Gender-Related Factors in the Recruitment of Physicians to the Rural Northwest

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Background: **This study examines differences in the factors female and male physicians considered influential in their rural practice location choice and describes the practice arrangements that successfully recruited female physicians to rural areas.**

Methods: **This cross-sectional study was based on a mailed survey of physicians successfully recruited between 1992 and 1999 to towns of 10,000 or less in six states in the Pacific Northwest.**

Results: **Responses from 77 men and 37 women (response rate 61%) indicated that women were more likely than men to have been influenced in making their practice choice by issues related to spouse or personal partner, flexible scheduling, family leave, availability of childcare, and the interpersonal aspects of recruitment. Commonly reported themes reflected the respondents' desire for flexibility regarding family issues and the value they placed on honesty during recruitment.**

Conclusions: **It is very important in recruitment of both men and women to highlight the positive aspects of the community and to involve and assist the physician's spouse or partner. If they want to achieve a gender-balanced physician workforce, rural communities and practices recruiting physicians should place high priority on practice scheduling, spouse-partner, and interpersonal issues in the recruitment process. (J Am Board Fam Pract 2002;15:391–400.)**

The growing proportion of women in medicine threatens to exacerbate the ongoing shortage of rural physicians.[1] Women, who gravitate toward primary care specialties,[2–6] are less likely than men to practice in rural areas.[7,8] Among recent medical school graduates tracked by the American Medical Association (AMA), women comprise 19% of the urban but only 13% of rural generalist physicians.[9] Because rural areas rely mainly on primary care providers for health care,[9] the recent increase in numbers of women in medical training is likely to have a major impact on the supply of medical providers for rural areas.

The availability of female providers is important in health care delivery for a number of reasons. Many patients, especially women, prefer female providers for certain types of medical care, such as prevention,[10,11] some types of cancer screening,[12] and female adolescent health care.[13] In addition, female physician availability correlates with the frequency of preventive services offered to women.[11,14] One review of the importance of gender in the physician-patient relationship concluded that female physicians are more likely than their male counterparts to address psychosocial issues.[15]

The literature regarding recruitment of physicians to rural areas describes features of rural practices and communities that physicians find attractive and unattractive and characteristics of physicians who choose rural practices.[16,17] Some studies provide guidance to those involved in recruitment.[18] Few studies, however, describe the actual recruitment packages that attract male and female physicians to rural areas or systematically ask for rural physicians' advice on recruitment strategies. This study investigates the factors female and male physicians considered influential in their choice of a specific rural practice location and describes the practice arrangements that were successful in recruiting female physicians to rural areas.

Methods

Study Population

This cross-sectional study profiles male and female physicians recently recruited to small rural commu-

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nities in the Pacific Northwest. The study population was selected from general internists, general pediatricians, family physicians, general practitioners, and obstetrician-gynecologists listed in the AMA directories[2–6] whose preferred mailing address was in nonmetropolitan statistical area towns of 10,000 or fewer population between 1992 and 1999 in the states of Alaska, Idaho, Montana, Oregon, Washington, and Wyoming. The selection of towns was based on 1994 census data.[19] Obstetrician-gynecologists were included because they provide a considerable amount of general care for women in rural areas. Other physician specialty types were excluded.

We reviewed AMA data[2–6] for 1992, 1994, 1996, and 1999 to find physicians newly recruited to these small towns within that period. Data for each year represented physicians for whom information was available as of June of the publication year. Our study sample included those newly recruited physicians who were still practicing in these towns according to the 1999 data. This particular study group was selected to provide information about recent influences on rural physician recruitment based on the experiences and responses of successful recruits. In the sample population, gender was inferred from physician first and middle names. We included all listed physicians who met inclusion criteria. The inferred gender of respondents was verified by an item on the questionnaire itself.

Survey Instrument

A four-page survey instrument included several question types. We listed 27 influences on recruitment and asked participants to rate the importance of these influences (1 = not important, 2 = somewhat important, 3 = very important). There were several open-ended questions, asking participants to list the three most successful strategies and three least attractive aspects of their recruitment, and eliciting three pieces of advice participants would give to those involved in recruiting rural physicians. In addition, the questionnaire elicited descriptive information about the arrangements in the practices that the participants ultimately chose, as well as standard demographic information. A pilot survey was sent to 30 family physicians in another state. Minor wording changes were made in the instrument based on comments obtained during the pilot survey. The questionnaire was mailed to the study sample in the winter of 2000. To improve response rates, three mailings about 1 month apart were conducted.

Analysis

Responses to scaled questionnaire items were analyzed using SPSS 6.1 for the Power Macintosh. Responses were stratified by gender as well as examined for the entire study population. Categorical responses were compared using chi-square tests. Mean ratings for continuous responses were compared using *t* tests for independent samples. Responses to open-ended items were coded using qualitative analysis methods with independent coding by two individuals, with a third coder resolving disagreements.[20]

Results

Response Rate

A total of 423 rural physicians (311 men and 112 women) met our initial study sample criteria. Based on information provided by the postal service and returned surveys, we excluded from the denominator 20 physicians who were not providing patient care, were retired, or were deceased, and 95 who had not actually been practicing in the rural Northwest or for whom the AMA data provided an incorrect address that we were unable to update. We conducted a survey of randomly chosen nonrespondents to determine what percentage met our study criteria. Of those contacted, 27% had moved out of the study area, were no longer practicing, or were unreachable and presumably never received the survey instrument. We used this result to adjust the nonrespondent rate by 19%, resulting in an overall response rate of 61% (70% for women and 58% for men). The response rate by state ranged from 53% in Oregon and Montana to 72% in Alaska.

The study population was further refined to exclude 1 physician who was an emergency medicine specialist, 11 who had been in practice in that location for 10 or more years and thus had not been recently recruited, and 23 who were recruited to their rural practices through a loan repayment program or as an obligation to a scholarship program. The latter group was excluded because their practice location choices could have been influenced by factors quite different from those that influenced physicians not so obligated. A total of 114 physicians—77 men (68%) and 37 women (32%)—re-

Table 1. Personal and Training Characteristics of Rural Generalists Successfully Recruited to Rural Northwest, Compared by Gender.

Characteristic	All Respondents (n = 114)	Men (n = 77)	Women (n = 37)
Mean age (years)	43.7	45.2	40.6*
Married or partnered (%)	85	94	68†
Number of children at home when respondent entered current practice (%)			
0	47	38	65‡
≥2	40	47	24‡
Mean number of children	1.3	1.5	0.7*
Year residency completed (%)			
1995–98	21	18	28
1990–94	39	34	47
1980–89	29	32	25
1970–79	7	11	0
1960–69	4	6	0
Mean year of completion	1989	1987	1992†

*$P < .01$.
†$P < .001$.
‡$P < .05$ (difference between men and women).

turned the survey instrument and met inclusion criteria.

Demographics

Respondent demographics are shown in Table 1. Compared with their male counterparts, rural female respondents were younger, less likely to be married or partnered, had fewer children, and were more likely to have completed residency more recently.

Practice Characteristics

Current practice characteristics of respondents are shown in Table 2. Respondents practiced in one of six states in the Northwest, and 79% were family physicians or general practitioners. Men were more likely than women to be family physicians or general practitioners. Only 19% of the respondents were in solo practices. Although not statistically significant, there was a trend for women to be more likely to practice in multispecialty groups than in single-specialty groups. Most respondents' incomes were based on salary, and 52% of respondents were employed rather than self-employed or partners in a practice. Men and women did not differ significantly with respect to practice organization, proportions of income based on salary and production, or likelihood of being self-employed or partners in their practices, as opposed to being employed by the practice.

Recruitment Characteristics

Aspects of the recruitment process are shown in Table 3. Forty-one percent of respondents had been in training and 36% in another type of primary care practice before entering their current practices. The rest provided ambiguous responses (eg, staff physician, locum tenens, physician employee) or had been in other types of positions, such as medical director, critical care, or emergency medicine. Women reported that they had spent fewer years in their previous practice and were significantly more likely than men (52% vs 24%, $P < .05$) to have had a partner or spouse looking for work when considering their current practice. Most (54%) respondents to a question about outreach to the spouse or partner reported that the community provided no assistance to the spouse or partner. The most common type of assistance provided was finding employment (28%) and social involvement (19%), with no significant difference by gender of physician recruit.

Men and women did not differ with regard to description of or perceived fairness of the recruitment negotiation process or their negotiation behavior. Women were more likely than men to have discussed part-time work (38% vs 14%, $P < .05$) and family leave benefits (15% vs 4%, but not statistically significant). The most common methods of obtaining information about the practice opportunity (not shown in a table) were networking

Table 2. Current Practice Characteristics Among Rural Generalists Recruited to the Rural Northwest, Compared by Gender.

Practice Characteristic	Percent of All Respondents (n = 114)	Percent of Men (n = 77)	Percent of Women (n = 37)
Location of principal practice, by state			
Alaska	15	20	5
Idaho	15	16	14
Montana	21	18	27
Oregon	16	14	19
Washington	19	18	22
Wyoming	14	14	14
Current medical specialty			
Pediatrics	5	4	8
Internal medicine	9	8	11
Obstetrics-gynecology	8	4	16
General practice-family practice*	79	85	65†
Practice organization			
Solo	19	20	19
Single-specialty group	47	51	38
Multi-specialty group	27	23	35
Employed, other	7	7	8
Income basis‡			
Mean proportion salary	56	56	57
Mean proportion production	44	44	43
Employment status			
Self-employed or professional partner	48	49	46
Employed	52	51	54

*5% of men and 0% of women were general practitioners.
†$P < .05$ (difference between men and women).
‡Eight missing observations.

(20%), professional experience (eg, during medical school or residency) (16%), recruiters (14%), and outreach by medical practice (13%). Many respondents had sought out the practice on their own.

Practice Arrangements

Practice arrangements related to scheduling issues and benefits are shown in Table 4. Among the 91 participants who answered questions related to total work hours (direct patient care plus other professional roles), 22% (16% of men and 34% of women) worked fewer than 40 hours per week. A minority, 42% (52% of men and 21% of women), worked more than 50 hours a week (not shown in a table). The mean number of hours per week for the respondent group as a whole was 43 hours in direct patient care (44.4 hours for men, 38.5 hours for women, $P < .05$,) and 3.5 hours in other professional roles (4.2 hours for men, 2.2 hours for women, $P < .05$). Regression analysis showed marital status and number of children were not predictive of number of hours worked for either men or women (not shown).

Responses to items about recruitment package details showed an average after-hours call load of 8 weeknights per month and 28 weekend days per year (no significant differences between men and women). Physicians who worked more hours per week also tended to spend more hours on call, regardless of gender (not shown). There were no significant differences between men and women with regard to insurance and retirement benefits offered when respondents were choosing their practices.

Recruitment Process

Responses to open-ended items regarding aspects of the recruitment process are summarized in Table 5. The most frequent type of comments, in descending order, were related to the following: (1) community-related factors, eg, setting, economic base, population characteristics, schools; (2) facility and practice (more influential for men; ranked second for men and fourth for women), eg, practice structure, work schedule; and (3) colleagues, eg, competence, skills, personalities, level of trust.

The most frequent reasons for not choosing other practices overall were related to community, colleagues, and facility and practice, in that order.

Table 3. Aspects of Recruitment Described by Rural Generalists Successfully Recruited to the Rural Northwest, Compared by Gender.

Aspect of Recruitment	Percent of All Respondents (n = 114)*	Percent of Men (n = 77)	Percent of Women (n = 37)
1. Position before current practice			
Training	41	40	43
Another primary care practice	36	40	27
Another type of position	23	20	30
2. Mean number of years spent in previous practice	4.8	5.8	2.8†
3. Partner or spouse looking for work when considering current practice	31	24	52‡
4. Efforts made to recruit spouse or partner			
Assistance finding employment	28	26	31
Social involvement	19	22	13
Little or no effort made	54	52	56
5. Respondent description of negotiation			
Accepted what was offered	51	51	53
Negotiated for more but ended up accepting what was originally offered	9	7	13
Negotiated for more and ended up with more than originally offered	38	41	31
Negotiated for more but ended up with much more than originally offered	2	1	3
6. Ratings of fairness of practice package			
Not at all fair	9	8	9
Moderately fair	45	40	55
Very fair	47	51	36
7. Discussed working part time	22	15	38‡
8. Discussed family leave benefits	8	4	15

*Missing aspect of recruitment observations: 11 for aspect 2, 31 for aspect 3, 13 for aspect 4, 5 for aspect 5, 9 for aspect 6, 4 for aspect 7, 7 for aspect 8.
†$P < .001$.
‡$P < .05$ (difference between men and women).

Men ranked facility and practice as more influential than colleagues, whereas women placed negative practice and financial arrangements before facility and practice as reasons why they did not choose other practices.

Recruitment strategies respondents thought to be most successful were, in descending order, (1) good interpersonal communication (especially for women: 44% offered such a comment vs 31% of men, $P < .05$), eg, friendliness, level of interest shown by those involved in recruiting; (2) highlighting the positive aspects of the practice, eg, conveying a sense of priorities, flexibility in scheduling; and (3) offering financial incentives, eg, salary, benefit, and loan forgiveness. For women, highlighting the community was given more often as a successful recruitment strategy than financial incentives.

Among the comments provided regarding the least successful recruitment strategies, the most common type of comments were (1) poor interpersonal communications, eg, lack of interest shown toward potential recruit, high-pressure sales techniques; (2) unsatisfactory financial offers; and (3) poor recruiting style, eg, disagreements among practice partners during meetings, inadequate efforts to show candidate around the community. Women mentioned unattractive structure or content as often as they did unsatisfactory financial offers.

The following were the most common kinds of advice to others trying to recruit physicians.

1. Cultivating good recruitment relationships (especially for female recruits: 63% of them cited such comments vs 33% of men, $P < .05$). A common theme in this category related to honesty and integrity regarding the workload and professional climate and follow-up on promises. Other common examples of advice offered, especially by women, were the need for involvement of the spouse and family and flexibility regarding scheduling.
2. Offering attractive practice arrangements, eg, balance between professional and nonprofessional life.

Table 4. Practice Schedule and Benefits Offered to Rural Generalists Successfully Recruited to the Rural Northwest, Compared by Gender.

Practice Arrangements	All Respondents (n = 114)*	Men (n = 77)	Women (n = 37)
1. Hours per week in direct patient care (mean)	43	44	39*
2. Hours per week in other professional roles (mean)	3.5	4.2	2.2*
3. Total hours per week (mean)	46	49	41†
4. Week nights on call in typical month (mean No.)	8	8.4	7.9
5. Weekend days on call per year (mean No.)	28	28.2	28.3
6. Offered disability insurance (%)	44	45	40
7. Offered health insurance (%)	77	78	74
8. Offered retirement plan (%)	58	58	57

*Missing observations: 19 for arrangement 1, 31 for arrangement 2, 19 for arrangement 3, 8 for arrangement 4, 11 for arrangement 5, 1 for arrangement 6, 2 for arrangement 7, 2 for arrangement 8.
†$P < .05$ (difference between men and women).

3. Emphasizing the strengths of the medical community, eg, putting recruits in contact with key medical leaders, highlighting autonomy of the rural practice, and emphasizing the availability of backup support, as well as offering attractive practice arrangements.

Of these three categories of advice, women discussed financial incentives and a good medical community the least but also recommended emphasizing the qualities of the community and involving the family and spouse.

In the section of the questionnaire listing specific influential aspects of recruitment (summarized in Table 6), the most influential factors for the respondent group as a whole related to community setting, recreation, and practice relationships, variety, schedule, and content issues. Women were more likely to consider the following factors to be highly influential during recruitment: flexible scheduling opportunities ($P < .0001$), opportunities for spouse or partner ($P < .01$), and availability of childcare ($P < .01$).

Discussion

In this regional study of all AMA-listed, newly recruited physicians to small towns in the Northwest, women were significantly more likely than men to attribute more importance to opportunities for their partner or spouse, the availability of childcare, and such temporal factors as flexible scheduling and part-time work. These results parallel those of past research showing that women in rural practice are more interested than men in opportunities for their spouse or partner.[21] Similarly, women in academic medicine tend to have personal partners of similar educational levels, to move to accommodate partner career relocation, and to carry the major responsibility for household management.[22] In addition, general practitioners' job dissatisfaction correlates with conflict between professional and personal life,[23] an issue that flexible scheduling and availability of childcare would partially mitigate. Past studies have found a close association between gender and preferred practice arrangements. Women in rural practice are significantly more interested than men in flexible hours.[21,24–26]

In our study, it was difficult to measure the difference in recruitment packages in terms of time off, because many of the respondents in this study were self-employed and thus would likely have considerable control over their schedules. Women did work fewer hours than men overall (41 hours vs 49 hours, $P < .002$) and were less likely than men to put in extremely long hours. Women were more likely than men to rank flexible scheduling and part-time schedules as more important, as reflected in their reported work hours.

An unexpected widespread finding was part-time schedules among recent rural recruits, especially women. Whereas most worked at least 40 hours per week, a significant proportion (22%) of respondents, 24% of women and 16% of men ($P < .01$), were working fewer than 40 hours per week. One study in Quebec found that between 1978 and 1988 the number of total hours worked per week decreased by 2 hours for younger physicians and male physicians but did not decrease for female physi-

Table 5. Most Frequent Comments Regarding Recruitment from Generalists Successfully Recruited to Rural Northwest, Compared by Gender.

Recruitment Comment Type	Percentage of Respondents Mentioning Factor		
	All (n = 114)	Men (n = 77)	Women (n = 37)
Top reasons for choosing current practice rather than others (112 respondents):			
Community related	83	86	78
Facility and practice related	31	34	25
Colleagues	27	25	31
Content and structure	17	12	28
Top reasons for not choosing other practices (81 respondents):			
Community related	67	70	59
Colleagues	33	30	41
Facility and practice related	27	32	19
Practice arrangements	23	15	41*
Most successful recruitment strategies (74 respondents):			
Good interpersonal skills	61	52	82*
Effectively highlighting practice	30	31	27
Financial incentives	26	27	23
Highlighting community	23	21	27
Least attractive aspects of the recruitment efforts by communities or practices considered (45 respondents):			
Poor interpersonal relationships	42	46	33
Unsatisfactory financial offer	27	27	25
Poor recruitment style	22	24	25
Advice for rural practices trying to recruit physicians (84 respondents):			
Cultivate good recruiting style	42	33	63*
Offer attractive financial package	33	40	17
Offer attractive practice arrangements	27	28	25
Emphasize good medical community	27	30	21
Emphasize qualities of community	19	17	25
Involve family and spouse	13	8	25

*$P < .05$ (difference between men and women). Chi-square comparing percentage of each gender mentioning each influence as opposed to other influences.

cians. This study also found that the ratio of female-to-male hours increased among general practitioners and pediatricians but decreased among internists and obstetricians, suggesting that the gender-related convergence in hours worked is specialty dependent.[27] It appears that many rural practices are able to provide a great amount of flexibility in scheduling.

Several other factors might discourage women, more than men, from joining a rural practice. These factors include negative collegial interactions[28] and cultural, social, and professional isolation.[26] Comments from respondents in our study reflected many of these same concerns. Responses to open-ended items about attractions and deterrents to choosing a practice and successful and unsuccessful recruitment techniques showed that interpersonal factors, both within the practice and among community members, were particularly important in the recruitment process. Such factors as relationships with practice partners and variety of clinical experiences were important for both men and women.

Although this study showed no correlation between gender and the influence of practice choice on the opportunity to do clinical procedures, there was a trend for women to be less interested than men in the procedural content of practice, and others have concluded that women are relatively less interested than men in doing procedures.[14]

Attention to acquainting the potential recruit to the strengths of the community and practice, as well as creating supportive practice arrangements, both financial and administrative, is very important. A surprising number of comments described awkward recruiting techniques that undermined the

Table 6. Percentage and Rank of Factors Successfully Recruited Rural Northwest Generalists Rated as Very Important in Their Recruitment, Compared by Gender.

Factor	All Respondents (n = 114)*		Men (n = 77)		Women (n = 37)	
	Percent	Rank	Percent	Rank	Percent	Rank
Good relationship(s) with practice partners	80	1	76	2	88	1
Variety of clinical experiences offered	78	2	83	1	68	3
Attractive physical setting	69	3	72	3	63	6
Recreational opportunities	67	4	70	4	61	7
Reasonable call schedule	63	5	61	5	69	2
Opportunity to practice general obstetrics	60	6	57	8	65	5
Access to high-quality hospital	58	7	60	6	53	9
Opportunity to control work environment	56	8	54	9	59	8
Wide range of clinical procedures	55	9	59	7	44	13
Opportunity to provide a needed service	50	10	51	10	49	11
Potential to have a full patient schedule	49	11	51	11	44	15
Opportunity to perform cesarean section	45	12	43	13	50	10
Good relationship(s) with hospital administration	44	13	45	12	43	16
Access to high-quality consultants	41	14	42	14	38	18
Other family-related issues (eg, good school system)	40	15	39	15	44	13
Flexible scheduling opportunities (eg, part-time, flexible hours)	38	16	25	17	66†	4
Opportunities for spouse or partner‡	34	17	26	16	58§	12
Attractive benefits package	24	18	22	18	27	21
Opportunity to teach	21	20	17	21	29	20
Community efforts to recruit spouse or partner‡	22	19	17	22	39	17
Proximity to extended family	20	21	18	20	24	22
High income potential	18	22	20	19	15	26
Opportunity to take leadership role	17	23	16	23	19	24
Opportunity to repay educational loans	16	24	16	24	15	25
Family leave opportunities	13	25	9	26	23	23
Proximity to urban area	12	26	13	25	10	27
Availability of child care‖	10	27	3	27	33§	19

*Missing values: <10 missing for factors 1–5, 7–11, 13, 14, 22, 23; 11–20 missing for factors 15, 16, 18, 19, 21, 25, 26; 20 missing for factors 17, 20.
†$P < .001$.
‡Of respondents indicating they were married or partnered.
§$P < .01$.
‖Of 51 respondents indicating they had children living at home and for whom the question was otherwise applicable.

recruitment efforts of the practices or communities. Women, in particular, valued interpersonal communication as a successful recruitment strategy.

The limitations of this study include the low number of respondents, especially women (and the associated lack of statistical power), the regional nature of the study, and reliance on respondents' recall of reasons for past decisions. At the same time, this study surveyed the universe of physician generalists recently recruited to practices in the rural Northwest. The AMA database indicated a number of newly recruited physicians who, according to our follow-up, were not practicing in these rural towns. It is possible that those inaccuracies in the database also led to underascertainment of recruited male and female physicians in some of the small towns we studied. Slightly less than 40% of physicians did not respond to our survey instrument. Although we would have preferred a higher response rate, there is no reason to believe that nonrespondents, in aggregate, would respond differently from respondents.

The validity of this study is limited by the lack of a comparison group that was not successfully recruited to rural areas. Unfortunately, we were unable to include physicians who considered small-

town practices but opted for practices in larger communities and those who did locate in rural areas but left their practices by 1999. It would be of great interest in future studies to survey these populations. In addition, the survey instrument was created from multiple interviews and content of related studies, but it was not formally validated. The AMA database does not include all physicians in rural practice. It might omit physicians who are transient, eg, doing locum tenens work or hourly work, but nevertheless represent important aspects of the rural physician workforce. Despite the limitations of this study, its findings contribute to the understanding of an issue likely to assume more importance as women make up increasing proportions of physicians completing residency training.

In summary, our findings suggest that with careful preparation and coordination of recruitment plans, communities, practices, and recruiters can improve their chances of successful recruitment for rural practices of a gender-balanced mix of physicians. Efforts to encourage more women to enter rural practices will fall short if practice models attractive to women are not offered and if recruitment methods and packages do not accommodate and attract women and their families. Communities are more likely to recruit female physicians successfully if they address spouse-partner, childcare, and scheduling issues during the recruitment process and if they strive for effective interpersonal communications regarding important aspects of the community and practice. Although such factors are also important for men, they might be more influential for women.

Recruitment is only the first step in ensuring an adequate rural workforce of both male and female providers. Equally important is retention of providers once recruited, which requires further study so that rural areas can recognize the features that will maintain a gender-balanced provider workforce.

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