

# SATISFACTION WITH PRACTICE AND DECISION TO RELOCATE: AN EXAMINATION OF RURAL PHYSICIANS

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## Executive Summary

There has been longstanding concern about the ability of rural communities to retain physicians. Although the relationship between physician availability and access to care is not clearcut (Berk, et al., 1984), a number of studies reflect concern about physician supply in rural areas and the potential impact on access to health care (COGME, 1998; Hart, et al., 2002; Carson, et al., 2003). In fact, approximately one-fifth of the U.S. population resides in rural areas, yet rural physicians account for only about one-tenth of practicing physicians in the country (COGME 1998; UNC Center for Health Services Research). While the Federal government has created incentives to bring physicians to rural areas, such as the National Health Service Corps program and the reformed Medicare and Medicaid payments to physicians practicing in rural areas, physician retention is still a problem and previous studies have correlated retention to satisfaction. This study examines physician satisfaction with various aspects of practice and its association with decisions to continue or discontinue practicing in a rural location.

Included in this study were the administrations of two surveys of a cohort of rural physicians: one in 1993, comprised of 3 components, funded by the Robert Wood Johnson Foundation and one in 2003 administered by the Walsh Center and funded by the Federal Office of Rural Health Policy. The 2003 survey sample cohort included all the physicians sampled in 1993 that were in the under the age of 40 component along with all the physicians in the general population component who were under the age of 40 in 2003. Overall, 87 percent of the physicians selected for the 2003 sample were located; of those physicians located and deemed eligible for survey (96%), 140 (48%) responded. In each of the two surveys, physicians were asked to rank dissatisfaction with selected aspects of practice with a five-category scale that ranged from very satisfied to very dissatisfied. Questions were also included about other life satisfaction issues. A determination was made, based upon the zip code of the physician's practice, as to whether he or she had moved to a less rural geographic area based upon Rural-urban Continuum code classifications. A few conclusions apparent from the data included:

- The most common aspects of rural life and practice to be dissatisfied about were access to cultural activities, amount of person time away from work, earnings from main practice, and access to continuing medical education opportunities.
- Physicians who reported being dissatisfied with their earnings in 1993 were significantly more likely than those who were satisfied to move to an urban practice by 2003.
- Physicians who moved from rural to urban practices showed a significant decrease in the percent that were dissatisfied with access to cultural activities, from 90 to 29 percent.
- Physicians who moved from rural to urban practices also showed a statistically significant decrease in percent who were dissatisfied with the earnings from their main practice, from 71 to 39 percent; physicians who continued to practice in rural areas increased from 45 percent of the group being dissatisfied to 52 percent being dissatisfied.
- Physicians aged 33 or younger in 1993 were more likely to move to an urban practice by 2003 than their older counterparts.

The findings illustrate the formidable obstacles facing policymakers who want to increase physician supply in rural areas. While there are a number of characteristics about rural practice associated with high dissatisfaction they are generally not associated with decisions to move from rural practice. One of the primary exceptions is physician earnings; clearly this is amenable to policy intervention

through payment rates but this issue has been extensively explored elsewhere. Additional longitudinal research with a larger sample should be done that would allow for examination of subgroups such as physician by specialty and degrees of rurality.

## Background

There has been longstanding concern about the ability of rural communities to retain physicians. Although the relationship between physician availability and access to care is not clear cut (Berk, et al., 1984), a number of studies reflect concern about physician supply in rural areas and the potential impact on access to health care (COGME, 1998; Hart, et al., 2002; Carson, et al., 2003). This study examines physician satisfaction with various aspects of practice and its association with decisions to continue or discontinue practicing in a rural location. The study findings are based on one of the only national longitudinal surveys ever conducted of rural physicians in which physicians were surveyed in 1993 and then were re-interviewed ten years later. In addition to the 1993 and 2003 survey data, practice location data for 2007 were used to extend the length of time over which relocation decisions were observed. The study examines satisfaction with key components of practice life in rural areas to address three critical questions:

- 1) What aspects of practice were most likely to be sources of dissatisfaction for rural physicians?
- 2) What types of dissatisfaction were associated with decisions to move to less rural communities? and
- 3) How do physicians' expectations about moving or remaining in a rural area compare with their actual practice location decisions?

Concern about the ability of rural communities to ensure local access to high-quality medical care stems from the fact that approximately one-fifth of the U.S. population resides in rural areas, yet rural physicians account for only about one-tenth of practicing physicians in the country (COGME 1998; UNC Center for Health Services Research). On average, rural communities have 53 primary care physicians and 54 specialists per 100,000 population, while urban residents have access to physicians at a much greater rate--an average of 78 and 134, respectively (Reschovsky, 2005). Indeed, non-metropolitan areas account for nearly 70 percent of all federally designated Health Professional Shortage Areas (HPSAs), which are characterized by a ratio of 1 physician to a population of 3,500. The Federal government has recognized the shortage issue and has enacted several programs aimed at enticing physicians to serve in rural underserved areas and providing these physicians with incentives to stay--the National Health Service Corps, enacted in 1971, offered physicians scholarships or loan repayment in exchange for service in medically underserved areas. While it places more than half of NHSC physicians in non-metropolitan counties (LaRavia et al., 2002), this program falls short in encouraging physicians to remain in the area after their NHSC services have ended (Pathman et al. 1992, Cullen et al., 1997, Holmes 2004).

Problems of attracting physicians to rural areas may be mitigated to the extent that rural communities are able to retain physicians who have chosen to practice there. To this end, Federal programs have targeted physician retention directly, and these efforts have focused on reimbursement to rural physicians. Specifically, provisions in Medicare and Medicaid provide higher reimbursement rates to physicians practicing in rural communities and rural HPSAs. Though these provisions have been in place for years, the Medicare Modernization Act of 2003 included two

additional provisions—a bonus payment for HPSA physicians and a floor to the geographic adjustment of the physician work component of Medicare physician fee schedule—that increased payments to nearly all rural physicians, whether practicing in a HPSA or not (Reschovsky, 2005).

Despite implementation of various policies designed to help overcome or compensate for urban-rural differences, a shortage of physicians in rural areas has persisted. Thus, from a policy perspective, it is important to understand the factors that influence both recruitment and retention of physicians in rural areas. Several studies have examined the first issue—recruitment—and have found that rural background, training in family medicine, osteopathic training, and training at medical school with a rural focus or rural curriculum are all associated with the decision to go into rural practice (LaRavia et al., 2002). The few studies that specifically examine retention have been limited to comparison of subgroups of the rural physician population and have not been definitive. One study found that rural NHSC physicians were less likely to remain in rural practice than their non-NHSC rural counterparts (Pathman et al., 1992). Another study found no significant differences in retention between practicing rural HPSAs and those in rural non-HPSAs (Pathman et al., 2004).

While limited work has been done to examine retention, over the years several studies have examined rural physician satisfaction, generally assumed to be a correlate of retention. These studies suggest that rural physicians are, in general, satisfied with the personal relationships, clinical autonomy, and medical practice challenges that rural medicine affords (Minarick, 2003). Areas of dissatisfaction include the long hours and lack of free time, strong community and patient demands, increased responsibility for administrative decisions, and lack of access to urban amenities, cultural opportunities, and continuing education although salary was not empirically associated with physician dissatisfaction (Minarick, 2003; Pastor et al., 1989). One recent study has shown that although rural physician salaries are somewhat lower than urban ones, they provide, on average, about 13 percent more purchasing power when local cost of living is taken into account (Reschovsky, 2005).

Few studies have examined physicians' decisions to relocate from a rural area to an urban one dynamically. A study conducted by Pathman et al. (1996) found that, among a group of physicians who moved to rural areas between 1987 and 1990, rural physician retention was independently associated only with satisfaction with their community and opportunities to achieve their professional goals. Satisfaction with earnings was also mildly predictive of rural retention. Only one known study has examined the accuracy of rural physicians' predictions about their retention plans (Pathman, Konrad and Agnew, 2003). The Pathman et al. study (2003) found through a survey and follow-up survey conducted five years later that the physicians surveyed were generally accurate in their predictions about whether they would stay in a rural area.

These studies provide an important glimpse into the factors driving rural physician retention; however, significant gaps remain in our understanding of the effects of rural physician self-reported satisfaction on the decision to relocate and whether relocation actually makes dissatisfied rural

physicians more fulfilled. The study discussed in this report is an attempt to fill an important gap in the literature on rural physician satisfaction and retention.

## Methods

In conducting this study of physician satisfaction and the relationship to retention, it was important to use a panel design that reflected physician attitudes over a relatively lengthy time period. Data for this study came from two surveys of a single cohort of rural physicians. For the purposes of the study, rural physicians were defined as those physicians practicing in counties not contiguous to a Standard Metropolitan Statistical Area (SMSA), based on the Rural-Urban Continuum Codes, a classification scheme developed by the U.S. Department of Agriculture.<sup>i</sup>

The first survey (“the 1993 survey”) was funded by the Robert Wood Johnson Foundation and had three components—a national general probability sample of rural physicians (n=800), a small sample of rural physicians under age 40 (n=300), and a sample of “crisis shortage area” physicians serving in non-MSA counties with the lowest per-capita physician rates (n=501). Of the 1,601 physicians surveyed, we achieved an overall response rate of 59.2 percent, with individual response rates of 57.9 percent, 59.3 percent, and 61.1 percent for the general, young physician, and crisis area samples, respectively.

The second survey, the Walsh Center’s 2003 Survey of Rural Physicians (“the 2003 survey”), was funded by the Federal Office of Rural Health Policy using a cohort of over 300 physicians who were eligible for the 1993 survey. The 2003 sample cohort included all physicians sampled in the 1993 young physician survey and all physicians in the 1993 general population survey who were under age 40 in 2003. Overall, Walsh Center staff were able to locate 87 percent of the physicians in the 2003 sample using a variety of sources including electronic Yellow Page listings, Lexis-Nexis and telephone calls (the remaining physicians were determined to be non-locatable by standard search procedures). Of the physicians who were located in 2003, approximately one-third had moved their practice from the county of practice a decade earlier, just under two-thirds were still practicing in the same county as 1993, and the remaining approximately 4 percent were deemed ineligible for the survey because they were no longer providing direct patient care. There were 140 respondents to the 2003 survey, for a response rate of about 48 percent.

To further augment understanding about physicians’ practice location decisions, information on practice location was traced for the 140 physicians that responded to both the 1993 and 2003 surveys. For these physicians, Walsh Center staff once again used a variety of sources including electronic Yellow Page listings and Internet sources to determine whether the practice location had changed between 2003 and the end of 2007.

In each of the two surveys, physicians were asked to rank dissatisfaction with selected aspects of practice using a five-category scale in which they could answer very satisfied, satisfied, neutral, dissatisfied, or very dissatisfied. The surveys included several factors related to medical practice, including the quality of doctor-patient relationships, whether the physician had access to consultants for referrals, opportunities for continued medical education, and so on. Questions also were

included about other life satisfaction issues, such as personal time away from work, opportunities to enjoy outdoor activities, and access to cultural activities such as nice restaurants and theater. A physician was considered to have moved from a less rural geographic area based on a comparison of the zip codes in which a physician was practicing in 1993 and 2003; as in the initial sample definitions, physician practice locations were classified as rural or urban based on Rural-Urban Continuum codes. It should be emphasized that our concept of move focuses exclusively on rural-urban mobility. A physician who moves from one rural community to another is not considered a mover for purposes of this study.

## Findings

Table 1 shows the percent of physicians who were *not* satisfied with aspects of rural life and practice when they were surveyed in 1993. While the majority of physicians were satisfied with most aspects of practice and rural life, there were clearly areas of concern. About 73 percent of physicians were not satisfied with cultural activities such as theaters and restaurants and almost two-thirds were not satisfied with the amount of personal time away from work. Half of physicians were dissatisfied with earnings from their main practice and an equal percentage noted concern about their access to continuing medical education opportunities.

<b>TABLE 1. RURAL PHYSICIAN SATISFACTION WITH SELECTED ASPECTS OF PATIENT CARE AND PRACTICE ENVIRONMENT, 1993, AND PHYSICIAN MOVES TO URBAN AREAS, 2003</b>		
	<b>Percent Not Satisfied, 1993</b>	<b>Of Those Not Satisfied in 1993, Percent Moved to Urban, 2003</b>
Access to cultural activities	73.3%	28.8%
Amount of personal time away from work	64.7	24.0
Earnings from main practice	50.4	35.4
Access to continuing medical education opportunities	50.0	18.9
Opportunities to achieve professional goals	42.5	28.9
Access to current medical literature	37.1	23.5
Access to consultants for referrals	27.4	21.2
Opportunities to enjoy outdoor activities	25.0	32.7
Degree of acceptance by other physicians in the rural community	16.3	32.1
Quality of doctor-patient relationships	14.1	36.7

Satisfaction was higher for certain other indicators. While access to referrals often is cited as a problem in the delivery of rural care (Hart et al., 2003; Hartley et al., 1998; Rosenblatt and Hart, 1999), we found only 27 percent of rural physicians were not satisfied with this aspect of practice. Less than one-fifth of physicians were dissatisfied with the degree of acceptance by other physicians in the community or with the quality of doctor-patient relationships.

We also looked at the probability that physicians who were dissatisfied with selected aspects of patient care and the practice environment in 1993 would move to an urban practice by 2003. Column 1 of Table 1 depicts the percentage of physicians who were dissatisfied with a particular factor in descending rank order, while column 2 shows the likelihood of moving associated with the same factor. Of interest, there appears to be no discernible pattern between the two columns. For example, while 73 percent of rural physicians were dissatisfied with access to cultural activities, less than 29 percent of those who expressed dissatisfaction moved. Conversely, while only 14 percent of physicians were dissatisfied with the quality of the doctor-patient relationship, almost 37 percent of those who were unhappy with this element of practice relocated to an urban area.

The relationship between reported satisfaction in 1993 and subsequent practice moves is further examined in Table 2, which shows those aspects of the environment where the highest percentage of those who were dissatisfied moved.

<b>TABLE 2: SATISFACTION AND LIKELIHOOD OF MOVING TO AN URBAN PRACTICE</b>			
	<b>Satisfaction in 1993</b>	<b>No. of physicians</b>	<b>Percent moved by 2003</b>
<b>Access to Cultural Activities</b>			
	Satisfied	50	18.0%
	Not satisfied	139	28.8%
<b>Amount of Personal Time Away from Work</b>			
	Satisfied	68	29.4%
	Not satisfied	121	24.0%
<b>Earnings from Main Practice*</b>			
	Satisfied	92	15.2%
	Not satisfied	96	35.4%
<b>Access to Continuing Medical Education Opportunities*</b>			
	Satisfied	99	32.3%
	Not satisfied	90	18.9%

\* Indicates difference in likelihood of moving for two groups is statistically significant at .05

For two of the four aspects of environment shown in Table 2, the likelihood of moving to a more urban practice location is higher for those who reported initial dissatisfaction. About 29 percent of physicians who were not satisfied with their access to cultural activities, such as theaters and restaurants, had moved by 2003, compared to 18 percent of those who were satisfied with rural cultural activities. The variable with the strongest association with moving is whether or not the physician was satisfied with practice earnings. Those who were not satisfied were more than twice as likely to move, with 35 percent moving compared to about 15 percent of rural physicians who were satisfied with their income. There was an interesting and unexpected association between satisfaction with medical education and the probability of moving. Those who were satisfied with their medical education activities were actually *more* likely to move to less rural areas—32 percent of

this group moved compared to about 19 percent of those who were not satisfied. We did not collect data on the details of their experience with medical education opportunities. Unlike most of the other indicators, medical education is less tied to the geographic practice location--many rural physicians might obtain continuing education in urban areas so those expressing satisfaction with medical education were not necessarily satisfied with the resources available locally in their rural community and they might, in fact, have found superior education opportunities in the communities they moved to.

<b>TABLE 3: COMPARISON OF SATISFACTION BETWEEN MOVERS (N=31) AND NON-MOVERS (N=105)</b>		
	<b>Percent Not Satisfied 1993</b>	<b>Percent Not Satisfied 2003</b>
<b>Access to Cultural Activities</b>		
Moved Less Rural *	90.3%	29.0%
Same or More Rural	75.2%	69.5%
<b>Amount of Personal Time Away from Work</b>		
Moved Less Rural	54.8%	51.6%
Same or More Rural	66.4%	67.3%
<b>Access to Continuing Medical Education Opportunities</b>		
Moved Less Rural *	41.9%	16.1%
Same or More Rural *	54.3%	33.3%
<b>Earnings from Main Practice</b>		
Moved Less Rural *	71.0%	38.7%
Same or More Rural	44.9%	52.3%

\* Indicates change in satisfaction between 1993 and 2003 is statistically significant using McNemar test

We also examined whether levels of satisfaction changed after moving (see Table 3). For two of the four indicators examined, physicians who moved to more urban areas had increased levels of satisfaction. Physicians who moved to more urban areas appear to have found cultural activities they liked—the level of dissatisfaction was 90 percent in 1993 and 29 percent in 2003, while only a small difference was seen among those who stayed. As noted earlier, dissatisfaction with earnings was the major predictor of relocation to a less rural practice. It appears that moving was associated with changes in levels of satisfaction between 1993 and 2003 among those who moved to a less rural practice. We found that 71 percent were not satisfied with their incomes in 1993 but only 39 percent were not satisfied in 2003. There was no significant change in satisfaction levels of those who remained in rural practice with 45 percent expressing dissatisfaction in 1993 compared to 52 percent in 2003. However, when access to continuing medical education is examined, we find that irrespective of the decision to move, physicians practicing in rural areas in 1993 were more likely to be satisfied with their educational opportunities in 2003. Those who moved to a less rural area were less than half as likely to be dissatisfied ten years later; 42 percent of movers were dissatisfied with their educational opportunities in 1993 while only 16 percent were not satisfied in 2003. Comparable differences, however, were found among those who stayed in rural areas. About 54

percent were not satisfied in 1993 while only 33 percent were not satisfied in 2003. Changes in satisfaction level, therefore, did not appear to be associated with changes in practice locations.

<b>TABLE 4. PHYSICIAN DECISION TO MOVE BY SELECTED CHARACTERISTICS</b>			
<b>Selected Physician Characteristics, 1993</b>	<b>Number of Physicians</b>	<b>Percent Moved Urban or Metro Adjacent</b>	<b>Percent Stayed Rural</b>
ALL	191	25.7%	74.3%
<b>Age</b>			
Ages 33 or Younger	56	39.3%	60.7%
Ages 34 to 39	135	20.0%	80.0%
<b>Career Satisfaction</b>			
Not Satisfied	44	40.9%	59.1%
Satisfied	143	21.7%	78.3%
<b>Practice Arrangement</b>			
Employee	58	39.7%	60.3%
Solo/group practice, full or part owner	118	17.0%	83.0%

In addition to those practice characteristics examined above, Table 4 provides information on other factors that are associated with the decisions of rural physicians to re-locate to more urban areas or remain in a rural area. Moving was clearly correlated with the physician's age; not surprisingly, physicians at a more mature stage in their career in 1993 were less likely to move than younger physicians. About 61 percent of younger physicians in rural practice remained in rural practice 10 years later whereas 80 percent of those in the 34-to-39 cohort were still practicing in rural localities. Not surprisingly those who were satisfied with their careers were more likely to stay with almost 78 percent remaining in rural practice. We also found that employees were more likely to move than those who were owners of a practice. This was expected since ownership generally involves a long-term commitment and employees would find moving easier than those who need to sell or close a practice.

<b>TABLE 5: RURAL PHYSICIANS: EXPECTATIONS ABOUT MOVING COMPARED TO ACTUAL MOVE RATES</b>		
<b>Expectations as of 1993</b>	<b>Number of physicians</b>	<b>Percent who moved to more urban practice by 2003 *</b>
Expect to move within 10 years	53	43%
No set expectation	31	39%
Expect to stay	107	13%

\* Of the 31 physicians with no set expectation about moving, 39 percent moved to a more urban practice.

We also examined physician perceptions about whether they would stay in rural practice. In 1993, approximately one-quarter of physicians (n=53) expected to move within 10 years while over half (or 107) expected to stay in rural practice. The remaining 17 percent had no set expectation about where they would be located ten years later.

As expected, those who said they would stay in a rural setting were very likely to remain--only 13 percent moved to an urban area. The converse, however, was not true; only 43 percent who expected to leave rural practice did so. While those who expected to move to an urban area were more likely to do so than those who expected to remain in a rural setting, the majority of those who expected to move within ten years did not in fact do so.

In December 2007 we updated our practice location data to observe mobility between 2003 and 2007 for all 140 of the physicians in both the 1993 and 2003 surveys. This allowed us to examine move decisions up to almost 15 years after the original survey. We wanted to see how many physicians moved from rural practice late in their career as well as the extent to which physicians who had moved away from rural practice decided to return to a rural locality. We expected to find a relatively small number of late movers as well as few returning from an urban practice back to a rural one. In fact, the extent of stability was surprising--we did not find a single physician who moved to an urban practice during the 10 to 15 year interval after the initial survey. Similarly none of those who did move during the earlier time interval subsequently moved back.

## **Conclusion**

The findings illustrate the formidable obstacles facing policymakers who want to increase physician supply in rural areas. While there are a number of characteristics about rural practice associated with high dissatisfaction they are generally not associated with decisions to move from rural practice. One of the primary exceptions is physician earnings; clearly this is amenable to policy intervention through payment rates but this issue has been extensively explored elsewhere.

Of note, we found that it was quite rare for a physician who expected to stay in rural practice not to do so. But even among those who expected to leave, a majority—57 percent—stayed in a rural practice.

Our study was relatively limited in scope; the small sample, while yielding unbiased estimates, nevertheless was incapable of supporting examination of smaller subgroups. It would have been useful to examine different physician specialties that are experiencing particular shortages in rural areas. We would also like to see separate estimates by different degrees of rurality. A larger sample combined with the longitudinal design employed here would help to clarify some of the issues that we have begun to explore.

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<sup>i</sup> <http://www.ers.usda.gov/briefing/Rurality/RuralUrbCon/> The Rural-Urban Continuum code is a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to a metro area or areas. The metro and nonmetro categories have been subdivided into three metro and six nonmetro groupings, resulting in a nine-part county codification. The codes allow researchers working with county data to break such data into finer residential groups beyond a simple metro-nonmetro dichotomy, particularly for the analysis of trends in nonmetro areas that may be related to degree of rurality and metro proximity.