

Choosing to Practise Obstetrics

What factors influence family practice residents?

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SUMMARY

To document their plans for practising obstetrics and factors influencing these decisions, a questionnaire was sent to all 79 residents graduating from the University of Toronto's Department of Family and Community Medicine. Fifty-one percent of the 53 residents who responded (67%) planned to practise obstetrics on graduation; 21% planned antenatal care only; 11% planned no obstetrics; and 17% were undecided. The family practice program appeared to influence the residents positively.

RÉSUMÉ

Un questionnaire envoyé aux 79 résidents finissants du Département de médecine familiale et communautaire de l'Université de Toronto a permis de documenter leurs projets concernant la pratique de l'obstétrique et les facteurs influençant ces décisions. Cinquante-et-un pourcent des 53 résidents ayant répondu au questionnaire (67%) planifiaient de pratiquer l'obstétrique au terme de leurs études; 21% prévoyaient offrir des soins anténatals seulement; 11% ne comptaient pas offrir de soins obstétricaux; et 17% n'avaient pas encore pris de décision en ce sens. Le programme de médecine familiale a semblé influencer positivement les résidents.

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HE QUESTION OF WHO WILL BE attending births in the year 2000 is actively discussed in family medicine literature.¹⁻⁸

Some say, "Family physicians who practice obstetrics are becoming an endangered species,"³ and that "midwives could eventually replace family physicians in general care obstetrics."⁹

In recent years an increasing number of family physicians have given up obstetrics. This trend is most marked in Ontario and Quebec, where only one third of family doctors are still delivering babies.¹ A 1982 survey by the Canadian Medical Association determined that 56.5% of Canada's family physicians practised intrapartum obstetrics.³ The study of Ontario family physicians by Bain et al⁴ in 1987 showed that 40% of respondents were currently practising obstetrics, but 59% of this group had considered stopping. In Quebec, Lebreque et al⁸ reported a drop in those doing maternity care from 48% in 1979 to 38% in 1985.

This trend is occurring in spite of the fact that the practice of obstetrics has positive effects for both the family physician

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and the families served. In one study, family practices that included obstetrics provided significantly more pediatric, gynecologic, minor surgical, and psychotherapeutic care than those that did not include obstetrics.¹⁰ In addition, physicians in these practices saw five times as many family members for continuing care.

For low-risk women, family practice obstetrics offers an approach characterized by less intervention¹¹⁻¹⁴ with no change in outcome measures. Looking after mothers and babies is one of the most rewarding aspects of family medicine.¹

A number of factors contribute to the decline of family practice obstetrics, including lifestyle issues, malpractice fears, and perceived competence. One area with relatively little study is the contribution of family medicine residency programs. In the past they have been criticized for providing poor training in obstetrics, with residents attending too few births to give them confidence in their skills.^{2,9} In the survey by Bain et al,⁴ the 29% of respondents who had never practised obstetrics indicated inadequate training was the most important reason. Programs should "ensure enough interested family medicine teachers provide 'positive role models' for residents at the critical training stage prior to establishing a practice."⁹

Little information is available about either the decision to practise obstetrics among family practice residents or the

value of their training. American studies have correlated the presence of family practice obstetric role models during training and rural practice plans with the decision to practise obstetrics.^{15,16} In Quebec, Lebreque et al¹⁷ have questioned whether family practice residency provides an appropriate model for training residents.

Table 1. RESIDENTS (N = 53) PROVIDING CARE DURING SPECIFIC PERIODS OF THE MATERNITY CARE CYCLE

STAGE OF CARE	NO. OF WOMEN ATTENDED		
	0	1-10	>10
Prenatal care	7 (13%)	21 (40%)	25 (47%)
Delivery	13 (25%)	17 (32%)	23 (43%)
Postpartum care	16 (30%)	21 (40%)	16 (30%)
Well baby care	8 (15%)	31 (59%)	14 (26%)
Complete care	15 (28%)	25 (47%)	13 (25%)

During the past decade in Toronto, much effort has been put into improving obstetrics training in the residency. This has included recruiting more staff who do obstetrics, twinning residents with staff maternity cases, increasing community hospital experience, and forming politically active sections of family practice obstetrics,^{18,19} which provide support and increased involvement for the family physicians in their hospitals' maternity care services. With this in mind, we were interested to see whether the training was encouraging residents to plan obstetrics in their practices.

PURPOSE

The purpose of this study was to survey University of Toronto family medicine residency graduates as they completed their 2-year residency program, to document their plans for obstetric practice, and to explore the factors that influenced their decisions.

SETTING

The Department of Family and Community Medicine at the University of Toronto is one of the largest in North America, with approximately 80 residents in each of the 2 years of the family medicine residency program. Residents are distributed among

eight hospital-based programs throughout the city. These teaching hospitals range from tertiary care downtown hospitals with many resident and specialist staff to community teaching hospitals where family medicine residents are the only house staff. All of the hospitals, except one, have in-house maternity services. Most of the programs send their family medicine residents to at least one community hospital in order to increase the numbers of births the residents can attend. Residents at the hospital with no obstetrics attend births at another hospital in the city.

Several of the hospitals have well-developed programs of teaching maternity care. In these hospitals obstetrics patients are shared by a faculty family physician and resident who work as partners and care for each patient throughout the pregnancy, labor and delivery, postpartum examination, and well baby visits. Residents are expected to attend the birth and to provide postpartum care for their patients, regardless of what service they are on. Many of these hospitals also have well-established political or administrative organizations, Sections of Family Practice Obstetrics.¹⁹ In addition to their family medicine experience, the residents also complete 1- to 4-month rotations on the obstetric service of their hospital or the community affiliate.

METHOD

We attempted to contact all 79 family medicine residents in the University of Toronto Department of Family and Community Medicine during the last month of their second (and final) year of training in June 1990.

A questionnaire was designed to obtain information on the residents' obstetric training experiences by both explicit multiple-choice questions and written long answers that inquired into qualitative aspects of their training. The questionnaire was pre-tested and found to be readily understood.

The survey was mailed to the residents in their final month of training using the Dillman technique, with two follow-up mailings and a phone call in some cases. Anonymity of the respondents was assured by having no names on the surveys, and a

response card was mailed in separately. The data were recorded on the Epi Info computer program²⁰ for analysis, using the Sign Test (a nonparametric test for paired data) where statistics were required.

A second questionnaire was designed to survey the residency program directors at all eight hospitals and was used to corroborate information obtained from the residents' survey and to provide some description of each program's training in maternity care.

One section of the questionnaire was qualitative. Residents were asked to write long answers to three questions: 1) Can you describe one good experience during your obstetrics training? 2) Can you describe one unpleasant or disturbing experience? 3) How could the Department of Family and Community Medicine improve your training and promote family practice obstetrics?

The answers to these questions were analyzed by the authors separately at first and then together to reach a consensus. The answers were categorized by the best estimate of their content and by the recognition of key words that marked recurrent themes.²¹ For instance, many residents were very positive about their experience and frequently described the "joy" or "excitement" of being involved with births. In other cases a theme of "disrespect" toward the resident emerged, which was remarked upon directly or through negative feelings. The authors then combined their lists to achieve the final categorization by consensus. A balance here was struck between generalizing the comments for efficiency and allowing their individuality to come through. The frequencies of the answers were recorded to give a sense of relative importance of the opinions expressed.

RESULTS

Of 79 residents, we had incorrect addresses for and could not contact three. Another 23 did not respond to the survey, resulting in 53 replies, a response rate of 67%. The response rate was at least 60% in each hospital-based program except one, in which only 40% of residents replied.

Respondent characteristics

The average age of the residents was 27.9

years. Fifty-nine percent of respondents were women and 41% men. Most of the residents were graduates of University of Toronto (64%); 11% were from McMaster; 14% were from other Canadian universities; and 11% were from elsewhere. Forty-two percent of residents expected to practise in an urban center, 32% in a suburban area, and 21% in a rural or small town; 6% were undecided.

Table 2. RESIDENTS' EXPERIENCE DURING TRAINING AND PLANS TO PROVIDE OBSTETRIC CARE

PLANS AFTER COMPLETION	NO. OF RESIDENTS	AVERAGE NO. OF DELIVERIES	EXPOSURE TO FAMILY PRACTICE PATIENTS ^a	
			NO.	%
No obstetric care	6	43	2	33
Antenatal care only	11	47	2	18
Full obstetric care	27	101	16	59
Undecided	9	84	6	67

^aExposure to family practice patients indicates number of residents who had more than five family practice patients in all stages of care.

Quantitative survey

Fifty-one percent of family medicine residents surveyed expected to practise obstetrics following the residency program (Figure 1). "Practising obstetrics" was defined as antenatal, intrapartum, and postpartum care. Twenty-one percent planned to deliver antenatal care only; 11% planned to do no obstetrics or antepartum care, and 17% were undecided.

Figure 2 indicates the average number of births attended by each family practice resident at the different hospital programs during the 2-year residency. The range is from 49 to 134, with an average of 83. Each resident might attend births at a number of hospitals, so these were added to give the total experience over 2 years. Most of the deliveries attended would have been during an obstetrics rotation. Figure 2 also indicates the average number of family practice patients followed for all stages of care. By "all stages," we meant that the woman was cared for throughout the prenatal period, birth, and postpartum period and received well baby care by the same resident. Note that residents from four of the eight programs cared for substantially more women throughout all stages of care.

Table 3. RESIDENTS' CHANGES OF PLANS TO PRACTISE OBSTETRICS

PLANS AFTER COMPLETION	PLANS TO PRACTISE OBSTETRICS WHEN ENTERING RESIDENCY		
	NO OBSTETRICS OR UNLIKELY (N = 15)	LIKELY OR CERTAIN (N = 23)	UNDECIDED (N = 15)
No obstetrics	5 (33%)	0	1 (7%)
Antenatal care only	6 (40%)	2 (9%)	3 (20%)
Full obstetric care	3 (20%)	17 (74%)	7 (47%)
Undecided	1 (7%)	4 (17%)	4 (27%)

Table 1 describes in more detail the experience residents had with obstetrics patients from family practice units. Forty-three percent of residents attended the births of more than 10 family practice patients during the 2-year residency. Twenty-five percent were able to provide all stages of care to more than 10 women. However, disturbingly, 25% attended no family practice unit births, and 28% did not care for a single woman in any of the stages of maternity care.

Of all the births attended by these family practice residents over two years of training, 71% were supervised by obstetricians and 28% by family physicians. Figure 3 shows the quality of maternity care teaching by family physicians and obstetricians as rated by residents. Teaching by family physicians in the areas of antenatal and postpartum care was reported as "good or excellent" most of the time, significantly more often than teaching by obstetricians. Teaching intrapartum care was rated as good or excellent 87% of the time for obstetricians and 74% for family physicians, which was not a statistically significant difference ($P = 0.144$ by Sign Test).

Family practice unit and community family physician preceptors were rated equally as good or excellent role models (68% versus 66%).

Residents were asked to rate their confidence in caring for a woman during a low-risk pregnancy and birth. Seventy-seven percent were fairly confident, 9% were very confident, and 11% were nervous.

The residents were also asked to rate factors influencing their decision to practise obstetrics. Factors rated as important or very important by over 85% of residents in this survey were participation in a happy

family event, addition of young families to the practice, family practice role models, lifestyle issues, level of confidence, and anxiety level.

A number of cross-tabulations were made to explore factors that might contribute to a resident's decision to practise obstetrics upon completing residency. The resident's sex appeared to be a highly significant factor. Eighty-six percent of the men were either certain or likely to practise obstetrics in the future, compared with only 29% of the women. Eighty-two percent (9/11) of residents planning rural practice intended to practise obstetrics, compared with 41% (9/22) of those planning either urban or suburban practice. Table 2 shows the average number of births attended versus plans to practise intrapartum obstetrics. Those planning to practise obstetrics attended more births. Among those intending to practise obstetrics, there was a larger proportion of residents who had cared for more than five family practice patients throughout all stages of care ($P = 0.07$).

The reported influence of obstetrics training in the residency is shown in Table 3. The residents were asked about their intentions to practise obstetrics after graduation, both on entering and on completion of the family medicine residency. Seventy-four percent of the residents who said they were likely or certain to practise intrapartum obstetrics on entering the program were planning to do so on completion. Of those who initially claimed they would not practise obstetrics, 20% decided to do complete care and 40% antenatal care only. Of the group whose members were undecided at the outset, 47% decided to do complete care.

Qualitative survey

The qualitative questions on the survey allowed the residents to express their opinions about various aspects of the program. These responses were synthesized and collated by the authors and classified into broad categories. Residents were asked to describe one good experience and one bad experience occurring during their obstetrics training (Table 4). Finally, residents were asked how the residency program could promote the practice of obstetrics (Table 5).

As the qualitative responses were being classified into these categories, certain expressions, or key words (listed below), kept recurring or summarized a resident's opinion. Positive terms included:

- "bond" formed with the couple;
- "very rewarding experience";
- "enthusiastic supervisors";
- "joy" of delivering a healthy baby;
- "family involvement";
- "I performed the entire delivery without another physician in the room!"
- "family physician X was a fabulous teacher"; and
- "thrill" of seeing a 1-year-old whom I had delivered earlier.

Negative terms included:

- "missing a delivery" when I had looked after the couple for so long;
- "not participating" in the decision-making process;
- "stillbirth was devastating";
- "unnecessary intervention"; and
- "shoulder dystocia was terrifying."

DISCUSSION

In our survey, 51% of family practice residents expected to practise obstetrics. This figure is comparable to data from Smith and Howard's¹⁵ survey of 16 Michigan family practice residency programs in 1985. In that sample 55% intended to practise obstetrics after graduation.

Sex differences

While almost two thirds of the residents were women, only about 30% of them planned to practise complete obstetric care, compared with 86% of the men. This sex difference was also found in a recent study of Ontario family physicians, in which 45%

Table 4. DESCRIPTIONS OF EXPERIENCES DURING OBSTETRICS TRAINING

NO. OF RESPONSES	COMMENTS
PLEASANT EXPERIENCES	
19	Personal and professional rewards
17	Continuity of care for family practice patients throughout antenatal, intrapartum, postpartum, and newborn care
14	Participation and decision making in the labor and delivery
4	Bond formed with the family
4	Exposure to a low-intervention approach
3	Good teaching in an uncritical, comfortable environment
UNPLEASANT EXPERIENCES	
17	Cases with a bad outcome or abnormal baby (stillbirth, nerve palsy, neonatal death, chromosomal abnormality, anencephaly, cleft palate)
12	The resident was ignored, was not allowed to participate meaningfully in management decisions or procedures, or was not shown respect
10	Obstetric emergencies, such as shoulder dystocia, respiratory distress, or postpartum hemorrhage
10	Cases where mismanagement was perceived, ie, unnecessary interventions
5	Poor teachers
2	Workload too heavy

of female physicians billed for obstetric care, compared with 60% of males.²² This difference was not found in billings for prenatal care (82% of female physicians, 79% of male physicians).

These findings have implications for health care resource planners. As it seems likely that the proportion of female family physicians will increase, the shortage of family physicians willing to attend births could become more of a problem. The pattern of women doing less after-hours work and less obstetrics has been proposed to be "consistent with the hypothesis that women are more likely than men to structure their practices to facilitate greater involvement in their family and child care responsibilities, particularly the latter."²² Training programs must address factors that would facilitate women's involvement in these areas.

Table 5. RESIDENTS' SUGGESTIONS ON HOW RESIDENCY PROGRAMS CAN PROMOTE OBSTETRIC PRACTICE

NO. OF RESPONSES	COMMENTS
27	Increase the number of family practice deliveries, with more teaching by family physicians and sharing of cases by staff with the residents. Increase the residents' responsibilities in all phases of care
18	Family medicine supervisors <i>must</i> practise obstetrics and be enthusiastic to provide good role models
13	Ensure an adequate number of births by reducing competition with other residents or by lengthening the rotation
12	Increase training at peripheral hospitals, using community physician teachers
11	Address lifestyle issues both for the training experience and as a model for practice: call rosters, group call arrangements
4	Facilitate residents' doing family practice patient deliveries: release from other rotations, carry pagers
2	Include neonatology training
2	Increase training in low-intervention settings
2	Increase the number of complications handled, ie, more high-risk deliveries

Influences of experiences

In our study, rural practice plans correlated with the decision to practise obstetrics, although the numbers were small. In Smith and Howard's study¹⁵ as well, rural practice plans significantly correlated with the decision to practise obstetrics, whereas suburban practice plans negatively correlated.

Numbers and types of births attended are listed in *Figure 2 and Table 1*. On average, family practice residents attended 83 births over the 2-year program. In 1975, an American study of family practice residency programs indicated that residents performed, on average, 148 normal deliveries and 17 complicated deliveries during their 3-year residency.²³

It is clear that residents planning to practise obstetrics have attended more births (*Table 2*). They have also attended more women throughout all stages of maternity care. One wonders whether their plans caused them to seek more experience or whether greater exposure influenced their plans. These results have implications for programs promoting family practice obstetrics.

The results in *Table 1* are sobering. While many residents had good exposure to all phases of maternity care with family practice patients, large numbers did not. Between 13% and 30% had *no* experience in one or more areas, and almost 50% in each category had 10 or fewer cases. The influence of continuity of care on desire to practise obstetrics is unclear, but it has traditionally been a principle of family medicine.

Family practitioners were rated more highly than their obstetrician colleagues in teaching antenatal and postpartum care and were evaluated equally in intrapartum teaching. Residents who reported the presence of good role models in family practice obstetrics were significantly more likely to practise obstetrics in Smith and Howard's study.¹⁵

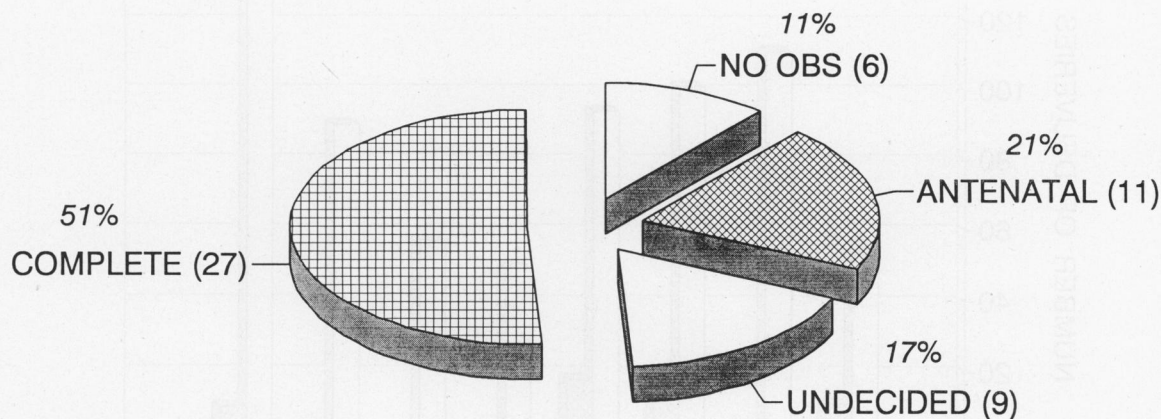
The percentage of graduates including obstetrics in their practices has been shown to be significantly associated with the precepting model.¹⁶ Residencies where full-time family physician faculty precepted in both outpatient and delivery suites reported that 72% of their graduates incorporated obstetrics into their practices after residency. This proportion was significantly greater than programs where family physicians precepted before the birth and obstetricians precepted in the labor room (50% of graduates planned to include obstetrics) and those where obstetricians were the only preceptors (38% of graduates planned to include obstetrics).

The factors influencing the decision to practise obstetrics were similar to those cited in the literature,⁴ although issues such as fees and malpractice costs were not among the most important. This finding is in contrast to Smith and Howard's American study, where most residents who had decided against obstetric practice reported that concerns about legal liability had influenced their decision.¹⁵

Influence of program

It is interesting to speculate on the perceived changes in plans to practise obstetrics over the 2-year program. *Table 3* shows that all groups appeared to have a positive shift toward practising antenatal care or complete obstetrics. This shift is most encouraging, especially given the range of experience represented by the program

Figure 1. PLANS TO PRACTISE OBSTETRICS



overall and the urban teaching setting with several tertiary care centers.^{19,24} This is in contrast to an American study, where 82% of family practice residents beginning their programs planned to include obstetrics in their future practices, but only 50% retained this interest by the third year of training.²⁵ In this American study, more than half of those who changed their minds and decided against obstetrics considered their training to be inadequate to allow a confident obstetric practice.

The results of the qualitative section of the survey seem to give an added dimension to the opinions described explicitly above. We were struck by the enthusiasm that was projected through words, such as "joy" and "bonding with the family." This enthusiasm was extremely encouraging to us as teachers, perhaps more than the objective numbers. It also made us aware that much could be improved by increasing family medicine experience, by teachers' sharing of patients, by increasing continuity of care, by greater involvement in the whole process of residents' decision making

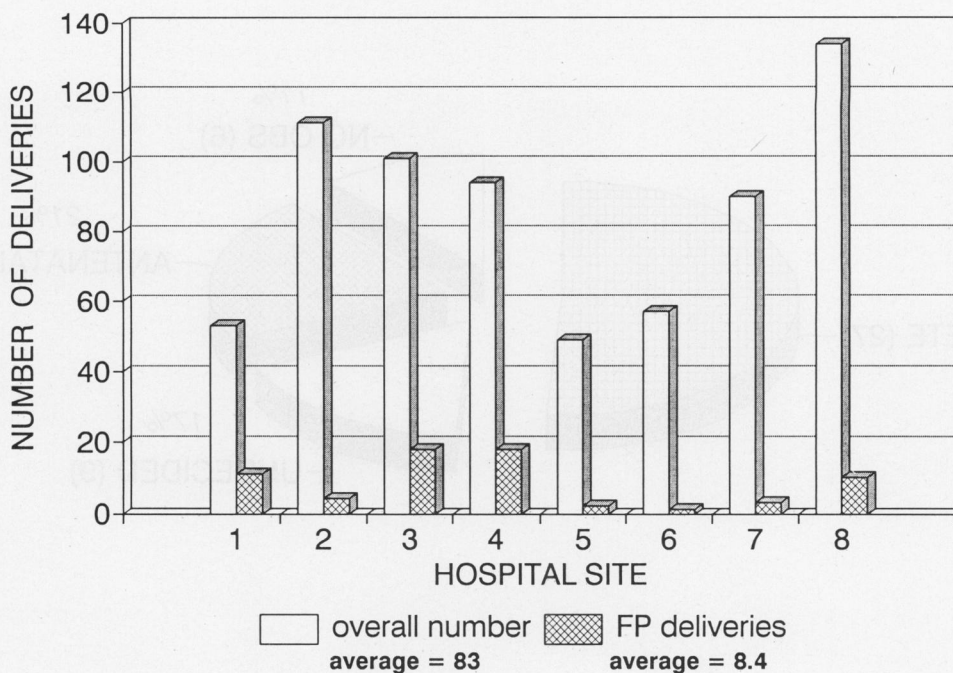
and management, by adding more family medicine role models, and by addressing the lifestyle issues (especially for women) that make the practice of obstetrics difficult.

Limitations

This study has a number of limitations. It was conducted at only one university training program and thus might not be generalizable to other programs in Canada or elsewhere. The fact that there were eight separate hospital programs with a wide range of experiences could compensate for this limitation. Certainly, a similar study should be carried out in more sites. Increasing the numbers would also make more sophisticated cross-tabulations possible. We do not have any information on the plans of residents who did not respond.

This was a single, cross-sectional, retrospective survey carried out at the end of training. It did not survey residents at the onset of their training, which might have improved credibility. It would also be strengthened by tracking residents for 6 months or 1 year after graduation to see

Figure 2. NUMBER OF DELIVERIES AT TEACHING HOSPITALS



whether they followed the plans described. A prospective design would have been the best method for this study.

CONCLUSION

Despite the limitations of this study, we are encouraged that the eight programs within a Canadian urban teaching residency appeared to have a positive influence on their residents' decisions to practise obstetrics. This is especially important, given the drift away from obstetric care that has been documented in the literature.

It was also encouraging to see that family physicians and their patients provided a valued educational experience for the residents. It reinforces the principle of strong obstetrics role models in family practice teaching units.

An issue of concern is the apparent tendency of women residents to limit obstetrics much more than men. Given their large proportion among the trainees, this will have a lasting effect on the numbers of family physicians practising obstetrics unless

the issues affecting women's involvement are addressed. ■

Acknowledgment

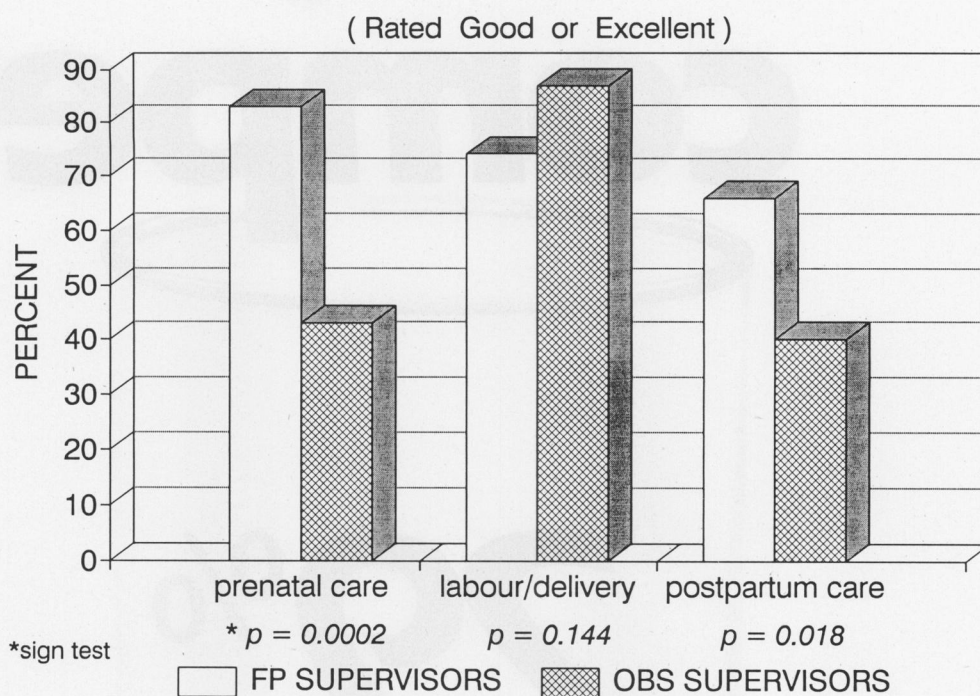
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Figure 3. QUALITY OF OBSTETRIC TEACHING



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