Assessment of the Need for Relief Services by Rural Texas Family Physicians

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Abstract

Rural physicians must be away from their practice on occasion, whether to pursue continuing medical education, because of illness or other personal business, or to take a vacation. Yet many rural physicians find it difficult to leave their practice. This difficulty is cited anecdotally by rural physicians as one of the disadvantages to practicing medicine in a rural setting. Obtaining temporary coverage, or relief services, for their practice is problematic. Their inability to leave a practice temporarily, as needed, contributes to their sense of professional isolation and to long hours and job pressures, factors often contributing to a physician's decision to reject rural medical practice.

Because rural Texas has such a severe shortage of medical and health care personnel, an issue like relief services, that may affect recruitment and retention of these professionals, is of critical concern. The 196 nonmetropolitan counties in Texas are home to 15.8 percent of the state's residents, yet they contain 84 percent of the state's federally designated Health Professional Shortage Areas (TDH, 1994). Over 75 percent of Texas' federally designated Medically Underserved Areas or Populations—another measure of health service shortages—are located in the state's nonmetropolitan counties (TDH, 1994).

A Recruitment and Retention Issue

Relief or locum tenens (from the Latin meaning "one holding a place") services has been recognized as an important issue for rural physicians in

Texas. In 1987, the Texas Legislature created the Special Task Force on Rural Health Care Delivery in Texas, comprised of members appointed by the Texas Governor, Lieutenant Governor, and Speaker of the House, to investigate and make recommendations regarding rural health. The Special Task Force reported in 1989 that rural physicians across the state "...identified professional isolation as a difficulty of rural practice" and stated "it is difficult to pursue continuing medical education opportunities.... The need exists to develop programs to provide relief services to rural physicians....".

The Task Force's report led to the passage of the Omnibus Rural Health Care Rescue Act in 1989. This law created the Texas Center for Rural Health Initiatives (CRHI) and required it "...to develop relief services programs for rural physicians and allied health personnel to facilitate ready access to continuing education."

DEVELOPING STRATEGIES TO ADDRESS RURAL PHYSICIAN RELIEF SERVICES NEEDS

Since its formation in 1990, the Texas Center for Rural Health Initiatives has worked with other interested agencies and associations to identify and clarify relief services needs and to develop effective strategies to meet those needs. In 1991, the CRHI organized an ad-hoc committee with representation from state agencies, medical schools, and health related associations to advise the agency on development of a relief services program. This committee helped outline several program options and directed an initial needs assessment.

With the assistance of the Texas Higher Education Coordinating Board and the Texas Hospital Association, the ad-hoc advisory committee examined the need for relief services by mailing postcard surveys to 124 rural physicians. This initial data collection effort yielded information indicating a general need for relief services among rural physicians, primarily by solo practitioners. Of the 124 surveyed physicians, 94 responded to the postcard questionnaire. Of these, 59 (63%) reported having difficulty obtaining relief services, and 49 (52%) of those having difficulty reported that low-cost relief services would help them obtain needed continuing medical education. Of the physicians who indicated that such a program would help, 77 percent were solo practitioners.

The CRHI initiated two programs to address rural physician relief services needs. In 1992, the Texas Center issued a request for proposals for a relief services program. Using this method, the CRHI contracted with the University of Texas Medical Branch at Galveston, Department of Family Medicine, for a project in East Texas in 1993 and 1994. The CRHI is also developing a relief services registry listing physicians available to provide short-term coverage in rural communities. Rural physicians in need of relief services will be able to obtain the list of available physicians from the Center.

Although these initial program efforts have yielded important information relevant to alleviating relief services concerns, they have not yet resulted in a long-term program that can assure relief services for rural physicians on a statewide basis. The UTMB program covered only a portion of the state, and the listing service faces difficulty with recruiting a sufficient supply of physicians.

Survey Goals and Design

This study was designed to supplement the information from the earlier survey and the information from the development and implementation of the two relief services programs. Generally, its aim was to help determine if the problem is significant enough to warrant additional state attention and resources and, if so, to aid in identifying effective strategies to address the problem. The specific goals of the study were to:

1. measure the extent to which relief services is a problem for rural physicians;
2. clarify which aspects of leaving a practice temporarily are of most concern to physicians;
3. identify the location and characteristics of

physicians in greatest need for relief services; and
4. determine what physicians believe would help address their relief services needs.

Methodology

The survey was developed as a joint effort of the Texas Academy of Family Physicians (TAFP) and the Texas Center for Rural Health Initiatives, with the assistance of the Texas Department of Health (TDH). A four-page questionnaire was designed by the Center and reviewed by TAFP and other interested parties, including the University of Texas Medical Branch at Galveston.

Questionnaires were mailed to physicians who are the following:
1. employed in providing direct patient care;
2. specializing in family or general practice; and
3. practicing in one of the 196 nonmetropolitan Texas counties.

The Texas Department of Health, Bureau of Health Professions, supplied mailing labels for physicians in direct patient care. TDH obtains physician data from the Texas State Board of Medical Examiners, the licensure agency for physicians, and maintains the information as necessary for tracking. Family and general practitioners were selected for the study because they provide the

Figure 1

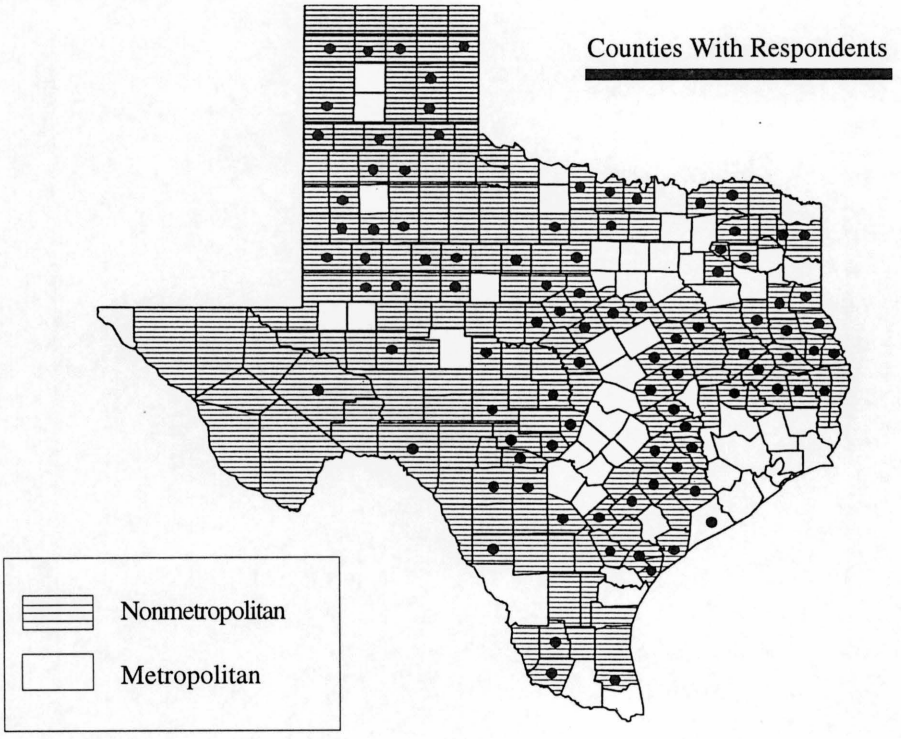
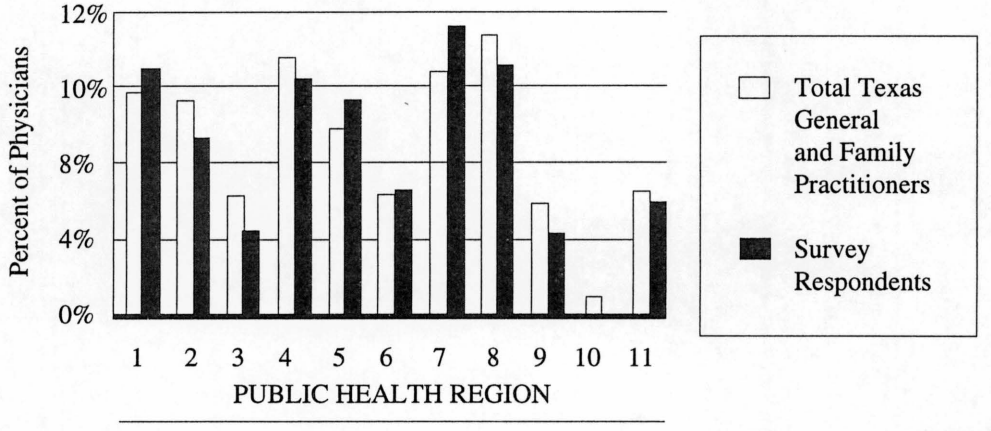


Figure 2

Distribution of Family and General Practitioners and Survey Respondents



greatest amount of generalist care in rural areas, representing most (approximately 69.4%) of the licensed primary care physicians in nonmetropolitan counties (Texas State Board of Medical Examiners, 1995). Physicians employed in correctional institutions or in the military were not surveyed.

A total of 905 questionnaires were mailed in mid-August 1994 under TAFP letterhead with a stamped, return envelope addressed to the CRHI. The Department of Sociology and Social Work, University of North Texas, tallied the results and provided statistical analysis.

RESULTS

Respondents

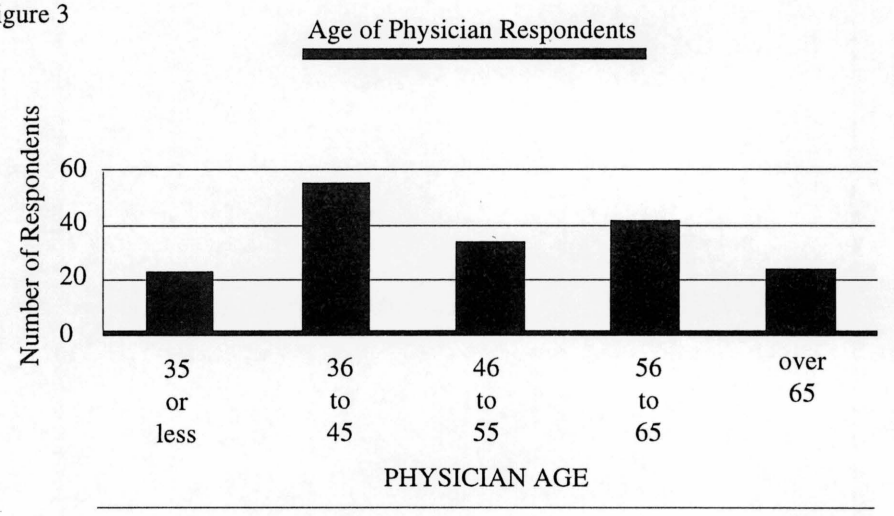
Of the 905 rural family and general practice physicians surveyed, 185 (20.4%) responded to the questionnaire. Respondents were located in 95 (46.3%) of the state's 196 nonmetropolitan counties, as illustrated in Figure 1.

The general distribution of respondents closely parallels the distribution of general and family practice physicians across the state, as Figure 2 shows. Respondents practice in 10 of the state's 11 Public Health Regions. Region 10, with no respondents, also has an extremely low proportion of these generalist physicians. Appendix A indicates the location of Texas' 11 Public Health Regions.

Over one-half of respondents (93 physicians, or 50.3%) are solo practitioners, and 64 (34.6%) are in a rural health clinic practice. Thirty-eight (20.5%) respondents are group practitioners, and two (1.1%) practice in a migrant or community health center. Nine respondents listed their practice type as "other." *

* Because physicians were able to select all applicable descriptors for their practice, numbers add to greater than 185, and percentages total over 100.

Figure 3



Physicians were asked (a) how long they have practiced in a rural setting and (b) how long they have practiced in the community in which they now work. On average, respondents have practiced as a rural physician for 17.1 years and have been located in their community for 15.8 years.

Over one-half of respondents (56.5%) are age 46 or older, although there were more respondents in the age 36 to 45 bracket than in any other bracket. Figure 3 demonstrates the responses of 177 physicians about age as the following: Twenty-two (12.4%) are ages 35 and younger; fifty-five (31.1%) are ages 36 to 45; thirty three (18.6%) are ages 46 to 55; forty-two (23.7%) are ages 56 to 65; and twenty-five (14.1%) are over age 65.

The average community population size for all respondents is 11,582, with half of respondents living in communities with populations of 8,000 or fewer.

PRIMARY MEASURE OF CONCERN WITH RELIEF SERVICES

Three measures were used to assess the level of rural physicians' concern about relief services. The primary measure was physicians' responses to the statement, "Relief services/coverage for my practice when I need to be away is an important issue and concern for me." A scale of 1 (strongly disagree/it is of no concern) to 5 (strongly agree/it is a major problem for me) was used. Physicians responding with a 4 or 5 to the statement are labeled as "high-concern."

Ninety-four physicians ranked their concern with a 4 or 5, representing 50.8 percent of all respondents. Twenty-nine physicians (15.7%) did not respond to this statement. The 94 high-concern physicians represent 60.2 percent of the 156 physicians who did respond to the statement.

Figure 4 illustrates the location of high-concern physicians, who practice in 62 (31.6%) of the state's nonmetropolitan counties. As Figure 5 indicates, Public Health Regions 1, 3, 5, 7, and 11 are disproportionately represented among high-concern physicians. Region 5 (in east Texas) and 7 (in central Texas) are particularly over represented. Region 5 accounts for 9.7 percent of general and family practitioners in Texas, 11.4 percent of respondents and 13.8 percent of high-concern physicians. Region 7 accounts for 12.9

Figure 4

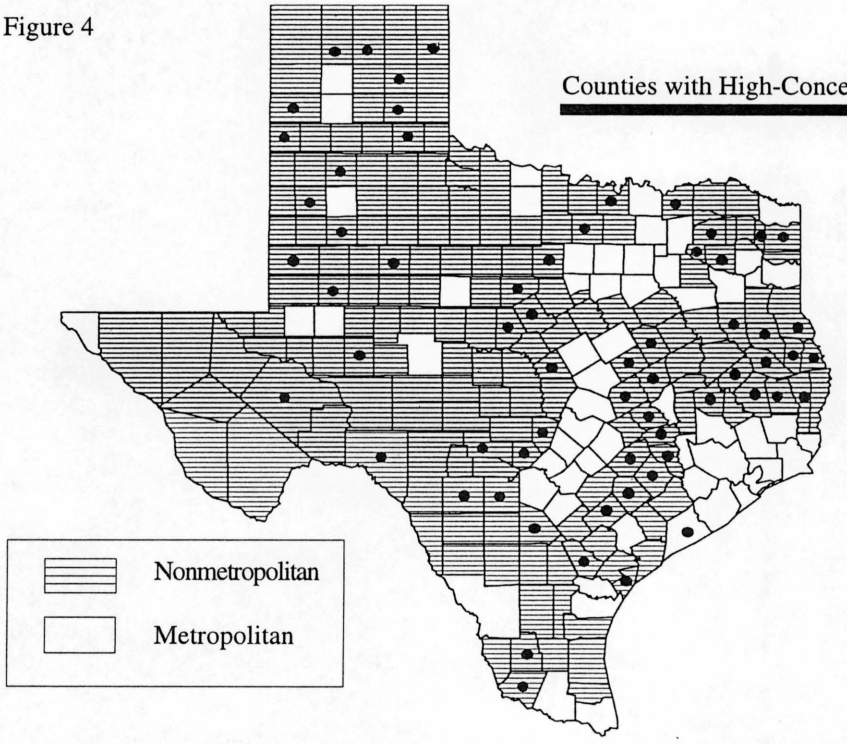
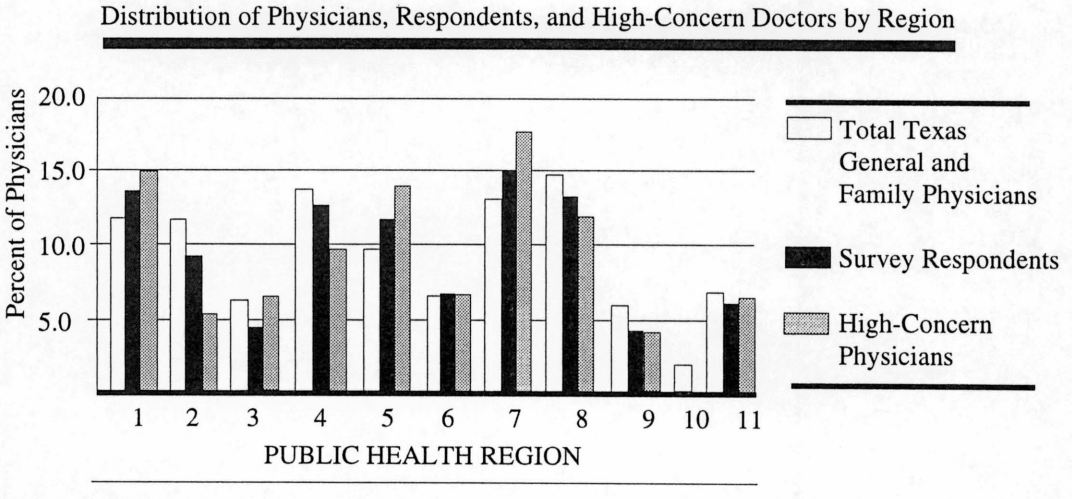


Figure 5



percent of Texas family and general practitioners, 15.1 percent of respondents and 18.1 percent of high-concern doctors.

Figure 6 compares the 94 high-concern physicians with all survey respondents according to community size, age, practice length, and practice type. Solo and rural health clinic practitioners are disproportionately represented among the 94 high-concern physicians. Solo practitioners comprise 52 percent of the total respondents, but 58.7 percent of high-concern physicians. Rural health clinic practitioners comprise 35.8 percent of the total sample and 39.1 percent of physicians with high-concern.

The average high-concern physician has practiced as a rural physician for 14.7 years and in his or her current community for 13.4 years. High-concern physicians practice in communities with an average population of approximately 11,232, with approximately one-half in communities with populations of 7,000 or fewer.

ADDITIONAL MEASURES OF CONCERN FOR RELIEF SERVICES

Two additional measures for degree of concern with relief services were used in the study. Physicians were asked to indicate whether or not,

Figure 6

Comparison of High-Concern Physicians to All Respondents

	All Respondents	High-Concern Respondents
Average Community Size	11,582	11,232
Number in Age Range (percent)		
35 or younger	22 (12.4%)	12 (13%)
36 to 45	55 (31.1%)	35 (38%)
46 to 55	33 (18.6%)	14 (15.2%)
56 to 65	42 (23.7%)	19 (20.7%)
over age 65	25 (14.1%)	12 (13%)
Average Practice Length		
As rural physician	17.1 years	14.7 years
In current community	15.8 years	13.4 years
Number by Practice Type (%)		
Solo	93 (52%)	54 (58.7%)
Group	38 (21.2%)	11 (12%)
Rural Health Clinic	64 (35.8%)	36 (39.1%)
Migrant/Community Health Center	2 (1.1%)	1 (1.1%)
Other	5 (9%)	4 (4.3%)

over the last two years, there had been at least one occasion when they did not leave their practice for needed time away because of their concerns about coverage for their practice. Of 181 respondents to this statement, 111 (61.3%) answered affirmatively.

As a third measure, physicians were asked which of seven programs, including temporary practice coverage, would enhance their medical practice. This question was designed to provide some indication of the level of importance placed on relief services as compared to other common rural medical practice-related concerns. A scale of 1 (would not enhance my practice) to 5 (would greatly enhance my practice) was used.

Figure 7 illustrates the proportion of both total and high-concern physicians who indicated, by ranking it with a 4 or 5, that each enhancement would aid their practice. Temporary practice coverage assistance ranked first of all options among both total and high-concern physicians when viewed this way. Seventy-nine (42.7%) of all physicians and 56 (59.6%) of high-concern physicians selected a 4 or 5 for temporary coverage. Physician recruitment assistance ranked a close second among the practice aids for all respondents, with 76 (41.1%) registering a 4 or 5. This enhancement also ranked second for high-concern physicians, with 45 (47.9%) of high-concern physicians registering a 4 or 5.

Means for each enhancement, as reflected in Figure 8, also confirm that practice coverage assistance ranks first, followed by physician recruiting aid and access to medical library services, for all respondents.

Although both sets of physicians generally ranked the aids in similar order, high-concern physicians responded more positively to serving as a medical training site than did respondents in general.

SPECIFIC RELIEF SERVICES CONCERNS

Respondents were asked several questions to assess the specific nature of their relief services concerns. First, physicians were asked to indicate their attitude towards eight issues related to relief services coverage. Respondents were asked to use a scale ranging from 1 (little or no concern) to 5 (very great concern).

Figure 9 shows the number and proportion of total and high-concern physicians responding with a 4 or 5 to each issue. Cost was of most concern to 63.7 percent of all respondents and 79.8 percent of high-concern physicians. Quality of relief services ranked second for both groups of physicians, with 58.3 percent of total respondents and 74.4 percent of high-concern doctors registering a 4 or 5 for this issue. High-concern respondents registered a higher ranking for access to relief services, with 64 (68.1%) using a high score for this issue compared with 90 (48.7%) of all physicians.

Mean scores for each issue for total respondents generally confirm this ranking, as Figure 10 illustrates. However, mean scores reflect a higher ranking for access to relief services above uneasiness about leaving practice to an unknown physician.

Physicians were also asked to indicate which specific relief services concerns accounted for their inability to leave their practice. Of the 111 respondents who reported that they were unable to leave their practice during the last two years because of relief services concerns, 88 (79.3%) indicated lack of access to relief services, 77 (70%) reported cost, and 70 (63.6%) reported quality as the reason they were unable to leave. Approximately 50 of these physicians (45.9%) reported that all three reasons accounted for their inability to leave.

Of the 76 high-concern physicians who did not leave their practice, 62 (82.7%) listed lack of access, 51 (68%) listed cost, and 45 (60%) listed quality as the reason for not leaving. Of these doctors, 32 (43.2%) reported that all three reasons accounted for their inability to leave.

Current Practice Coverage Arrangements

Respondents were asked to identify their current sources for temporary coverage by indicat-

Figure 7

Medical Practice Enhancements

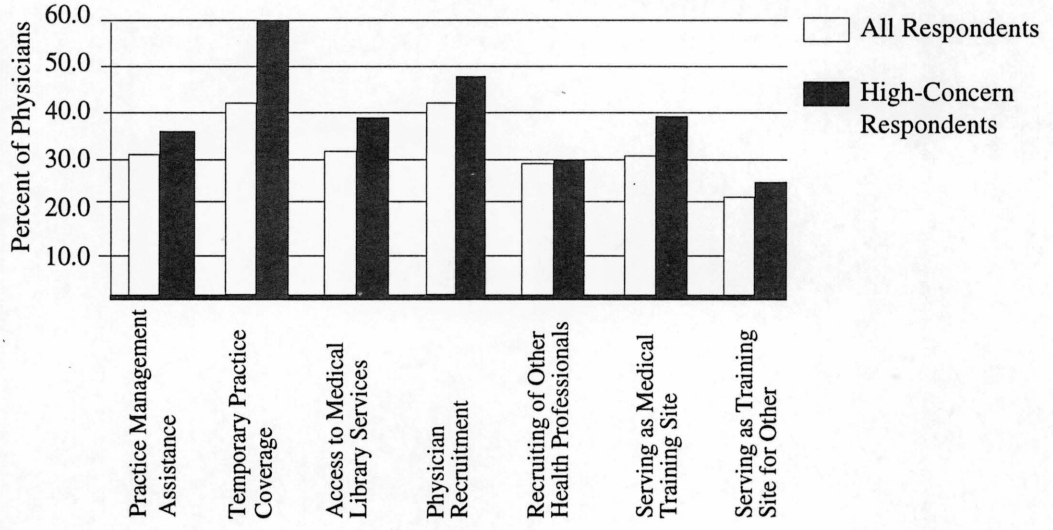


Figure 8

Mean Scores for Medical Practice Enhancements

	Mean Values	
	All Respondents	High-Concern Physicians
Practice Coverage Assistance	3.15	3.82
Physician Recruiting Assistance	3.10	3.38
Improved Access to Medical Library Services	3.01	3.36
Serving as Training Site for Medical Students/Residents	2.84	3.20
Recruiting Assistance for Non-physician Providers	2.79	2.87
Practice Management Assistance	2.76	3.01
Training Site for Non-physician Providers	2.59	2.83

Figure 9

Relief Services Concerns

Relief Services Issue	Total Respondents	Percent of Total Respondents	High-Concern Respondents	Percent of High-Concern Respondents
Cost	118	63.7	75	79.8
Quality of Relief Coverage	108	58.4	70	74.5
Loss of Revenue	102	55.1	59	62.8
Uneasiness about leaving practice to unknown physician	91	49.2	57	60.6
Access to relief physicians	90	48.6	64	68
Lack of information to help locate relief physicians	72	38.9	50	53.2
Uneasiness about leaving patients	71	38.4	42	44.7
Cultural Language Barriers	56	30.3	29	30.8

ing, for various potential relief services providers, whether each was never, rarely, sometimes, frequently, or always used.

Respondents generally used another physician in the community or physician partner to cover their practice. As Figure 11 indicates, 83 physicians (44.9%) reported that another physician in the community provides coverage either frequently or always, and 80 physicians reported using a physician partner frequently or always. Forty-eight percent of high-concern physicians frequently or always use another community physician, and 32 (42.7%) use a physician partner.

Only 14 physicians (7.6%) reported hiring a locum tenens provider either frequently or always. Twelve of these 14 physicians are high-concern doctors.

Forty-three physicians (23.2%), including 24 (25.5%) high-concern physicians, indicated that they frequently or always close their practice when they need to be away. Conversely, as Figure 12 reflects, 75 total respondents and 35 high-concern physicians rarely or never close their practice.

POTENTIAL SOLUTIONS

Physicians were asked to indicate which of three potential solutions would help most in addressing their relief services needs: lower costs, better familiarity with the temporary physician, or improved access to information about available relief physicians. Respondents rated each of these using a scale of 1 (would not help very much) to 5 (would greatly help).

Both total respondents and high-concern physicians most frequently cited access to information as most helpful. One hundred total physicians (54.1%), including 66 (70.2%) high-con-

Figure 10 Mean Scores for Relief Services Concerns

	Mean Values	
	All Respondents	High-Concern Physicians
Cost of Service	3.67	4.18
Quality of Service	3.64	4.18
Loss of Revenue	3.55	3.79
Lack of Access	3.29	3.96
Uneasiness Leaving Practice	3.29	3.68
Lack of Available Information	3.11	3.59
Uneasiness Leaving Patients	3.01	3.26
Cultural Language Barriers	2.75	2.95

Figure 11 Temporary Coverage Options Often Used

Frequently or Always Use Respondents	Total of Total	Percent Physicians	High-Concern Physicians	Percent
Physician Partner	80	43.3	32	42.7
Community Physician	83	44.9	45	48.0
Physician in Region	21	11.3	12	12.8
Hired Locum Tenens Physician	14	7.5	12	12.8
Practice Closed	43	23.2	24	25.5

cern physicians, responded with a 4 or 5 to this aid. Second, respondents cited better familiarity with temporary physicians, with 99 (53.5%) of the total and 62 (66%) of the high-concern physicians responding with a 4 or 5. Lower costs rated a 4 or 5 from 92 (49.7%) of all respondents and 59 (62.8%) of high-concern physicians.

Mean scores for total respondents, illustrated in Figure 14, indicate that access to information slightly exceeds both lower costs and better familiarity, the latter of which tied for second place.

One avenue for addressing relief services concerns is through medical school faculty and medical residents. Of all physicians responding to

an inquiry regarding these doctors as potential relief services providers, 134 (74.9%) would consider using medical school faculty and/or medical residents to cover their practice. Among high-concern physicians, 79 (85.9%) would consider using these physicians.

ANALYSIS AND PROGRAM IMPLICATIONS

This survey does not provide a complete picture of relief services needs. The response rate was low (approximately 20%), and only general and family practitioners were surveyed. Although these practitioners comprise nearly 70 percent of rural primary care doctors, results may have been different if other primary care physicians, including obstetricians/gynecologists, were included. Further, it is difficult to draw statistically verifiable conclusions given the relatively low numbers for high-concern physicians and physicians in each Public Health Region.

However, survey results do answer many of the questions posed by the study and allow important program-related conclusions to he drawn. First, it appears that relief services is an important concern for many rural family and general practitioners but not for an overwhelming majority. The 94 high-concern physicians represent slightly over one-half of the total respondents. If one assumes that interest in relief services was a prerequisite for responding to the survey, this number seems to indicate a relatively low level of interest or concern about relief services.

However, responses to other survey questions indicate that relief services is an important concern. In responding to inquiries about various medical practice enhancements, both total and high-concern physicians viewed assistance with temporary practice coverage as the most helpful of all suggested enhancements. Although this finding may, in part, confirm that physicians with an interest in relief services were more likely to respond to the survey, it also indicates a level of interest in relief services among an important segment of rural physicians.

Further, responses to inquiries about physicians' behaviors reveal that relief services has an impact on many rural physicians. Over 60 percent of all respondents have been unable to leave their practice when necessary at some time in the last two years.

Relief services issues also may have an important impact on rural communities. Results of the survey indicate that when physicians do

Figure 12

Temporary Coverage Options Rarely Used

Rarely or Never Use Respondents	Total of Total	Percent Physicians	High-Concern Physicians	Percent
Physician Partner	61	32.97	38	40.43
Community Physician	53	28.65	23	24.47
Physician in Region	100	54.05	51	54.26
Hired Locum Tenens Physician	102	55.14	46	48.94
Practice Closed	75	40.54	35	37.23

leave a practice temporarily, they may leave it unattended. Over 23 percent of respondents frequently or always close their practice when they need to leave, and one in four high-concern physicians do so. Although this does not represent a clear majority of physicians, it has serious health care access implications for small communities. With almost 60 percent of respondents appearing to have closed a practice because of lack of relief services, access to care can be severely, if only temporarily, restricted in areas where providers are already in short supply.

Although the vast majority of rural practitioners may not be greatly concerned with relief services, those that do register concern are greatly concerned. Most of the high-concern physicians (approximately 70%) registered a 5 rather than a 4 to indicate their level of concern about relief services.

Survey results also help to pinpoint a target for rural relief services programs. It appears that younger physicians are more likely be concerned with relief services than are older physicians. Physicians age 45 or younger comprise 43.5 percent of the total respondents, yet 51.1 percent of high-concern physicians. In particular, physicians in the age 36 to 45 bracket appear to be most concerned with relief services.

Physicians in small communities also appear to be more concerned with the issue. Although the

Figure 13

Potential Relief Services Solutions

Potential Solution	Total Respondents	Percent of Total Respondents	High-Concern Physicians	Percent High-Concern Physicians
Access to Information	100	54.1	66	70.2
Better Familiarity	99	53.5	62	66.0
Lower Costs	92	49.7	59	62.8

Figure 14

Mean Scores for Potential Relief Services Solutions

	Mean Values	
	All Respondents	High-Concern Physicians
Improved Access to Information	3.64	4.21
Better Familiarity	3.57	4.00
Lower Costs	3.57	4.06

average community size for total and high-concern physicians was similar, the median size for high-concern physicians was lower. Further, the relationship between community size and selecting access, cost and quality as relief concerns was significant for high-concern physicians, with physicians in small communities more likely to have these concerns.

Physicians in certain regions of the state may also be more affected by relief needs. Regions 1, 3, 5, 7, and 11 had a greater proportion of high-concern physicians than respondents. In particular, physicians in Region 7 (central Texas) and Region 5 (east central Texas) appear to have more concern with relief services than those in other parts of the state.

As earlier studies found, relief services is a particular issue for solo practitioners. Cross tabulations between practice type and selection of practice coverage assistance as a medical practice enhancement confirm this relationship. The relationship between selecting practice coverage and being a solo practitioner was significant, though weak, at the .05 level of significance. The relationship between this choice and group practice was inverse, but also significant, if weak, at the .05 level. Relief services also appears to be of special concern to rural health clinic practitioners, who are also over represented among high-concern physicians.

In questions relating to their specific concerns about relief services, rural physicians indicated that they are most concerned with cost and quality of services. In general, respondents ranked loss of revenue third. High-concern physicians ranked access to relief physicians third. Solo practitioners, according to cross-tabulation analysis, were more likely to select all of the relief concerns except cultural/language barriers and uneasiness about leaving a practice with an unknown physician. This finding simply confirms that solo practitioners are more likely to be concerned with relief services. Conversely, there was a weak, inverse, but statistically significant relationship between being a group practitioner and selecting any of the relief concerns.

When asked about the real effects of relief services—why they were unable to leave a practice due to relief services concerns—responses differed. Whereas cost and quality ranked first among all relief services concerns, access was the primary reason physicians gave for their inability to leave, with cost and quality second and third, respectively. It is likely that access in this case simply indicates that a physician was unable to find a doctor to provide temporary coverage and was, therefore, unable to leave.

Although access to information to help locate relief services ranked sixth among relief services concerns, it ranked first among the three potential solutions offered to address relief services needs. It is possible that physicians used access to information as a proxy for access to physicians in this question, since no potential solution directly related to improving access to physicians was offered. Cost and better familiarity with the relief physician (a measure of quality) were a close second and third.

The financial impact of relief services, including both cost and loss of revenue, quality of services, and access to information and/or physicians are closely ranked as both concerns and potential solutions. In fact, it is difficult to determine from the survey results whether any potential solution would help without the others or whether all are necessary. It does appear that all are equally desired by physicians, and that implementing programs that address all areas would go farthest in addressing the perceptions and real-world needs of rural physicians.

The lack of clarity regarding whether access to information or access to physicians directly is more desired complicates program planning. Common sense dictates that rural physicians would be more likely to want a physician than simply access to information about how to find one, but it may he that the information alone would also be helpful.

It does seem clear that the variety of needs may require a variety of programmatic approaches to fully address relief services needs. Based on the survey results, one avenue involves efforts to ad-

dress cost issues, either through subsidies or through discounted services. Because survey respondents were overwhelmingly interested in using medical faculty and residents to provide relief services, this avenue should also be explored. Use of these physicians offers a way to address quality and, likely, cost concerns as well as access issues.

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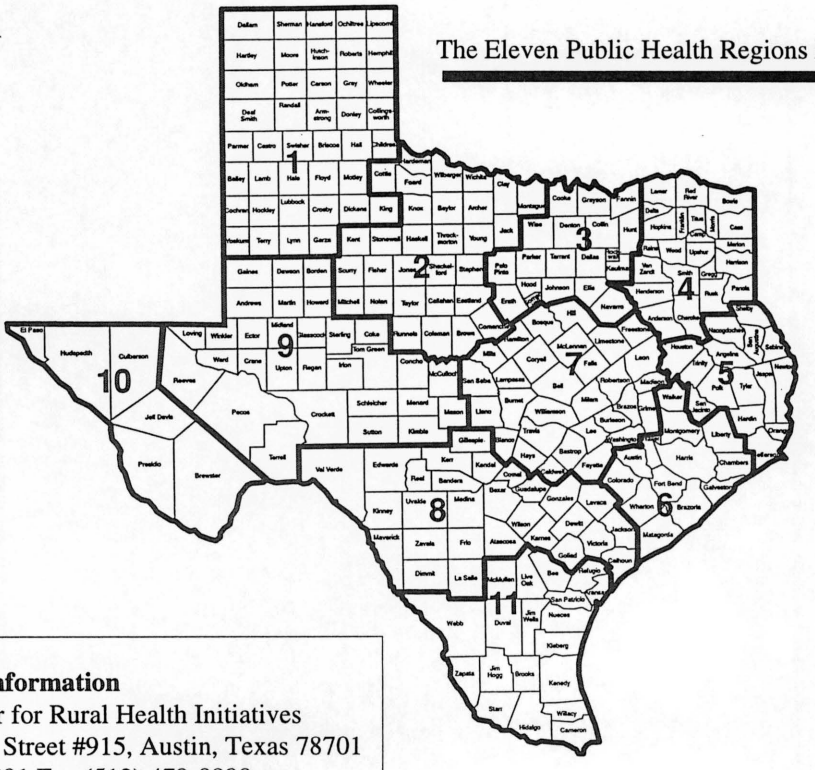
Appendix A

The Eleven Public Health Regions in Texas



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