pennsylvania who completed residency training outside Pennsylvania was 90.5, compared with 60.9 for family physicians trained within the state ($P=.002$). Pennsylvania-trained family physicians practicing out of state, however, did not report a statistically different number of deliveries during training (65.0) from peers who remained in state ($P>.5$).

Ninety-six percent of Pennsylvania physicians who completed a family practice residency and who reported currently doing deliveries thought that obstetric training should be required as part of residency training, as did 85% of those not practicing obstetrics. Only 6% in both groups felt that training as the primary surgeon in cesarean section should be required.

Reasons for Stopping Obstetrics

Family practice residency graduates practicing in Pennsylvania who stopped providing obstetric care or planned to stop indicated that several factors influenced their decisions (Table 4). For residency graduates who stopped obstetrics before 1982 (more than 5 years before the survey), time demand was most frequently cited as a very important factor (77%), followed by conflict with daily practice (68%). Fifty percent thought that the cost of malpractice premiums was a very important factor, but only 15% cited it as the most important. For those who stopped doing deliveries during the 5 years before the survey (after 1982), however, cost of malpractice premiums was most frequently cited as very and most important. Seventy-one percent of those who had stopped practicing since 1982 thought that cost of malpractice premiums was very important, and 39% of them cited it as the most important reason. For those planning to stop within the next 3 years, the cost of malpractice premiums was a very important factor to 77%, and 36% considered it to be the most important factor in their decision. For those who had stopped obstetric care since 1982 or who were planning to stop, fear of lawsuits was also of greater importance than for those who stopped before 1982.

TABLE 4. MAJOR FACTORS CITED AS VERY IMPORTANT FOR STOPPING OBSTETRICS BY FAMILY PRACTICE RESIDENCY-TRAINED PHYSICIANS PRACTICING IN PENNSYLVANIA

Factor	Percent Citing Factor as Very Important		
	Stopped 1982 or Before (n=22)	Stopped After 1982 (n=45)	Planning to Stop Obstetrics (n=19)
Malpractice premiums	50	71	77
Fear of lawsuits	24	38	59
Time demand	77	31	53
Conflict with daily practice	68	22	6

DISCUSSION

Surveys of obstetric practices by family physicians have routinely used membership rolls from the state academies of family physicians.^{1,2,4,6,7} To include the broadest possible range of family physicians practicing or trained in Pennsylvania, the sample used in this study was based on lists that also included nonmembers from several relevant professional organizations. The study sample included all graduates of Pennsylvania family practice residency programs, board-certified family physicians trained in other states or "grandfathered" by virtue of their early entry to the specialty, general practitioners (both medical doctors and doctors of osteopathy), and a very small number of "family physicians" who completed residency in specialties other than family medicine. The study most closely examined graduates of family practice residency programs because they are most likely to be predictive of future trends.

This study found that, at most, one out of ten family physicians practicing in Pennsylvania was currently engaged in obstetric practice, and nearly one half said they planned to stop within the next few years. Those in the smallest communities were most likely to be practicing obstetrics but also were most likely to be planning to discontinue. As in other parts of the country, there has been a decline in the number of family physicians providing obstetric care. This survey also found that residency-trained family physicians were increasingly choosing not to provide obstetric services when starting practice.

Information on obstetric practice obtained from the nonresponders selected for aggressive telephone follow-up showed that those who had responded to the survey were, not unexpectedly, those most likely to practice obstetrics. Comparisons were made among responders to the first mailing (16% practice obstetrics), responders to the second mailing (8% practice obstetrics), and nonresponders reached by telephone. In the sample of nonresponders, only 1% reported doing obstetrics. If one extrapolates from the difference in rates of the responders to the two mailings and the practice rate in the nonresponders, an even dimmer picture emerges: only about 5% of family physicians in Pennsylvania may now be providing obstetric care. Supporting this finding, a spokesman from the state's major malpractice carrier estimates that fewer than 5% of family physicians have malpractice coverage for obstetrics (Medical Protective Insurance Company, personal communication, April 1989).

Certain aspects of family medicine residency training were associated with current obstetric practice patterns. Additional obstetric training was the factor most strongly related to current practice of obstetrics. As those with the

commitment to practice obstetrics seem more likely to provide obstetric care if they receive a higher level of training, greater emphasis might be placed on optional additional training during or following residency.

The number of deliveries during training and having been trained outside Pennsylvania were also associated with increased likelihood of practicing obstetrics. Why residency graduates trained and residing in Pennsylvania are less likely to practice obstetric care than those residing in Pennsylvania but trained elsewhere and why those graduates remaining in Pennsylvania are less likely to practice obstetrics than those leaving the state remain unexplained. Community size does not account for these differences.

As reported elsewhere,^{1,2,4-7,12} and supported by this study of Pennsylvania physicians, the current practice climate is discouraging family physicians from providing obstetric care. Cost of malpractice insurance and fear of lawsuits now overshadow demands on time and other practice concerns as the major reasons for not practicing obstetrics. Outside the Philadelphia metropolitan area, the cost to family physicians in Pennsylvania for malpractice insurance including obstetric coverage is approximately \$11,500 per year, about \$6,000 more than coverage without obstetrics (Medical Protective Insurance Company, personal communication, April 1989).

The geographic variation in obstetric practice by family physicians found outside the Philadelphia area is not easily explained. The regional variations in obstetric practice by family physicians were not accounted for by rate differences in malpractice insurance premiums. The rates for additional obstetric coverage charged by the state's major malpractice carrier vary only slightly across Pennsylvania (Medical Protective Insurance Company, personal communication, April 1989).

CONCLUSIONS

Historically, family physicians practicing in rural communities have practiced obstetrics much more frequently than those in more urban communities. Now, however, the number of family physicians practicing obstetrics in Pennsylvania is decreasing, even in smaller communities. Almost 60% of those currently practicing obstetrics in the smallest communities reported plans to stop within the next few years. Furthermore, this study also found that fewer family practice residency graduates are including obstetrics when starting practice.

Nationally, there has also been a decline in obstetrician-gynecologists providing obstetric care.¹⁵ This decline has led to concern about availability of obstetric care by obstetrician-gynecologists in underserved, rural areas.¹⁶⁻¹⁷

There is evidence that family physicians provide a major portion of rural obstetric care.¹² Continued decline in the number of family physicians practicing obstetrics will further decrease the availability of such care. It is unlikely that obstetrician-gynecologists not now serving these communities will move in to meet the need for obstetric care.

Based on this study and others,^{3,5-7,17} legislative initiatives are needed to address the financial and legal disincentives that discourage family physicians from practicing obstetrics. In addition, family practice residency programs and professional associations should both reassess the current requirements for residency training in obstetrics and consider additional opportunities and options for postresidency obstetrics training.

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