The Changing Face of Access to Family Physician Services in Rural Florida

Nir Menachemi, PhD, MPH; Curtis Stine, MD; Art Clawson, MS; Robert G. Brooks, MD

Objectives: This study’s purpose was to determine whether access to services performed by Florida family physicians in rural areas is changing and whether the recent changes in the availability or cost of professional liability insurance may be influencing service provision. Methods: We conducted a survey of all family physicians in rural Florida, asking about changes in health care services and procedures provided, insurance coverage and premiums, satisfaction with practice, and plans for future practice. Results: Of the 204 respondents, 96 (49.5%) indicated that they have decreased or eliminated some health care services during the last year. Overall, 69.8% decreased or eliminated vaginal deliveries, 66.2% Cesarean sections, 56.6% endoscopies, 50.9% hospital-based surgeries, 50.7% emergency room coverage, 40.8% office-based surgeries, and 33.6% mental health services. Malpractice premiums increased a mean of 98.5%. Difficulty with finding or paying for insurance was listed as an important factor both by those reducing or eliminating services and by those planning to leave the community within the next 2 years. Conclusions: Access to some services provided by family physicians in rural areas is decreasing and may be influenced by recent changes in professional liability insurance costs and other factors in Florida. Given the number of states currently experiencing similar insurance cost changes, access to health care in rural areas may be affected nationwide.

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the past year. To examine the effect of factors that may influence physician practice patterns, we also included questions regarding insurance coverage and premiums, professional satisfaction, and plans for future practice.

Methods

The current report is part of a larger study\(^9\) that surveyed all rural physicians (n=1,965) in Florida. The results presented here are from respondents in the larger study who specifically indicated that they spend the majority of their time practicing family medicine (n=407). A list of all rural physicians was obtained from the Florida State Department of Health, which maintains practitioner information for state license requirements. We identified rural physicians by their practice addresses meeting any of the following three rural criteria: (1) the 33 statutorily designated rural counties in Florida, (2) rural areas of non-rural counties as designated by the Rural Urban Commuting Area (RUCA) codes\(^10\) and (3) the current Health Resources and Services Administration list of defined Florida rural zip codes.\(^11\) These three sources were used to capture an accurate and broad sampling of rural physicians in the state.

Surveys were mailed from May through July of 2003. The survey included questions on physician and patient demographics, the physicians’ training and practice scope, recent changes in services offered, insurance premium changes, satisfaction with practice, and future practice plans. The cover letter explained the purpose of the study and asked the physicians to participate. The protocol was approved by the Florida State University (FSU) institutional review board, and the mailing and data entry were conducted by the FSU Survey Research Laboratory.

After the first mailing, a number of surveys were returned as undeliverable, primarily because of unknown or changed addresses or incorrect practice location. Numerous efforts were made to obtain updated mailing information, and surveys were mailed again to those whose updated practice location was still in a rural location. Surveys were tracked by unique serial numbers, and participants who did not return a survey after 4 weeks were mailed a second copy of the survey with a different cover letter urging their participation.

We calculated descriptive statistics and tested for differences among groups using SPSS\(^{®}\) version 11.5 (SPSS Inc, Chicago). To test for statistically significant differences among groups, we used independent sample \(t\) tests for continuous variables and contingency tables using chi-square analysis for categorical data. In all analyses, significance level was considered at \(P \leq .05\).

Results

Among family physicians, 407 surveys were ultimately believed to have reached their intended participants, and 204 of those were returned (participation rate of 50.1%). Compared to all other physicians in the larger study, family physicians responded at a slightly higher rate. Rates of participation for the other specialties (in the larger study) were internal medicine (37%), pediatrics (52%), obstetrics-gynecology (58%), general surgery (41%), surgical specialties (50%), medical specialties (32%), emergency medicine (44%), psychiatry (40%), radiology (32%), anesthesiology (20%), and other (27%).

Demographic and practice characteristics of the 204 family physician respondents are shown in Table 1. Overall, the mean age of respondents was 50.5 years (range: 27 to 79). Seventy-eight percent were male; 138 (70.1%) were Caucasian, 26 (13.2%) Asian, 11 (5.6%) African-American, 8 (3.9%) Hispanic, and 14 (7%) were of another race/ethnicity or unknown. Physicians had been in their current practice community for a mean of 11.8 years (range: <1 to >50 years). Ninety-four percent of respondents stated that they accept new private pay patients, 91% accept new Medicare patients, and 55% accept new Medicaid patients.

Changes in Health Care Services

Overall, 96 (49.5%) responding physicians stated that they had decreased or eliminated patient services within the last year. Trends in a select group of these health care services are outlined in Table 2. Elimination of services was particularly frequent with regard to pregnancy-related services, 69.8% decreased or eliminated vagi-

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Table 1

Demographics and Practice Characteristics of Family Physician Respondents

<table>
<thead>
<tr>
<th>Demographics of respondents</th>
<th>Age: mean (range)</th>
<th>50.5 (27–79)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (male)</td>
<td>146/188 (78%)</td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>138 (70.1%)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>26 (13.2%)</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>11 (5.6%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>8 (4.1%)</td>
<td></td>
</tr>
<tr>
<td>Other (or unknown)</td>
<td>21 (7.0%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practice characteristics</th>
<th>Mean years in practice (range)</th>
<th>11.8 (&lt;1 to &gt;50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient race/ethnicity (mean)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>70.0%</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>22.0%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.4%</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>Other/unknown</td>
<td>1.6%</td>
<td></td>
</tr>
</tbody>
</table>
nal deliveries, and 64.8% eliminated Cesarean sections. Family physicians who indicated that they decreased or eliminated deliveries were significantly older (53.6 versus 45.7 years) than family physicians who added deliveries or continued performing them ($t=2.76, P=.007$).

Hospital-based surgeries were decreased or eliminated by 40.8% of the respondents, and an additional 50.7% reported decreasing or eliminating emergency room work. Likewise, office-based surgeries were decreased by 28.4% and eliminated by 12.4% of the 169 responding family physicians. In addition, of the 92 respondents who performed endoscopies, 12% decreased and 44.6% eliminated these procedures from their practice.

When the physicians who decreased or eliminated any services were asked “To what extent has the difficulty with finding or paying for medical liability insurance played a role” in change in service delivery, 83 (84%) stated either “a lot” or “some.” Only 7 (7.1%) said it had very little influence, and 9 (9.1%) said it had no influence on the change in services.

Our analyses of changes in health care services also examined potential differences between small isolated rural communities and larger rural towns. No statistically significant differences were detected, suggesting uniform overall decreases in services regardless of the rural community size.

### Professional Liability Insurance

#### Coverage and Premiums

Overall, 180 (90.5%) of the family physicians surveyed stated that they currently carried PLI. When asked about the percent change in their PLI premiums in the last year, 132 family physicians responded. Their mean increase in premiums was 98.5% (standard error=14.4). When assessed by distribution, 50% of physicians saw at least a 50% increase, 25% saw at least a 100% increase, and 10% saw at least a 244% increase in premiums in the last year. Overall, changes in PLI premiums were not significantly associated with reduction or elimination of services except in the case of office-based surgeries. When comparing the family physicians in the lowest and highest quartiles of premium increases, those who were in the highest quartile were significantly more likely to decrease office-based surgeries, while those in the lowest quartile were significantly more likely to increase office-based surgeries ($\chi^2=9.36, P=.025$).

### Satisfaction and Plans for Future Practice

When asked about satisfaction with their current medical practice, 37 (18.6%) family physicians stated that they were “very satisfied,” 72 (36.2%) were “somewhat satisfied,” 35 (17.6%) were “neutral,” 39 (19.6%) were “somewhat dissatisfied,” and 16 (8.0%) were “very dissatisfied.” Those who stated that they were “somewhat dissatisfied” or “very dissatisfied” with their current medical practice were significantly more likely to have indicated that they had decreased or eliminated services ($\chi^2=15.76, P<.001$) and generally had higher (but not statistically significant) mean PLI increases.

When questioned about plans for continuing to practice in their current community, 23 (12.0%) stated that they would be leaving within 2 years, and 45 (23.4%) stated they would be leaving within 2–5 years. For those physicians who stated they would be leaving within the next 2 years, 39.1% stated it was because of practice issues, 17.4% for early retirement, 13.0% for planned retirement, and 13.0% because of family reasons. Further, when these family physicians were asked “To what extent has the inability to find PLI played a role in your decision to leave practice in your community?” 34.8% stated “a lot,” and 39.1% stated “some.” When the same group was asked “To what extent has the inability to pay for PLI played a role in your decision to leave practice in your community?” 65% said “a lot” and 8.7% “some.” Physicians who indicated that they were dissatisfied with their medical practice were more likely to indicate that they were planning to leave within the next 2 years; however, this difference was not statistically significant ($\chi^2=3.47, P=.062$).

### Table 2

<table>
<thead>
<tr>
<th>Service</th>
<th>Number of Respondents</th>
<th>% Increased</th>
<th>% Unchanged</th>
<th>% Decreased</th>
<th>% Eliminated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal deliveries</td>
<td>76</td>
<td>1.3</td>
<td>28.9</td>
<td>6.6</td>
<td>63.2</td>
</tr>
<tr>
<td>Cesarean sections</td>
<td>71</td>
<td>1.4</td>
<td>32.4</td>
<td>1.4</td>
<td>64.8</td>
</tr>
<tr>
<td>Endoscopies</td>
<td>92</td>
<td>5.4</td>
<td>38.0</td>
<td>12.0</td>
<td>44.6</td>
</tr>
<tr>
<td>Hospital-based surgeries</td>
<td>106</td>
<td>1.9</td>
<td>47.2</td>
<td>6.6</td>
<td>44.3</td>
</tr>
<tr>
<td>Emergency room coverage</td>
<td>142</td>
<td>7.7</td>
<td>41.5</td>
<td>14.8</td>
<td>35.9</td>
</tr>
<tr>
<td>Mental health services</td>
<td>143</td>
<td>12.6</td>
<td>53.8</td>
<td>17.5</td>
<td>16.1</td>
</tr>
<tr>
<td>X rays</td>
<td>141</td>
<td>16.3</td>
<td>60.3</td>
<td>7.1</td>
<td>16.3</td>
</tr>
<tr>
<td>Office-based surgeries</td>
<td>169</td>
<td>10.7</td>
<td>48.5</td>
<td>28.4</td>
<td>12.4</td>
</tr>
<tr>
<td>Vaccine administration</td>
<td>160</td>
<td>13.8</td>
<td>58.8</td>
<td>13.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Pap smears</td>
<td>172</td>
<td>12.2</td>
<td>71.5</td>
<td>13.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Electrocardiograms</td>
<td>170</td>
<td>15.9</td>
<td>77.1</td>
<td>5.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

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*Table 2: Family Medicine Trends in Health Care Services: 2002–2003*
Discussion

For many rural Americans, access to basic health care services is already difficult. Access is limited by geographic, economic, and other factors associated with rural life. This well-known difficulty with access to care led us to study whether physicians were increasing or decreasing their services in Florida’s rural areas. The results of the current study suggest that Florida residents living in rural areas will find it more difficult to obtain health services and procedures from family physicians. This is particularly true for both hospital- and office-based procedures and surgeries and especially for pregnancy-related services and deliveries.

Nearly half of family physician respondents stated that they have decreased or eliminated services within the last year. Further, certain procedures and services appear to be particularly affected. For example, most of the rural family physicians who indicated that they performed pregnancy-related services stated that they had decreased or eliminated both vaginal and Cesarean deliveries. This raises important questions regarding how these women, some of whom live in isolated communities, will receive prenatal and delivery care in the future. Questions raised by these findings included whether women residing in rural areas will be forced to travel significant distances to receive pregnancy care and, if so, whether this adversely affects clinical outcomes.

Emergency room coverage is another important service that was reduced or eliminated by half of responding family physicians. This decrease could result in delayed access to emergency services by rural residents. Previous studies have shown that significant delays in obtaining emergency medical services has a negative impact on survival from myocardial infarction and other emergency medical conditions. Clearly, more research is needed to identify how rural emergency departments are compensating, if at all, for the decrease in coverage we found in our study.

Almost half of respondents indicated that they are not accepting new Medicaid patients. This trend could severely influence the ability of Medicaid recipients, made up primarily of the elderly and indigent, to receive health services or have an ongoing source of care. Additionally, since the Medicaid population also includes many high-risk pregnant women, this issue will compound the problem of decreasing the pregnancy care services discussed above.

The changes in service delivery identified by the current study also have important implications for the financial viability of rural hospitals and surrounding rural areas. Rural hospitals already face declining reimbursements. With loss of revenue from eliminated or decreased services, these hospitals will likely experience additional financial strains, interfering with their ability to serve their community. These hospitals are often major employers and provide a number of other economic benefits to the towns they serve. Should these trends persist, job loss and economic hardships are likely.

Previous studies have also demonstrated a relationship between the decline or elimination of services by family physicians and a decline in their professional satisfaction. The results of the current study seem to confirm these earlier findings as well. More than two thirds of those who reported planning to leave their community within the next 5 years attributed either “a lot” or “some” of that decision to their inability to find or pay for PLI. Unless significant relief from the current PLI climate can be achieved, it is unlikely that satisfaction will improve with respect to this issue, and critical workforce shortages could occur.

Limitations

Several limitations of the current study have been identified. First, the survey response rate of 50% may have resulted in bias, particularly if those physicians who did not change practice patterns, and/or had lower premium increases, chose not to respond. Additionally, self-reported data may be biased—particularly if respondents know or can assume what the instrument or study intends to measure. Other limitations, consistent with survey research, include respondents’ willingness and ability to respond to individual survey questions and respondents’ desire to give correct answers. Lastly, the practice environment and PLI situation in Florida may be unique, and the results of this study should, therefore, be generalized, with caution, to other states that have different practice environments and PLI situations.

Conclusions

In conclusion, the present study provides evidence that a number of important procedures and surgeries are being decreased or eliminated by family physicians who practice in rural communities. There is at least indirect evidence to suggest that difficulties with finding, or paying for, PLI may be playing a role in the change in at least some of these services. The service areas where the decline or elimination of services was largest (eg, vaginal and Cesarean deliveries, emergency room coverage, and surgical services) are services that typically increase a physician’s risk of being sued for malpractice. Although other factors such as changes in reimbursement for services, an aging physician workforce, and local market characteristics may also be playing a role in service change, further work is warranted to determine whether PLI increases are causative and whether reforms in the liability system will positively influence the current negative trends in service availability in rural areas.
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REFERENCES