Obstetric Care In Family Practice Residencies: A National Survey

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Background: **Supervision of obstetric care by family practice faculty increases the likelihood that family practice residents will choose to practice obstetrics.**

Methods: **A survey instrument was developed to obtain information about practice faculty and the educational setting in which residents learn family physician obstetric care. Questionnaires were sent to all family medicine residency directors and all full-time family physician faculty.**

Results: **Two hundred eighty-four program directors and 1396 faculty members responded. The mean percentage of recent graduates estimated to be practicing obstetrics was 30 percent. Factors independently associated with an increased likelihood of resident graduates practicing obstetrics included supervision of resident deliveries by family physicians, increasing number of family practice center deliveries, regional differences, and availability of training to perform Cesarean sections. Sixty-four percent of the responding family physician faculty were currently supervising deliveries, but only 5 percent had Cesarean section privileges. Seven percent of the faculty reported denial of obstetric privileges. Eighty-nine percent of all respondents supported the mandatory inclusion of obstetrics in family medicine residencies.**

Conclusions: **Residency programs in family practice can increase the number of their graduates practicing obstetric care by focusing on the family physician supervision model, faculty development that supports this model, and clinical privileges of faculty. (J Am Board Fam Pract 1993; 6:379-84.)**

The family physician of the early twentieth century routinely provided obstetric care to patients. This decision was probably not a conscious one for a young physician, as obstetric training and practice by generalists was the norm. Family physicians, residents, and medical students considering family practice in the last decade of the twentieth century now must specifically decide whether to include obstetric care in their practices. Some factors influencing this choice, such as high malpractice insurance costs and rate of malpractice suits, were not of concern in previous generations of physicians. Recent family medicine literature contains studies that report the impact of this choice on the individual physician's practice,[1,2] on the community in which the physician practices,[3,4] and on the health manpower needs at the state and national level.[5,6] The issues that influence this choice among students,[7,8] residents,[9,10] and practicing physicians[11-13] have been also studied. In a 1983 survey of residencies, Petry and Bobula[14] found regional trends in the percentage of family practice residency graduates choosing to practice obstetrics and an important positive effect of the family physician supervision model. Presumably, regional trends reflected community family physician role modeling, as well as other factors. A study of graduating residents by Smith and Howard[9] found community physicians to be an important influence.

There is little available information, however, about family physician faculty members and their contributions toward obstetric training in family practice residency programs. The present study was undertaken to obtain information about the practice of obstetrics in residency programs and about obstetric care in the training environment. Our purpose was to determine the availability of family physician faculty role models, their skill levels and privileges, and their attitudes toward this area of teaching to understand the factors that influence family practice residents to choose obstetrics.

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Methods

Questionnaires were distributed to residency program secretaries for all programs listed in the *1991 Directory of Family Practice Residency Programs*.[15] The secretaries were asked to give a questionnaire to all full-time family physician faculty in their program, as well as a program director's questionnaire to the director. The number of questionnaires sent to each program equaled the number of full-time faculty listed in the program catalog. For those not responding, a second mailing was sent approximately 8 weeks later, which included a letter asking, in particular, for the program director's response.

The methodology of the study and the content of the faculty obstetric questionnaire were reviewed in advance and endorsed by both the Society of Teachers of Family Medicine Research Committee and the American Academy of Family Physicians Division of Research. The questionnaire was initially pilot tested and then revised. The survey instrument was designed with two components: the first component was sent to individual faculty members to elicit information about their personal background and practice; the second was sent to program directors regarding residency program training issues. The individual faculty component was further divided to include one segment that requested demographic and factual information about skills and privileges and another segment that used a Likert scale to gather attitudinal responses. Program directors were asked to answer both the individual faculty and the program director's questionnaires.

A detailed analysis of individual faculty attitudes regarding residency obstetric care will be addressed at a later date.

Results

This report presents results from the program director's questionnaire and from the faculty questionnaire dealing with personal background and practice and the segment about skills and privileges. Responses were received from 284 of 376 program directors for a return rate of 76 percent. There was no statistically significant difference between responders and nonresponders for program type or region. Of the 2118 individual faculty questionnaires mailed, 1396 faculty members responded, giving a return rate of 66 percent. Because the exact number of faculty in each program was not known, the accuracy of the individual faculty response rate is less certain.

Program Directors' Responses

Ninety-six percent of responding family practice residency program directors reported that their residents provided obstetric services for their family practice center patients. The program directors estimated that 30 percent of the residents who had graduated in the last 5 years were currently practicing obstetrics. The proportion of graduates doing obstetrics differed among program types, with military program directors estimating that 63 percent of their graduates were practicing obstetrics (Table 1). More than 50 percent of the directors indicated their family practice centers did more than 10 deliveries per month (Table 2). More than 70 percent of the directors reported at least some supervision by family physician faculty for normal deliveries (Table 3).

Regional differences were analyzed utilizing the same seven regions as described by Petry and Bobula,[14] with military programs forming an eighth group (Table 4). There were significant differences among the regions in proportion of graduates practicing obstetrics, with the highest percentage of nonmilitary graduates practicing obstetrics from the North Central region ($P < 0.001$).

A linear regression model was developed to ascertain whether there was any interaction among the variables of the supervision model, number of deliveries, and region. In this model the percentage of graduates practicing obstetrics was the dependent variable; independent vari-

Table 1. Program Directors' Estimated Percentages of Recent Family Practice Residency Graduates Practicing Obstetrics, by Residency Type.*

Residency Type	Number	Percent Practicing Obstetrics
Community, nonaffiliated	15	23.5
Community, university affiliated	164	27.4
Community, university administered	49	34.6
University	44	31.3
Military	12	63

*One-way analysis of variance $F_{(4,260)} = 5.114$, $P < 0.01$.

Table 2. Program Directors' Estimated Percentages of Recent Family Practice Residency Graduates Practicing Obstetrics, by Residency Delivery Volume.*

Deliveries per Month	No. (%) Residency Programs	Percent Practicing Obstetrics
None	6 (2)	3.6
1–10	128 (45.1)	19.5
11–20	78 (27.5)	34.4
> 20	66 (23.2)	49.6

*One-way analysis of variance, $F_{(3,257)} = 25.199$, $P < 0.001$. Note: six programs did not respond to this question.

ables evaluated simultaneously included the region (categorical), increasing family physician supervision,* and number of deliveries.* We found a significant positive linear effect of increasing family physician supervision on proportion of graduates practicing obstetrics even after accounting for other variables in the model ($P < 0.001$), as well as a significant positive linear effect of number of deliveries on proportion of graduates practicing obstetrics even after accounting for supervision and region ($P < 0.001$). Also noted were significant differences among the regions with respect to proportion of graduates practicing obstetrics after accounting for the supervision model and number of deliveries ($P < 0.001$). There were no significant interactions among the independent variables.

University programs showed the same trend as programs overall in that an increasing number of family practice deliveries were associated with an increased likelihood of graduates to practice obstetrics. This trend, however, was not statistically significant.

Delineation of privileges was examined in a similar manner, controlling for region, number of deliveries per month, and supervision model. Graduates of programs whose clinical departments of family practice granted privileges for complicated, nonoperative obstetrics were more likely to practice obstetrics.

The availability of training to perform Cesarean sections was associated with an increased likelihood that recent program graduates were practicing obstetrics ($P < 0.01$). Fifty-five percent of program directors indicated that this training was available to their residents. Additional information about the setting in which family practice residency programs provide obstetric care is included in Table 5. No program director responded that faculty malpractice insurance coverage for obstetrics was too costly to obtain, and only one program director (0.4 percent) responded that this coverage could not be obtained.

*Coded as ordinal linear trend.[1]

Faculty Responses

Of the nearly 1400 faculty respondents, only 9 indicated double certification by the American Board of Family Practice and the American College of Obstetricians and Gynecologists (less than 1 percent).

Sixty-four percent of family physician faculty provided supervision of resident deliveries, with slightly fewer performing deliveries from their own practice (55 percent). To determine current obstetric practice and training, faculty members were asked to categorize their status in one of four categories: (1) adequately trained but not done since residency, (2) inadequately trained, (3) performed since residency but have stopped, or (4) currently perform. Table 6 shows their responses to questions about obstetric procedures. A small proportion (7 percent) responded that they had been denied obstetric privileges in their current practice setting; most of these respondents indicated they currently perform normal vaginal deliveries. Presumably, the privileges denied included more advanced or complicated care or procedures, but this needs to be clarified.

Eighty-nine percent of responding faculty agreed that educational experience in obstetrics was an essential part of the family medicine curriculum, even for residents who would not practice obstetrics. Seventy percent agreed that residents completing their program's required

Table 3. Residency Directors' Estimated Percentages of Recent Family Practice Residency Graduates Practicing Obstetrics, by Supervision Model.*

Supervision of Normal Vaginal Deliveries	No. (%) Residency Programs	Percent Practicing Obstetrics
Obstetricians	78 (27.5)	10.3
Obstetricians and family physicians	77 (27.1)	35
Family physicians	126 (44.4)	40.2

*One-way analysis of variance, $F_{(2,261)} = 39.382$, $P < 0.001$. Note: Three programs did not respond to this question.

Table 4. Program Directors' Estimated Percentages of Family Practice Residency Graduates Practicing Obstetrics, by Geographic Region.*

Region	Number of Residencies	States Included	Percent Practicing Obstetrics
Northeast	57	CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT	20
South	54	AL, FL, GA, KY, MS, NC, PR, SC, TN, VA, WV	12
Midwest	64	IL, IN, MI, OH, WI	34
North Central	30	IA, KS, MN, MO, ND, NE, SD	57
South Central	27	AR, LA, OK, TX	28
Mountain	15	AZ, CO, ID, MT, NM, NV, UT, WY	33
Pacific	25	AK, CA, HI, OR, WA	38
Military	12	Not applicable	63

*One-way analysis of variance, $F_{(7,257)} = 16.208$, $P < 0.001$.

obstetric training were prepared for the practice of normal obstetrics in the community. When questioned about the adequacy of their own training in the management of such complications as retained placenta, shoulder dystocia, and postpartum hemorrhage, most faculty thought they had been trained to manage these problems, but 22 percent believed they did not have adequate training.

Discussion

The 76 percent response rate of this survey for program directors and 66 percent for faculty members is respectable but less than ideal: it is possible that selective response has biased this report in favor of those who practice and supervise obstetrics. The nonresponders for faculty, however, came from programs in which no one responded rather than a concentration of individual faculty within programs, making selection of interested faculty somewhat less likely. In addition, some of the nonresponses from directors were representative of programs known to include active obstetric practices.

A limitation of this survey is that program directors were asked to estimate the percentage of graduates from the past 5 years who were currently practicing obstetrics. The cost of measuring current practices directly would have been prohibitively high, but the program directors' estimates could be erroneous. Ferentz, et al.[16] found that residency directors overestimated the number of their graduates who applied for obstetric privileges.

The literature shows that family physician supervision of obstetric training increases the likelihood that graduating residents will practice obstetrics. This positive influence has not been sufficient to counteract fully such negative factors as malpractice and lifestyle concerns. Of all graduates trained in the family physician supervision model, 72 percent were estimated to be practicing obstetrics in 1983,[14] and we found only 45 percent in 1991.

Because community family physicians seem to be an important influence on resident decision-making,[9] residency programs in some regions could be heavily impacted by the loss of these physicians as role models and as potential future

Table 5. Site Characteristics of Responding Family Practice Residencies.

Characteristic	Percent
Hospital delivery site	
Community hospital, no obstetric residency	63
Community hospital, with obstetric residence	26
University hospital	17
Unattached birthing center	0
Highest designated level of nursery at hospital site*	
Level I	16
Level II	43
Level III	31
Consultant arrangements	
Private consultant	55
University or obstetric residency	43
Obstetrician hired by family practice residency program	32
Source of family physician faculty obstetric malpractice insurance	
Institutional self-insurance	65
Private insurance company	25
Other sources and nonresponders	9
Unable to obtain	0.4 (1 program)
Hospital privileges granted to Department of Family Practice	
Normal obstetrics	72
Complicated, nonoperative obstetrics	30
Cesarean section	4 (11 programs)

*29 programs did not respond.

Table 6. Percentages of Responding Faculty with Training or Privileges in Obstetric Procedures.

Activity	Trained, Not Performed since Residency	Inadequately Trained	Performed since Residency but Have Stopped	Currently Perform
Normal delivery	21	2	18	58
Low-outlet forceps	17	36	19	27
Vacuum extraction	10	45	8	35
Cesarean section	14	70	10	4
Tubal ligation	13	72	8	5
Dilatation and curettage	20	37	17	24
Third trimester amniocentesis	5	86	4	4
Sonography, labor and delivery	8	66	5	19
Sonography for dating	7	78	4	9

partners for graduates. The overall percentage of recent graduates estimated to be practicing obstetrics in our study (30 percent) is very close to the percentage of family physicians who reported obstetric privileges in 1989 in the AAFP survey (29 percent).[17] This similarity is noted on a region-by-region basis as well, with very low percentages of family physicians providing obstetrics in the southern, mid-Atlantic, and northeastern regions.[17] It is not known how many of the family physicians surveyed in 1989 are still practicing obstetrics, but a 1990 survey of physicians in the western frontier areas indicated more than one-third of family physicians providing obstetrics planned to stop doing so in the next year.[18]

The availability of obstetric patients in residencies is dependent on a number of program circumstances and opportunities. Obstetric activity could be a specific consideration for many students who either actively search for or avoid residencies with high obstetric volumes. Self-selection could thus confound the positive association of delivery numbers and likelihood of obstetric practice. Nonetheless, our study indicates that performing a higher number of deliveries in the residency does not appear to discourage residents from choosing this option. Residents in the study by Smith and Howard[9] specifically cited more time and procedural training in obstetrics as positive influences. Although statistical significance could not be shown, the similarity in trends between university programs and all programs was suggestive of a specific influence of family practice deliveries, even in a high-volume, tertiary setting.

While program directors indicated wide availability of training in Cesarean section for their residents, very few programs have family physicians practicing operative obstetrics. There were only 11 program directors who reported that Cesarean section privileging occurs through the family practice clinical department independent of departments of obstetrics. What is notable is that military programs make up a disproportionately large percentage of both these groups.

Only a small percentage of family physician faculty said they were denied obstetric privileges, but this percentage does not reflect those who might have been discouraged from applying because they thought they were unlikely to obtain them or those who gave up obstetrics in a previous setting because of disputed privileges. It is likely that these restrictive circumstances send a powerful message to residents about the feasibility of their own career choices. Weiss,[19] in a 1984 study of clinical departments of family practice in university programs, found that hospitals with full clinical departments were more likely to grant privileges in high-risk obstetrics than hospitals without full clinical departments. The issue of clinical privileges in the educational setting deserves further study.

Despite marked decreases in the number of family physicians practicing obstetrics, it appears that obstetric practice is still the norm among family physician faculty. There is very good support for including obstetrics in a mandated curriculum. Because it is unclear from recent literature[20,21] how many practicing family physicians can be induced to resume obstetrics, increasing the number of family practice residency graduates who will provide this service is a crucial task for educators. No other group is as well positioned to respond to these health manpower needs, especially those in underserved communities.

Faculty development issues identified by this survey include training in the management of complicated vaginal delivery, obstetric sonogra-

phy, dilatation and curettage, and tubal ligation. Increasing the skill levels of family physician faculty decreases the need for obstetrician consultation in clinical situations that are commonly encountered in clinical practice. Many of these needs can be addressed by such activities as the newly developed Advanced Life Support in Obstetrics course,[22] courses in obstetric sonography for family physicians, and in minifellowships. These activities can provide empowerment to participants, as well as instruction in cognitive and procedural skills. Most obstetric fellowships in family medicine have been directed toward training rural physicians. Similar training would be useful for some family physician faculty.

Obstetric training in family medicine residency programs is only part of a challenging problem in health care access. Certainly malpractice insurance premiums, fear of lawsuits, and lifestyle issues will continue to influence the decisions of our graduates. Unlike some aspects of this problem, educational methods can be modified from within the discipline. Issues that deserve further study include the impact of faculty development activities on resident training and clinical privileges for faculty.

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