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Do Family Practice Residents Add or Subtract From Patients' Satisfaction During Labor and Delivery?

Introduction

Attending physicians at teaching hospitals are sometimes concerned, due to the very personal nature of the birth process, that including a resident physician in the care of laboring private patients might detract from patients' perception of the care they receive at the hospital. The purpose of this study was to assess whether the participation of a Family Practice resident affects a patient's perception of the quality of physician care during the birth process compared to deliveries performed by an attending physician alone.

Carle Foundation Hospital is a 300 bed JCAHCO-accredited teaching hospital located in Urbana, Illinois. It is a Level 3 Perinatal Center, serves as the primary teaching hospital for the University of Illinois College of Medicine at Urbana-Champaign (UICOM-UC), and sponsors a 12 resident 4-4-4 Family Practice residency affiliated with the UICOM-UC. The only other residency program at the institution is the University of Illinois Internal Medicine residency.

There are eight Obstetricians/Gynecologists on staff and eight Family Practice attendings with OB privileges. Together they combine to deliver 1800 babies per year. Carle Family Practice residents obtain all of their required OB training at Carle Foundation Hospital. The population of patients used for OB training includes residents' own patients from their Family Practice center practice, as well as private patients of the Family Practice and OB/GYN attendings. An attending physician was present at all deliveries whether or not a resident performed the delivery.

Methods

The population for this study consisted of patients who delivered at Carle Foundation Hospital, had a live, vaginal birth and completed the satisfaction survey. The patients were stratified into four groups, dependent on the physician(s) who delivered their child.

The four groups of patients included:

1. Family Practice Patients who were delivered by Family Practice Residents (FPP/FPR). This group includes Family Practice center prenatal patients of residents as well as prenatal patients of Family Practice attendings who were delivered by residents.
2. Family Practice Patients of attendings who were delivered by Family Practice Attendings (FPP/FPA).
3. Obstetrical Physician Patients who were delivered by Family Practice Residents (OBP/FPR).
4. Obstetrical Physician Patients who were delivered by Obstetrical Physicians (OBP/OB).

Patient names were obtained in chronological order from the delivery record on the Labor and Delivery unit from 9/7/95 to 5/26/97 until adequate numbers were obtained for all four groups. The survey was mailed with another survey routinely sent to all patients who deliver at Carle hospital.

Patients were sent a satisfaction survey which consisted of five questions. The first question identified the name of the physician who performed the delivery and asked the patient whether they remembered this physician's involvement in their care. This question was answered Yes/No. The four other questions were answered on a five point Likert scale. The survey was analyzed two different ways. The first approach was to examine the average scores for each question as well as a total overall score. (Each question could range from 1 to 5, except for the first question. The total score could range from 4 to 20.) The second approach was to examine the percentage of responses that were either Good/Very Good, or Added a Little/Added a Lot for question 5.

The average (mean) scores between the four groups were analyzed using one-way analysis of variance (ANOVA) and percentages were analyzed using Chi Square (X^2). Statistical significance was set at $p < .05$.

Response Rate

A total of 166 individuals returned the survey for an overall response rate of 39%. The response rates for the four physician groups are listed in Table 1.

Table 1. Response Rates

Patient Groups	Number of Patients	Returned	Response Rate
FPP/FPR	118	33	28%
FPP/FPA	66	27	41%
OBP/FPR	110	39	36%
OBP/OB	133	67	50%
TOTAL	427	266	39%

Results: Average Scores per Questions

The questions and mean (standard deviation) responses are listed for each of the four groups. (Table 2)

Table 2. Average Response Per Question (Standard Deviation)

QUESTION	FPP/FPR	FPP/FPA	OBP/FPR	OBP/OB
Please rate your overall satisfaction with your physician's involvement in your labor and delivery experience.	4.7 (.52)	4.9 (.52)	4.5 (.83)	4.6 (.70)
The quality of this physician's clinical skills.	4.9 (.27)*	4.6 (.54)*	4.8 (.39)	4.8 (.42)
This physician's interpersonal skills (ability to relate to people).	4.9 (.46)	4.6 (.60)	4.6 (.74)	4.6 (.65)
Do you feel that this physician added to or detracted from your satisfaction with your labor and delivery experience?	4.9 (.36)	4.5 (.80)	4.4 (.92)	4.5 (.82)

*There is a statistical difference between FPP/FPR (4.9) and FPP/FPA (4.6), $F=2.98, p=.032$

Table 3. Total Average Satisfaction Score (Standard Deviation)

FPP/FPR	FPP/FPA	OBP/FPR	OBP/OB
18.4 (2.4)	19.5 (1.4)	18.2 (2.1)	18.5 (2.4)

Discussion

One limitation the study has is a small sample size. Patient satisfaction data tends to be highly skewed in a positive direction. Therefore, large sample sizes are

necessary to detect small statistical differences with a great deal of accuracy and confidence. (As an example, it would take approximately 250 responses in each of the four patient/physician groups to achieve this statistical accuracy and confidence.) This limitation has to be balanced with the nature of the study and the difficulty of collecting this type of information with its intended purpose. Another limitation of the study is that patients self-selected to their primary physician service and were not randomized to groups.

Conclusion

Attending physicians at teaching hospitals are sometimes concerned, due to the very personal nature of the childbirth process, that including a resident physician in the care of laboring private patients might detract from patients' perception of the care they receive at the hospital. This data shows clearly that this is not the case, and also those patients who receive their care from the residents' Family Practice center have satisfaction levels which rival that of patients from the private practices of attending physicians.

This data suggests that resident involvement in patient deliveries does not adversely affect patient satisfaction levels. One limitation the study has is small sample size. Another study limitation is that patients self-selected their primary physician and were not randomized.

References

Two literature searches were conducted; one prior to the study and one following the conclusion of data collection. While there were articles that addressed overall satisfaction with resident involvement in patient care, none were specific to patient satisfaction with family practice resident involvement during labor and delivery.

This study was reviewed and approved by the Institutional Review Committee of Carle Foundation Hospital.

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CME Questions 4a-c

Please select the best answer for the following:

- 4a. Which of the following types of physicians generate high levels of patient satisfaction during labor and delivery?
- a. Obstetricians
 - b. Family Medicine physicians
 - c. Family Medicine residents supervised by an attending physician
 - d. All of the above
- 4b. Attending physicians should be rightfully concerned about patient satisfaction when involving trainees in the labor and delivery process?
- a. True
 - b. False
- 4c. According to this survey, the level of patient satisfaction was:
- a. 95%
 - b. 90%
 - c. 70%