Health Services Research

Prepared But Not Practicing: Declining Pregnancy Care Among Recent Family Medicine Residency Graduates

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Background and Objectives: *Pregnancy care has been an important component of family medicine in the Pacific Northwest. This paper describes a sudden decline in the provision of pregnancy care by recent family medicine residency graduates in the region.* Methods: *Two cohorts of graduates from the University of Washington Family Medicine Residency Network were surveyed about their current pregnancy care practice patterns. A total of 205 graduates from 1997–1999 (surveyed in 2000) and 223 graduates from 2000–2002 (surveyed in 2003) completed the surveys (69% and 65% response rates).* Results: *From 2000 to 2003, there was a 20% decline in the proportion of recent family medicine residency graduates performing deliveries in their practice (78% versus 58%). The proportion performing prenatal care declined from 81% to 64%. Graduates from all the programs across the region rated their preparation for the practice of pregnancy care highly, regardless of whether or not they currently provided such care. In addition to graduation cohort, the provision of pregnancy care was also related to practicing in the Washington, Alaska, Montana, and Idaho (WAMI) region, providing hospital care, and feeling well prepared to provide pregnancy care. (Wyoming residency programs became affiliated with the WAMI network in 2003 and are not included in this analysis.)* Conclusions: *Fewer new family physicians are providing pregnancy care in the Pacific Northwest. This decline does not appear to be related to training but threatens access to service for patients.*

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Pregnancy care is an important component of family medicine, especially in rural and underserved communities, even though there continue to be challenges to family physicians providing this care. The influence of delivering babies on physician lifestyle[1-3] and the cost of professional liability insurance[1,4-7] are often cited as deterrents to providing pregnancy care.

Studies have shown, however, that community and personal factors are better predictors of the likelihood of providing pregnancy care than are malpractice insurance costs.[8,9] Practicing or planning to practice in a rural area[3,5,10] and enjoying deliveries[2,4,10] predict residents' and recent graduates' pregnancy care practice. Female residents are slightly more likely to plan to provide pregnancy care.[1,3,11] Interventions that improve the quality of a program's pregnancy care training have also been shown to increase the rate at which graduates provide that care.[12-14]

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Although other studies have shown declining rates of pregnancy care by family physicians, this study examines recent trends and barriers in a regional residency network with historically high rates of pregnancy care. Nationally, only 22% of family physicians provide pregnancy care.[15] In comparison, an earlier survey showed that 64% of graduates from the University of Washington family medicine network did so. At the time of this study, the University of Washington family medicine residency network included all 17 family medicine residency programs in Washington, Alaska, Montana, and Idaho (WAMI) (Wyoming residency programs became affiliated with the WAMI network in 2003 and are not included in this analysis.) Programs in the network are located in both rural and urban communities. This study compares the most recent graduates of the network with an earlier cohort of recent graduates to assess changes in pregnancy care practice. In addition, this study examines whether changes in residency education influence pregnancy care provision.

Methods

We conducted two distinct cross-sectional surveys of WAMI family medicine residency graduates. Two cohorts of family medicine graduates, comprising 297 family physicians who completed residency between 1997–1999 and 343 family physicians who completed residency between 2000–2002 were surveyed about their current practice patterns and their evaluation of their residency training. The first cohort was surveyed in 2000 and the second was surveyed in 2003. Details of the survey methodology have been previously described.[16] The University of Washington Human Subjects Review Board granted this study an exemption from formal review.

Respondents were asked about their current provision of pregnancy care, including prenatal care, vaginal deliveries, cesarean deliveries, and surgical assisting at cesarean sections. Respondents were also asked about their provision of hospital care to children and adults. We asked respondents to rate the quality of their residency training in pregnancy care, using a Likert scale: 1=under-prepared, 2=adequately prepared, 3=well-prepared. Questionnaire items were identical in the two surveys.

We collected demographic information about the physicians and identified characteristics of the residency program from which respondents graduated. Respondents' practice locations were categorized as small (<25,000), medium (>25,000 and <100,000), and large (>100,000) by physician self-report. Practice locations were also assigned to Rural-Urban Commuting Areas (RUCAs). RUCAs are validated zip code-based measures that reflect the size of cities and towns as well as the access between rural and urban areas.[17] There are 33 RUCA codes, and these were combined into four categories—urban, large rural, small rural, and small isolated areas.

Data Analysis

We conducted bivariate analyses of physician characteristics, practice location, physicians' rating of training quality, and scope of current practice. Our primary outcome for pregnancy care was the performance of vaginal deliveries. We then compared, using chi-square tests, the two graduation cohorts by their baseline characteristics and their current provision of pregnancy care. In addition, we performed multivariate logistic regression to examine the differential contribution of each of our hypothesized variables, including graduation cohort, on the likelihood that graduates were performing pregnancy care. All analyses were performed using SPSS (Statistical Package for the Social Sciences) version 10.0.

Results

There were 640 graduates from residencies in the four-state region between 1997 and 2002. The response rate to the survey of the 1997–1999 cohort was 69% (205/297). The survey of the 2000–2002 graduates had a response rate of 65% (223/343). Nonrespondents did not differ from respondents in year of graduation or practice location.

From 2000 to 2003, there was a 20% decline in the proportion of recent family medicine residency graduates performing deliveries in their practices (78% versus 58%, $P<.05$) (Table 1). For prenatal care, the rate declined from 81% to 64% ($P<.05$) (Figure 1).

Graduates who remained in the WAMI region experienced a 24% decline in the proportion providing pregnancy care (82% versus 58%, $P<.05$). There was no significant decline among graduates who left the WAMI region to practice, although the proportion performing vaginal deliveries was lower than among WAMI physicians (68% versus 52%, P=not significant [NS]). There was no statistically significant difference in the decline in providing pregnancy care between female and male family physicians (female 22% versus male 15%). The practice of pregnancy care was not

Table 1

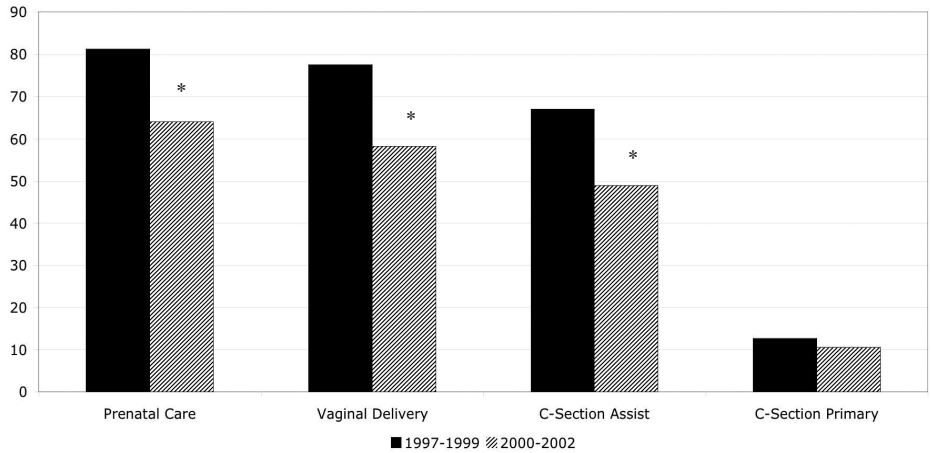
Characteristics of Two Family Medicine Residency Graduation Cohorts

	1997–1999 n=205	*2000–2002 n=223*	P *Value**
	% (n)	*% (n)*	
Female	51 (105)	50 (112)	NS
Current practice in WAMI region	65 (134)	58 (130)	NS
Practice community size			NS
>100,000	31 (62)	37 (80)	—
>25,000 and <100,000	27 (54)	22 (48)	—
<25,000	42 (83)	41 (88)	—
Pregnancy care			
Prenatal care	81 (165)	64 (136)	<.05
Vaginal delivery	78 (158)	58 (123)	<.05
C-section	12 (23)	11 (22)	NS
C-section assist	68 (136)	49 (102)	<.05

* chi-square
WAMI—Washington, Alaska, Montana, and Idaho
NS—not significant

Figure 1

Percentage of Graduates Reporting Pregnancy Care: 1997–1999 Cohort Versus 2000–2002 Cohort



* $P<.05$

associated with whether graduates provided ambulatory care for children but was associated with the provision of hospital care to adults. Over the same time period, provision of adult hospital care declined from 82% to 65%.

Among graduates practicing in isolated rural areas, there was no significant difference between the early and later cohorts in the proportion providing pregnancy care. The proportion providing pregnancy care was significantly lower in the later cohort among graduates practicing in urban areas (76% versus 51%, $P<.001$) and large communities (76% versus 52%, $P<.05$).

Graduates from all the programs across the region rated their preparation for the practice of pregnancy care highly, regardless of whether they were providing this care or not. Despite the fact that fewer of them were performing deliveries, the recent cohort reported feeling better prepared for pregnancy care compared to the earlier cohort (mean score 2.77 versus 2.64, $P<.05$).

Multivariate logistic regression revealed graduation cohort to be the strongest predictor of provision of pregnancy care (RR 4.13, $P<.001$). Practicing in the WAMI region, providing hospital care, and feeling well prepared to provide pregnancy care were also significantly associated with providing that care (Table 2).

Discussion

These findings demonstrate a marked decline in the provision of pregnancy care by recent family medicine graduates in the Pacific Northwest. The reasons for this decline are less clear. The decline was not related to gender differences, nor can it be explained by a large generational difference, because these two graduation cohorts were less than 6 years apart. There is no suggestion that inadequacy of residency training in pregnancy care is related to the falloff in providing these services in practice. Not only did graduates rate their pregnancy care training highly, recent graduates felt better prepared for pregnancy care than the earlier cohort.

Although providing care for children was not associated with the decline in providing pregnancy care, providing hospital care to adults was related to providing pregnancy care in the regression model. This was an unexpected finding but suggests that limitations in scope of practice may be a factor in whether recent graduates provide pregnancy care. Our data cannot determine if these family physicians are being denied hospital privileges, are declining to seek privileges,

Table 2

Multivariate Odds of Performing Vaginal Deliveries, Adjusted for Provider and Practice Characteristics

Characteristic	*Odds Ratio*	*95% CI*
Earlier graduation cohort (1997–1999)	4.13	2.32–7.36
Male	.88	.51–1.49
Current practice in WAMI region	2.03	1.16–3.58
RUCA	.25	.95–1.72
Pediatric care	.62	.03–13.7
Adult hospital care	2.29	1.18–4.44
Reports being well-prepared for obstetric care	3.16	1.85–5.37
Training program emphasized rural and pregnancy care	.89	.51–1.57

CI—confidence interval
WAMI—Washington, Alaska, Montana, and Idaho
RUCA—rural-urban commuting area

or are joining practices that have self-limited their hospital and pregnancy care activities. The urban predominance of the decline in providing pregnancy care also suggests the importance of institutional or organizational limits placed on physicians practicing in larger communities.

Limitations

This study has several limitations. First, our data provide only two "snapshots" of current pregnancy care practice patterns of recently trained family physicians. Since these are not longitudinal data, trend analyses were not performed. Second, the data reflect only one region of the country. However, the Northwest has historically led the nation in pregnancy care practice by family physicians. Finally, the data are derived from self-reports. We were unable to count the numbers of deliveries actually performed and thus cannot estimate the magnitude of the loss of access to these essential services. Similarly, we could not assess the quality of the services performed.

Conclusions

Practicing in the WAMI region was associated with delivering pregnancy care. Nationally, only 22% of family physicians provide pregnancy care.[15] In the Pacific census region (California, Alaska, Hawaii, Washington, Oregon), 27% of family physicians perform deliveries, and 34% of physicians in the Mountain region (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming) perform delivieries. The rural nature of the region and the prevailing culture of family medicine have contributed to this higher rate of provided pregnancy care. Family physicians are important providers of pregnancy care services, especially in rural and underserved areas.

Future studies will need to examine the underlying causes of the decline in providing pregnancy care among family physicians. These may include restrictions on scope of practice, professional liability, and self-determined lifestyle factors. More importantly, this sudden loss of family physicians who provide pregnancy care may signal a break in the supply of physicians able to provide these essential services to patients and communities. If this becomes a continuing trend, policymakers will need to consider ways to ensure continued access to pregnancy care.

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