The Practice of Obstetrics by Army Family Physicians

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Background: **There has been a dramatic decline nationwide in family physicians practicing obstetrics. This study describes the practice of obstetrics by Army family physicians in an environment relatively free of malpractice liability and other financial concerns.**

Methods: **A questionnaire was mailed to every family physician on active duty in the Army (n = 334) in 1993, with a final response rate of 79 percent (n = 265).**

Results: **Nearly 73 percent of Army family physicians practice obstetrics. Almost all believed they were adequately prepared to provide routine prenatal care (98 percent) and complicated obstetric care (84 percent). More than 95 percent of those assigned to a teaching facility delivered babies. Obstetric procedures that the majority performed included normal vaginal deliveries (100 percent), repair of third-degree (98 percent) and fourth-degree (93 percent) tears, insertion of fetal scalp electrodes (96 percent) and intrauterine pressure catheters (98 percent), interpretation of nonstress tests (97 percent) and contraction stress tests (83 percent), vacuum extractions (93 percent), pudendal or paracervical blocks (88 percent), first assist in Cesarean sections (80 percent), amnioinfusions (76 percent), and low-forceps deliveries (53 percent). Those who currently practice obstetrics were more satisfied with being a family physician compared with those who did not practice obstetrics (95 percent vs 86 percent, $P < 0.02$).**

Conclusions: **The majority of Army family physicians perform a wide spectrum of obstetrics care. Those who practiced obstetrics were generally more satisfied with family practice than were those who did not practice obstetrics. (J Am Board Fam Pract 1996;9:174-81.)**

The specialty of family practice provides comprehensive medical care with particular emphasis on the family unit. The family physician's continuing responsibility for health care is not limited by the patient's age or sex or by a particular organ system or disease entity. The phrases "womb to tomb" and "cradle to grave" have come to embody the comprehensive and continuous nature of family practice.

Recently, however, the womb and cradle portions of our specialty have come under question. Numerous studies have shown that family physicians are well suited to deliver high-quality obstetric care.[1-12] Other studies have shown that family physicians who provide obstetric care receive greater compensation financially and psychologically and perform a wider range of procedures than do those family physicians who exclude obstetrics.[13-16] Also, those family physicians who perform obstetrics have in their practice a greater diversity of patients who are primarily younger and have more complete families. They also have fewer Medicare patients.[13] Despite these advantages for family physicians to provide maternity care, there has been a rapid decline in the number of family physicians who deliver babies.[13,17-24]

Family physicians cite many reasons for exclud-

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Table 1. Demographics and Practice Characteristics of 274 Army Family Physicians, 1993.

Characteristic	Percent	Mean ± SD	Range
Age (years)		36.9 ± 6.2	27 - 60
Sex, male	82.7		
Race or ethnic group			
White, non-Hispanic	91.0		
White, Hispanic	4.5		
Black, non-Hispanic	1.9		
Oriental, Pacific Islander	2.6		
Medical school graduation year *		1983 ± 5.7	1959 - 1989
Medical degree			
Doctor of Medicine	78.2		
Doctor of Osteopathy	21.8		
Family practice residency graduate	95.9		
Type of family practice residency			
Military community hospital	50.6		
Military medical center	36.0		
Civilian	13.4		
ABFP board certified	99.6		
Percent time spent in patient care			
0-25	16.8		
26-50	20.1		
51-75	21.3		
76-100	41.7		
Patients seen each week			
0 - 25	16.2		
26 - 50	16.3		
51 - 75	15.2		
76 - 100	22.0		
> 100	30.3		
Clinic setting			
Clinic ≤ 5 physicians	22.0		
Clinic 6-10 physicians	13.5		
Clinic > 10 physicians	7.7		
Community hospital < 75 beds	12.4		
Community hospital 75-150 beds	12.7		
Community hospital > 150 beds	10.0		
Medical center	19.7		
Assigned to a teaching facility	32.3		

ABFP – American Board of Family Practice
* Fifty percent graduated from medical school after 1984.

ing obstetrics from their practice: cost of malpractice premiums, fear of malpractice liability, increased demands on personal and family time, potential disruption of daily office practice, poor or absent backup by obstetricians for complicated cases, problems obtaining hospital privileges, increased competition with obstetricians and nurse midwives, inadequate training during residency, lack of support from other family physicians in the community, and lack of desire to include maternity care in their practice.[14,17,19,21,25-40] For these reasons only 26 to 30 percent of family physicians currently include obstetrics in their practice.[40-42] The actual rate varies by state, with a low of 2 percent of family physicians practicing obstetrics in Florida[13] to a high of 81 percent in South Dakota.[42]

Studies to date have excluded military family physicians, a large group actively involved in delivering obstetric care. As a result of Title X of the United States Code, military physicians, acting in the scope of their practice, are immune from personal malpractice liability.[43] Congress thus eliminated the need for military physicians to buy their own malpractice insurance. Furthermore, because military physicians are salaried employees of the US Government, there are no monetary incentives or disincentives to perform obstetrics—they get paid the same regardless of whether or not they do obstetrics. Consequently, competition for maternity care based solely on economics does not occur between the obstetricians and family physicians. Finally, this group is worthy of study because they work in the largest managed health care system in the United States.

This study describes the practice of obstetrics by Army family physicians, their perceived preparedness from residency training, the obstetric procedures that they perform, their recommendations on the level of training that family practice residents should receive, and the association of performing obstetrics and degree of satisfaction with being a family physician.

Methods

This cross-sectional study was part of a larger project designed to describe the procedures that Army family physicians perform in their practice using a 14-page, 697-variable, anonymous questionnaire that had three major sections: (1) level of perceived preparedness from residency training in 65 areas of family practice; (2) performance of 103 procedures, training in these procedures,

and recommendations on the level that family practice residents should be trained in each of these procedures; and (3) basic demographic information, which included a question on degree of satisfaction with being a family physician (definitely satisfied, somewhat satisfied, somewhat dissatisfied, definitely dissatisfied).

The questionnaire was sent to all 334 family physicians on active duty in the US Army in 1993, with two subsequent mailings sent to nonrespondents. The response rate was 82 percent (274 usable questionnaires returned). The demographics of the study sample (Table 1) are consistent with known demographics of Army family physicians.

Part of this project focused on obstetric care and procedures performed. Nine of the 274 respondents failed to answer the question regarding obstetric practices and were excluded, yielding a final response rate of 79 percent. Those who acknowledged that they currently perform normal vaginal deliveries were included in the obstetrics group, and various aspects of their training, practice and demographics were compared with those who did not perform vaginal deliveries (nonobstetrics group).

There are six Army family practice residency programs, five of which have obstetrics actively performed at their hospitals (one program participates jointly with a civilian program and the majority of obstetric procedures are done at that civilian location). Another questionnaire was sent to the full-time family practice faculty at the five residency programs. This questionnaire asked the faculty about obstetric privileges, their desires to do obstetrics both in the Army and in civilian practice, and the perceived support from obstetricians at their location.

Data were analyzed using the nonparametric tests chi-square, Fisher's exact, and Mann-Whitney U when comparing categorical and ordinal data, and analysis of variance when comparing continuous data among groups.

Results

Of the 265 Army family physicians who were practicing obstetrics, 193 (73 percent) delivered obstetric care in their practice. Nearly all respondents felt adequately or overprepared from their residency training to perform routine prenatal (obstetric) care (98 percent), routine postnatal care (98 percent), and complicated obstetric care (84 percent). There was no significant difference in perceived preparation in these three areas between the obstetrics and nonobstetrics groups, although there was a trend for those in the nonobstetrics group to feel less prepared.

When comparing demographic factors between the two groups, there was no significant difference in type of medical degree, graduation from a family practice residency, family practice board certification, and military rank. Fewer civilian-trained family physicians delivered obstetric care (53.1 percent) than those trained in a military family practice residency (75.9 percent), a difference that approached statistical significance ($P = 0.051$ by chi-square).

Those Army family physicians assigned to clinics with 10 or fewer physicians were less likely to deliver obstetric care (46 percent) than those who were in a larger clinic (67 percent), a community hospital (78 percent), and a medical center (92 percent). In addition, 95 percent of those assigned to a teaching facility delivered obstetric care compared with 62 percent who were not involved in teaching ($P < 0.00001$). There was no significant difference in the mean percentage of time spent in patient care and in research between the two groups; however, the obstetrics group spent significantly more time teaching residents and significantly less time in administration compared with the nonobstetrics group.

Table 2 lists the training, performance, and recommendations for resident training of obstetric procedures by the Army family physicians who currently perform obstetrics. Family physicians were more likely to perform those procedures learned during their residency training. They also recommended that residency programs require training of all residents to the level of independent credentialing in those procedures.

Of the 11 obstetric procedures that at least 75 percent of these physicians performed, the vast majority (more than 90 percent) were learned during their residency, the exception being amnioinfusion for which more than one third acquired the skill after residency training. Although 78.8 percent of the obstetrics group had been trained to perform low-forceps deliveries during their residency, only one half were currently performing this procedure. Basic obstetric sonography was performed by only 44 percent of the obstetrics group, with an equal percentage never having

Table 2. Training, Performance, and Recommendations for Resident Training of Obstetric Procedures by 193 Army Family Physicians Who Provide Obstetric Care, in Descending Order of Percentage of Procedures Performed.

Procedure	When Training Occurred (May Answer More Than One)				Level Residents Should Be Trained*			
	Trained in Residency %	Trained After Residency %	Never Trained %	Performs Procedure %	I Do Not Train %	II Expose %	III Offer %	IV Require %
Normal vaginal delivery	97.4	4.1	1.0	100.0	-	-	1.6	98.4
3rd degree tear - repair	97.4	4.7	-	98.4	-	-	4.2	95.8
Intrauterine pressure catheter	94.8	5.7	1.0	97.9	-	0.5	3.1	96.4
Nonstress test	95.9	7.8	0.5	97.4	-	0.5	5.2	94.3
Fetal scalp electrode	96.4	3.6	1.6	95.9	-	-	3.1	96.9
4th degree tear - repair	91.7	8.9	2.6	93.2	-	1.6	9.9	88.5
Vacuum extraction	91.2	6.7	3.6	92.7	-	-	10.4	89.6
Pudendal or paracervical block	94.3	3.6	3.1	88.0	-	0.5	18.8	80.6
Contraction stress test	92.2	5.7	4.7	83.2	-	1.0	16.1	82.8
Cesarean section - first assist	95.9	7.3	0.5	80.3	-	1.0	18.7	80.3
Amnioinfusion	41.5	36.3	22.8	75.5	2.1	3.6	18.2	76.0
Low-forceps delivery	78.8	6.2	16.6	53.4	-	3.1	34.7	62.2
Basic obstetrics sonogram	40.9	19.2	43.5	44.0	1.0	2.6	47.4	49.0
Scalp pH	52.6	13.5	35.4	40.6	0.5	8.9	33.9	56.8
Twin delivery	39.9	7.3	53.6	19.5	3.1	31.8	50.0	15.1
Breech delivery	39.1	4.1	56.0	12.7	3.6	33.9	42.7	19.8
Cesarean section - primary surgeon	42.2	6.3	52.6	5.8	4.7	15.1	74.0	6.3
Epidural or spinal anesthesia	16.1	6.3	77.1	4.7	6.3	49.5	36.8	7.4
Amniocentesis	13.0	3.1	84.5	1.6	13.5	54.2	28.6	3.6

* Level of resident training: I = do not train residents in this procedure. II = expose residents so they know what the procedure entails; other specialists will usually perform and interpret the procedure; referral is the norm. III = offer to train interested residents to level of credentialing; family physicians will usually seek consultation, but not referral. IV = require training of all capable residents to the level of independent credentialing; family physicians will independently order, perform, and interpret.

received training in this procedure. Although nearly two thirds of the physicians had been trained to perform a scalp pH, less than one half were currently doing it. For the remaining five procedures, fewer than 25 percent of the physicians were performing those procedures, and the majority had never received any training.

There were six obstetric procedures (basic obstetric sonography, twin deliveries, breech deliveries, primary surgeon for Cesarean sections, epidural or spinal anesthesia, and amniocentesis) that the majority felt that family practice residents should be exposed to or be offered additional training in, but not required to learn to the point of independent credentialing. These six procedures were also performed by less than one half of the group. Although less than 6 percent of the physicians were performing Cesarean sections as the primary surgeon, 74 percent felt that family practice residencies should offer to train interested residents in this procedure to the level of credentialing.

Providing obstetric care was associated with a statistically significant higher degree of satisfaction with being a family physician (Table 3). Nearly 95 percent of those who provided obstetric care were somewhat or definitely satisfied with being a family physician compared with 85.7 percent of those who did not practice obstetrics ($P = 0.02$). Those who did not practice obstetrics were three times more likely to be somewhat dissatisfied (11.4 percent vs 3.6 percent) and nearly twice as likely to be definitely dissatisfied (2.9 percent vs 1.6 percent) with being a family physician compared with those who currently provide obstetric care.

Regarding the second questionnaire that was sent to the full-time family practice faculty at the Army residency programs, 37 of 44 (84 percent) faculty responded. All of the respondents provided

Table 3. Association of Providing Obstetric Care and Percentage of Respondents Reporting Satisfaction with Being a Family Physician.

Satisfaction Level	Provide Obstetric Care Yes (n = 192)	No (n = 70)	*P* Value (Mann-Whitney U)
Definitely satisfied	77.1	58.6	0.02
Somewhat satisfied	17.7	27.1	(U = 5406)
Somewhat dissatisfied	3.6	11.4	
Definitely dissatisfied	1.6	2.9	
Mean satisfaction score*	1.3	1.6	

*1 = definitely satisfied, 2 = somewhat satisfied, 3 = somewhat dissatisfied, 4 = definitely dissatisfied.

obstetric care. No staff member had difficulty obtaining obstetric privileges, and 81 percent were very or somewhat satisfied with their obstetrics privileges, 8 percent were neutral, and 11 percent were somewhat or very dissatisfied. When asked, "If given a free choice, would you do obstetrics in the Army?" 73 percent definitely or probably would do obstetrics, 5 percent were unsure, and 22 percent probably or definitely would not. When asked, "If you were to get out of the Army today, would you include obstetrics in your civilian practice?" 46 percent definitely or probably would do obstetrics, 19 percent were unsure, and 35 percent probably or definitely would not.

The faculty were also asked about the perceived support from the obstetricians at their hospital. When asked, "How supportive are they in letting you perform routine obstetrics?" 94 percent felt very or somewhat supported, and 6 percent were neutral or felt somewhat unsupported. When asked, "How supportive are they in letting you perform complicated obstetrics?" 63 percent felt very or somewhat supported, 20 percent were neutral, and 17 percent felt somewhat or very unsupported.

Discussion

Army family physicians, as a group, are younger than the average civilian family physician,[42] with the majority being men, white, non-Hispanic, and almost all graduates of a family practice residency and diplomates of the American Board of Family Practice (ABFP). They provide care in a variety of clinical, teaching, and administrative assignments. They also practice in a wide range of settings from small, isolated clinics (where they provide primarily ambulatory care without obstetrics or inpatients), to large community hospitals and medical centers (where they practice the full spectrum of family practice). The majority spend at least one half of their time delivering patient care, seeing more than 75 patients a week.

Nearly 73 percent provide obstetric care, which is almost 2.5 times the rate of the national average for family practice. Their active involvement in obstetrics is reflected by studies documenting that prenatal care is the most common[44] or second most common[45,46] diagnosis cluster encountered in the Army family practice outpatient setting, representing more than 10 percent of the total visits compared with only 3 percent in the National Ambulatory Medical Care Survey.

The predominant perception that Army family physicians felt adequately prepared from their residency to deliver obstetric care is in contrast to the findings of Kruse et al,[32] who found that only 58 percent of a random, national sample of 329 family physicians felt well prepared to practice obstetrics after residency training. Kruse et al also found that those who provided prenatal care felt better prepared than those who did not. Our study did not find this difference. In another study comparing perceptions of obstetricians and family physicians, Kruse et al[47] found that 18 percent of family physicians felt unprepared to practice obstetrics.

The six Army family practice residency programs (two in military community hospitals and four in military medical centers) produce 42 graduates a year. A goal of each of these programs is to prepare the graduate to provide the full spectrum of family practice care, including obstetrics. Although the Special Requirements for Residency Training in Family Practice[48] require only 2 months of training in obstetrics, the Army family practice residencies require a minimum of 4 months of training in this area. In addition, residents are required to follow a number (typically 35) of pregnant patients longitudinally from conception through postpartum care and are able to take electives in obstetric procedures. An interesting area worthy of further study was the finding that only 53.1 percent of the civilian family

practice residency-trained Army family physicians provide obstetric care, compared with 75.9 percent of those trained in an Army family practice residency.

The importance of family practice faculty who supervise, teach, and model the practice of maternity care is well documented in the literature.[11,19,21,23,27,40,49,50] Also, medical students bound for family practice favor a program with a strong experience in pregnancy care to a program with a weak experience by a 10:1 margin.[51] As such, the American Academy of Family Physicians (AAFP) recommends that family practice residency programs have full-time faculty with obstetric privileges who supervise and teach residents.[40]

Our study demonstrates that the Army family practice programs fulfill these AAFP recommendations. More than 95 percent of those assigned to a teaching facility are providing obstetric care, a rate markedly higher than the reported 58 percent of family practice faculty nationwide who do so.[52] The expectation at each of the Army residency programs is that all family practice faculty members must be able to provide the full spectrum of family practice care including obstetrics.

Because the vast majority of Army family physicians are family practice residency trained (95.9 percent) and ABFP diplomates (99.6 percent), we were unable to detect a difference in rates of obstetric care between those who are residency trained and those who are not. Other studies have shown that family practice residency graduates are more likely to provide routine obstetric care than those who did not complete a family practice residency,[40,42] which might account for the high percentage (72.8 percent) of Army family physicians who deliver obstetrics care, as most are family practice residency graduates.

Another major reason so many Army family physicians perform obstetrics is that they are expected to provide obstetric care if they are assigned to a location where obstetric care is available. As noted in our study, the only factors found to be significantly different between the obstetrics and nonobstetrics groups were their practice characteristics. Those assigned to clinics with 10 or fewer physicians, which are usually isolated and far from a hospital where pregnant patients can give birth, were less likely to be involved in obstetric care than were those assigned to a larger clinic or hospital. Also, those who spent more time in an administrative assignment were less likely to participate in obstetric care. Although Army family physicians have less freedom to choose whether they are involved in obstetric care, they can influence the decision by choosing a practice location where obstetric care is not available. Whether such a choice was made was beyond the scope of this study, but it is worthy of further investigation.

Noted by other authors,[9,24,40,53] Army family physicians typically do not have difficulty obtaining obstetric privileges. As evidenced by our faculty survey, the vast majority of Army family practice faculty are satisfied with their privileges. In addition, the Army family practice faculty felt that the obstetricians were supportive in their provision of obstetric care, a finding in sharp contrast to the findings of Kruse et al[47] on the attitudes of obstetricians toward family physicians doing obstetrics. Although the response rate of the obstetricians in their study was low (42 percent), the majority of the responding obstetricians felt that family physicians were unprepared to practice intrapartum obstetrics, that family physicians should not be delivering babies, and that accepting intrapartum consultation from family physicians put them at an increased risk for a malpractice suit.

That Army family physicians provide a wide variety of procedures for both routine and complicated obstetrics (Table 2) correlates well with results of two recent national studies on family practice obstetric privileges.[40,42] The percentage of Army family physicians who are primary surgeons for Cesarean sections (5.8 percent) is slightly higher than the 4.5 percent national average. More than 80 percent of Army family physicians are first assistants in Cesarean sections. For the majority of the procedures listed in Table 2, the respondents felt that family practice residents should be required to learn those obstetric procedures that are done most commonly.

One area of controversy within Army family practice is the need for training in obstetric sonography. Although more than 60 percent had received some training in obstetric sonography, only 44 percent are performing this procedure, and a slightly higher percentage (49 percent) feel that it should be required training for all family practice residents. Most Army family practice clinics do not have sonographs readily available and rely either on the obstetricians or the

radiologists to perform this procedure. It also should be noted that there are no economic incentives for Army family physicians to offer obstetric sonograms in their practice. As a result, obstetric sonography is performed without financial considerations as needed for the care of the pregnant patient.

The intent of the US Congress is that military physicians be free to perform their duties to the best of their abilities without worry about personal financial liability. The US Government, under the Federal Tort Claims Act, waives its sovereign immunity and accepts the liability for any alleged negligent acts of its military physicians, provided they are acting within the scope of their duties and practice.[43] Consequently, Army family physicians do not feel the same degree of pressure of malpractice premiums or fear of personal litigation that civilian family physicians experience. These two factors are often mentioned as being major reasons why civilian family physicians do not provide obstetric care. Several studies, however, have shown that family physicians are rarely sued for obstetric care and are more likely to be sued for a nonobstetrics case than one involving an obstetric patient.[13,15,54,55]

The obstetrics group was generally more satisfied with family practice than was the nonobstetrics group (Table 3). This association also was observed by Nesbitt et al[37] in their study of California family physicians. They found that 45 percent of those who had discontinued obstetrics during a 4-year period were less satisfied with their practice, compared with only 15 percent who were more satisfied. Likewise, in a recent study of Florida family physicians, Larimore and Sapolsky[13] found that, compared with family physicians who did not provide obstetric care, those who provided obstetric care were more satisfied with being a physician (94 percent vs 60 percent) and were more likely to choose family practice again if given a choice (63 percent vs 51 percent). This association, however, does not imply a cause and effect, and we can report only that those who do obstetrics were more satisfied with their specialty.

The major limitation to this study is that it is based on physician self-report and recall. Because the survey was anonymous, we were unable to check the actual practices of the respondents. We also did not ask about the volume of their obstetric practice, although the outpatient studies on Army family practice[44-46] do suggest that it is substantial. Finally, we cannot comment on the practice of obstetrics by family physicians in the US Navy or Air Force.

Free of the economic and litigation pressures experienced by civilian family physicians, Army family practice offers a unique source for investigating the attitudes of family physicians (and obstetricians) toward delivery of obstetric care. Further studies in this area should be done as our country moves toward a more managed health care system.

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