

Barriers to healthcare as reported by rural and urban interprofessional providers

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Summary

The research literature is replete with reports of barriers to care perceived by rural patients seeking healthcare. Less often reported are barriers perceived by the rural healthcare providers themselves. The current study is an extensive survey of over 1,500 healthcare providers randomly selected from two US states with large rural populations, Alaska and New Mexico. Barriers consistently identified across rural and urban regions by all healthcare professionals were Patient Complexity, Resource Limitations, Service Access, Training Constraints, and Patient Avoidance of Care. Findings confirmed that rural areas, however, struggle more with healthcare barriers than urban and small urban areas, especially as related to Resource Limitations, Confidentiality Limitations, Overlapping Roles, Provider Travel, Service Access, and Training Constraints. Almost consistently, the smaller a provider's practice community, the greater the reports of barriers, with the most severe barriers reported in small rural communities.

Keywords: *Rural, urban, barriers to care, disparities*

Introduction

Optimal healthcare delivery, regardless of location, is technology-demanding, costly without economies of scale, and dependent upon a skilled workforce. These features of healthcare systems are difficult to satisfy, even in urban areas. In rural areas, these features, in combination with rural limitations, make development and maintenance of efficient and effective healthcare delivery difficult (Rosenblatt, 2001). Obstacles to optimal health care delivery in rural areas are diverse, encompassing factors that cannot be controlled (weather and terrain; e.g., Bull et al. 2001), that pertain to providers (training and experience; e.g., Wolff et al. 2001), that are directly related to the recipients (stigma, values, and attitudes; e.g., Brown & Herrick, 2002), and that are inherent to contextual features in rural life (unemployment or system fragmentation; e.g., Harding et al. 2000). The consequences are “deficits in (rural) resources for meeting health needs [that] are a powerful barrier to... high health-related quality of life” (Goins & Mitchell, 1999, p. 155).

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Challenges inherent in rural healthcare delivery have received increasing attention and acknowledgement as a health disparity issue of unique importance (cf., Geyman et al. 2001; Stamm, 2003). Given the large number of rural residents, namely, 59 million people in 2,000 counties (<http://factfinder.census.gov>), addressing this health disparity will be necessary to assure the future health of many citizens. A first step in the process is the identification of barriers faced by rural residents, a step that has been initiated and has shown that rural healthcare is made difficult by factors such as geographic isolation, transportation, economic instability, provider shortages, discontinuity or fragmentation of care, funding disadvantages, stigma, lack of education about prevention, resource limitations, and ethical challenges.

Less is known about perceptions of rural healthcare providers and much of the existing literature about rural healthcare challenges is limited by less than rigorous research designs. With regard to the latter, studies about rural barriers are based largely on anecdotal information, qualitative data, or small-sample surveys. Larger-scale studies that have been conducted have relied predominately on a dichotomized urban-rural distinction, a distinction that ignores the heterogeneity of community size. That is, a mere urban-rural dichotomy does not discern, for example, differences between a small rural community of 100 residents and a rural community of 2,000; nor does it differentiate a large urban area of two million from a smaller urban area of 50,000.

Although prior research has provided insights into barriers faced by rural residents, greater specificity is needed about perceptions of healthcare providers. The majority of studies to date focused on barriers from the perspective of patients. No large-scale study was found in the peer-reviewed literature that attempted an objective comparison of the distinct barriers as encountered by small rural, rural, small urban, versus urban clinicians. Our study refines information about rural barriers to healthcare through an extensive survey of healthcare providers randomly selected in two US states, Alaska and New Mexico. Our survey allowed for careful comparisons of barriers encountered in different environments by physical versus mental healthcare providers. We hypothesized that rural providers, regardless of state, would report more severe barriers than urban providers and that behavioral healthcare providers would report different barriers than physical healthcare providers. Further, we hypothesized that barriers would be most pronounced in smaller rural communities, regardless of provider or state.

Method

Participants

Participants were selected randomly from eight population pools in Alaska and New Mexico. Over 3,600 individuals were approached and surveys were received from 1,555 professionals, including, physicians, physician assistants, licensed nurse practitioners, registered nurses; psychiatrists, psychologists, social workers, and mental health counselors.

Instrument

The survey used was developed for a larger NIDA-funded study and based on extensive developmental qualitative work. Over the course of two years, 82 key informant interviews and 25 focus groups were conducted in Alaska and New Mexico to explore issues surrounding rural practice, issues of rural practice vis-à-vis ethics and stigma, and

issues of rural health disparities. Information was analyzed using qualitative analytic procedures for assessing themes, domains, issues, and items (Strauss & Corbin, 1998). The process was iterative, moving between data coding, analysis, and integration, with data used to build a systematic picture of phenomena. Analyses included open and axial coding procedures drawn from grounded theory (Strauss & Corbin, 1998) and analysis of narrative structures (Miles & Huberman, 1994) to create a grid of themes, domains, and contents.

Blending information from the qualitative work with extant literature, we developed many survey items within subsections related to the overarching qualitative analysis themes. This survey was pilot-tested and revised to include 10 parts. Of interest to this paper is Part IV of the survey, "barriers experienced in providing healthcare". Respondents were asked to indicate how often each of 40 items was a barrier to their ability to provide optimal healthcare in their community, on a scale from 0 (*never a barrier*) to 10 (*always a barrier*). Principal components analysis with orthogonal rotation of the 40 barriers items resulted in nine factors with eigen values over 1.0, accounting for 66.8% of the variance. Two items did not load significantly on any factor: provider-patient language differences and provider travel distance. Information about the factors, items, eigen values, coefficients alpha, and item factor loadings are shown in Table I. The nine factors and two individual items became the dependent variables in all analyses.

Procedures

Primary care physicians, psychiatrists, physician assistants, nurse practitioners, registered nurses, psychologists, social workers, and mental health counselors were identified from lists of licensed professionals obtained from their respective licensing boards in Alaska and New Mexico. Based on addresses, licensees were categorized as urban or rural and half of each profession was drawn from rural and half from urban areas. The final sample size was 3,695.

After receiving approval by the Institutional Review Boards at the University of Alaska Anchorage and University of New Mexico Health Sciences Center, survey procedures were implemented following the general recommendations of Dillman (2000). Specifically, the survey process began with preletters notifying potential participants that they would soon receive a survey. The preletters were followed two weeks later by primary survey mailings consisting of a cover letter, informed consent form, payment form, survey, and non-response form.

Relying on individualized code numbers for tracking purposes, reminder postcards were sent four weeks later to individuals who had returned neither a survey, nor a non-response form. A second complete survey packet was delivered two weeks after the postcard to remaining non-respondents, followed by a final reminder letter two weeks later. Respondents who returned a completed survey received \$50 compensation.

Independent variable development. A rural versus urban definition was derived using cluster analyses. Clustering resulted in four categories: communities with discrete or contiguous populations of over 35,000 were defined as *urban*; communities with discrete or contiguous populations of 15,000 to 34,999 as *small urban*; communities with discrete or contiguous populations of 3,500 to 14,999 as *rural*; communities with discrete or contiguous populations of fewer than 3,500 as *small rural*. The eight provider groups were collapsed into two groups: *physical healthcare providers* (physicians, physician assistants, licensed nurse practitioners, and registered nurses) and *behavioral healthcare providers* (psychiatrists, psychologists, social workers, and mental health counselors).

Table I. Factor analysis of potential barriers to care.

Factor name	Item	Factor loading	Coefficient alpha
Time constraints	Having to work at a pace that was not comfortable for <i>your clients/patients</i>	.85	$\alpha = 0.90$
	Having to work at a pace that was not comfortable for <i>you or your staff</i>	.83	
	Insufficient time to <i>fully discuss or explain</i> to clients/patients about their problem/illness or treatment	.83	
	Insufficient time to <i>fully learn about</i> client/patient characteristics, values, or preferences pertaining to their care	.80	
	Excessive practice demands on you that reduced your availability to clients/patients	.53	
Resource limitations	Limited provider <i>expertise</i> in the community for certain problems/illnesses	.85	$\alpha = 0.90$
	Limited access to consultants for <i>specialty areas</i>	.83	
	Limited <i>number</i> of other providers within the community	.80	
	Lack of appropriate treatment facilities in the community	.73	
	Limited access to consultants for <i>ethical issues</i>	.45	
Confidentiality limitations	Concern by clients/patients that staff member might breach their confidentiality	.79	$\alpha = 0.85$
	Staff or colleagues having access to sensitive records about your clients/patients	.78	
	Limited ability to assure confidentiality in the local community	.72	
	Legal or ethical requirements to report certain information about your clients/patients to outside authorities	.61	
Training constraints	Limited access to training to <i>increase your skills and abilities</i>	.84	$\alpha = 0.87$
	Limited access to training to <i>keep yourself up-to-date</i>	.83	
	Limited time/coverage to allow you to get <i>additional training</i>	.77	
	Limited time/coverage to have <i>down time or vacation</i>	.63	
	Staff members who were <i>not</i> sufficiently trained or experienced	.45	
Patient avoidance of care	Clients/patients who became <i>defensive</i> or avoided or prematurely terminated care	.76	$\alpha = 0.85$
	Clients/patients who avoided providing or withheld <i>necessary information</i>	.72	
	Clients who were concerned that seeking treatment or providing needed information for treatment might get them in <i>legal trouble</i> or trouble with <i>social services</i>	.69	
	Lack of support of <i>family or friends</i> for clients/patients	.56	
	Stigma or embarrassment that <i>clients/patients</i> experienced in the community if people had known of their problem/illness	.47	
	Client/patient fear of partner or spouse or family response if help was sought	.45	
	Distances that clients/patients needed to travel to receive <i>general care</i>	.81	
	Lack of access to transportation by clients/patients who needed to travel to receive <i>health care</i>	.75	
Service access	Distances that clients/patients needed to travel to receive <i>specialty care</i>	.73	$\alpha = 0.82$
	Inability of your clients/patients to afford treatment or care	.51	
Outsider role	Inability to learn more about <i>local values and customs</i>	.77	$\alpha = 0.72$
	Inability to consult <i>community leaders or elders</i> to increase your ability to provide care for your clients/patients	.66	
	<i>Your hesitance or discomfort</i> with talking about stigmatizing problems with your clients/patients	.57	

(continued)

Table I. (Continued).

Factor name	Item	Factor loading	Coefficient alpha
Patient complexity	<i>Substance abuse problem/addiction</i> that co-existed with another serious problem/illness	.84	$\alpha = 0.81$
	<i>Mental illness</i> that co-existed with another serious problem/illness	.81	
	Clients/patients' difficulty in understanding the links between their <i>behavior and their needed care</i>	.53	
Overlapping roles	Clients/patients seeking advice or help from you when you were in the community in <i>non</i> -professional settings	.76	$\alpha = 0.67$
	Having to interact in <i>non</i> -professional roles in the local community with your clients/patients present	.69	
	Client/patients desires to use <i>non</i> -standard or alternative treatment approaches	.43	
N/A	Having to care for clients/patients who were <i>not fluent</i> in a language in which you are fluent (and not having translators)	N/A	N/A
N/A	Distances that <i>you needed to travel</i> to provide care	N/A	N/A

Results

Response rates

The overall response rate was 52.2% (50.6% in Alaska; 53.7% in New Mexico). Of 3,695 mailed surveys, 222 were undeliverable, 488 were ineligible, 1,428 were nonrespondents, and 1,555 were completed. Rural rates were 49.8% ($n = 662$); urban rates were 54.1% ($n = 896$).

Of the respondents, 507 were men and 1048 women. Primary ethnic heritage was: 1249 (80.3%) White, 63 (4.1%), Native American, 27 (1.7%) Other, 19 (1.2%) African American, 19 (1.2%) Asian American, and 13 (0.8%) Alaska Native; 19 (1.2%) failed to respond; 146 (9.4%) individuals claimed Hispanic, Latino, or Spanish descent. The majority were married/living with a partner (1,158; 74.5%), followed by single (192; 12.3%), divorced or widowed (198; 12.7%) and unknown (7; 0.5%). Mean age was 48.9 years ($SD = 9.5$).

Primary data analyses

A multivariate analysis of variance with three independent variables of *Community Size* (urban, small urban, rural, and small rural), *State* (New Mexico and Alaska), and *Provider Discipline* (physical healthcare and behavioral healthcare) resulted in several significant effects. The overall MANOVA was significant for all main effects, namely, *Rurality*, *Discipline* and *State*; for all two-way interaction effects, namely *Rurality X Discipline*, *Rurality X State* and *Discipline X State*; but not for the three-way interaction. Table II shows all *F*-statistics and *p*-values.

Main effects. Of the 11 univariate analyses for the *Rurality* main effect, nine reached statistical significance. The analyses for Time Constraints and Patient Complexity were not statistically significant, revealing that *Rurality*, as a main effect, does not relate to how much time constraints or patient difficulty level contribute as barriers to care. All other dependent variables reached significance. Of the 11 univariate analyses for the *Discipline* main effect,

Table II. F-statistics and probabilities for the multivariate analyses of variance.

Factor scale or item	Rurality	discipline	State	Rurality X discipline	Rurality X state	Discipline X state	Rurality X discipline X state
Overall MANOVA	$F(3,4493) = 15.59$, $p < 0.0001$	$F(11,1525) = 42.07$, $p < 0.0001$	$F(1,1525) = 6.55$, $p < 0.0001$	$F(33,4493) = 2.33$, $p < 0.0001$	$F(33,4493) = 2.53$, $p < 0.0001$	$F(11,1525) = 2.35$, $p < 0.007$	$F(33,4493) = 1.30$, $p = 0.11$
Time constraints	$F(3,1535) = 0.12$, $p = 0.95$	$F(1,1535) = 5.10$, $p < 0.02$	$F(1,1535) = 1.91$, $p = 0.17$	$F(3,1535) = 0.63$, $p = 0.59$	$F(3,1535) = 1.03$, $p = 0.38$	$F(1,1535) = 8.18$, $p < 0.004$	$F(3,1535) = 0.44$, $p = 0.73$
Resource limitations	$F(3,1535) = 47.88$, $p < 0.0001$	$F(1,1535) = 56.42$, $p < 0.0001$	$F(1,1535) = 4.79$, $p < 0.03$	$F(3,1535) = 2.64$, $p = 0.048$	$F(3,1535) = 0.13$, $p = 0.94$	$F(1,1535) = 0.07$, $p = 0.80$	$F(3,1535) = 0.69$, $p = 0.56$
Confidentiality limitations	$F(3,1535) = 42.07$, $p < 0.0001$	$F(1,1535) = 15.11$, $p < 0.0001$	$F(1,1535) = 1.05$, $p = 0.31$	$F(3,1535) = 0.85$, $p = 0.47$	$F(3,1535) = 3.63$, $p < 0.012$	$F(1,1535) = 0.70$, $p = 0.40$	$F(3,1535) = 2.70$, $p = 0.052$
Training constraints	$F(3,1535) = 19.45$, $p < 0.0001$	$F(1,1535) = 4.10$, $p < 0.04$	$F(1,1535) = 1.59$, $p = 0.21$	$F(3,1535) = 1.04$, $p = 0.37$	$F(3,1535) = 0.54$, $p = 0.65$	$F(1,1535) = 0.00$, $p = 0.95$	$F(3,1535) = 2.02$, $p = 0.11$
Patient avoidance of care	$F(3,1535) = 12.22$, $p < 0.0001$	$F(1,1535) = 110.83$, $p < 0.0001$	$F(1,1535) = 0.03$, $p = 0.85$	$F(3,1535) = 2.14$, $p = 0.09$	$F(3,1535) = 0.17$, $p = 0.92$	$F(1,1535) = 1.35$, $p = 0.25$	$F(3,1535) = 2.07$, $p = 0.10$
Service access	$F(3,1535) = 31.05$, $p < 0.0001$	$F(1,1535) = 0.05$, $p = 0.82$	$F(1,1535) = 19.54$, $p < 0.0001$	$F(3,1535) = 0.24$, $p = 0.87$	$F(3,1535) = 1.52$, $p = 0.21$	$F(1,1535) = 1.50$, $p = 0.22$	$F(3,1535) = 2.05$,

seven reached statistical significance, as shown in Table II. Service Access, Outsider Role, Patient Complexity, and Overlapping Roles were not rated significantly differently by physical versus behavioral healthcare providers. Of the 11 univariate analyses for the *State* main effect, three reached statistical significance. Time Constraints, Confidentiality Limitations, Training Constraints, Outsider Role, Patient Complexity, Overlapping Roles, and Provider Travel were not rated significantly differently in Alaska versus New Mexico. Means by main effect and results from post hoc analyses and maximum Cohen's d are shown in Table III.

Two-way interaction effects. Table Two provides details about F -statistics and p values for the significant two-way interactions. A significant *Rurality X Discipline* Interaction with very large effect sizes was revealed for Resource Limitations (maximum Cohen's $d = 1.45$) and Provider Travel (maximum Cohen's $d = 1.85$). For Resource Limitations, this interaction reached significance because physical healthcare providers in all geographic regions reported fewer resource problems than their colleagues providing behavioral healthcare, with means of 5.8 for small rural, 5.4 for rural, 5.0 for small urban, and 3.8 for urban physical healthcare providers, as compared to 6.9, 6.0, 6.0 and 5.2, respectively, for behavioral healthcare providers. This difference between physical and behavioral care providers was particularly pronounced in urban areas, where physical healthcare providers reported the fewest resource barriers of all. With regard to Provider Travel, behavioral healthcare providers gave higher ratings than physical healthcare providers in all geographic regions. Behavioral healthcare providers achieved mean rating for barriers related to Provider Travel of 4.9 in small rural areas, 2.7 in rural areas, 2.0 in small urban areas, and 1.4 in urban areas, as compared to physical care providers who rated Travel at 2.7, 1.9, 1.3, and 1.1, respectively. Notably, behavioral healthcare providers in small rural areas gave the highest ratings of all groups to this type of barrier to care.

The interaction of *Rurality X State* reached significance for Confidentiality Limitations (maximum Cohen's $d = 0.91$) and Language Differences (maximum Cohen's $d = 0.65$), see Table III. Confidentiality issues were rated most strongly as barriers by providers in small rural (Mean = 3.5) and rural Alaska (Mean = 3.0) areas, as compared to small rural (Mean = 3.0) and rural (Mean = 2.7) New Mexico. In urban areas, no significant state differences were noted (Mean = 1.8 for both states), although small urban providers rated confidentiality problems as slightly less of a barrier in Alaska (Mean = 2.0) than in New Mexico (Mean = 2.4). Regarding Language Differences, interesting patterns emerged. Small rural and small urban providers in Alaska reported the fewest problems with language differences (Mean = 2.3 and 2.1, respectively). Conversely, in the small rural and small urban areas in New Mexico, providers gave the *highest* ratings with regard to language differences between providers and patients, with means of 3.7 in both settings. In rural areas, ratings did not differ across the two states (Mean = 2.8 in Alaska and Mean = 2.7 in New Mexico). In urban areas providers in Alaska and New Mexico gave equal ratings to language barriers (Mean = 3.3 in both states).

The final significant interaction was a *Discipline X State* interaction for Time Constraints (maximum Cohen's $d = 0.36$). This analysis revealed that physical healthcare providers in New Mexico felt more time constraints (Mean = 4.7) than any other group (Mean = 4.0).

Discussion

This study identified significant barriers to optimal care that are common across diverse communities, and demonstrated that rural healthcare providers face more challenges in

providing care than providers in urban communities. Support was obtained for the hypothesis that rural areas are not all the same, with interprofessional clinicians in small rural areas facing greater obstacles than those in larger rural areas. Rural healthcare disparities may thus be even greater in remote areas than was indicated by rural studies in which very heterogeneous communities were combined. Discussion of the most pronounced barriers (in order of effect sizes) follows.

Challenges of healthcare delivery in rural America

Resource limitations. Our survey confirmed that although limited numbers of providers, treatment services, specialists, and consultants were the greatest barriers perceived by all providers, providers in small rural areas suffered most. Small rural practitioners have extremely limited access to colleagues for consultations, referrals, and special expertise. Other research has revealed that the more specialized the service provider, the worse the national per capita ratio for rural and small rural areas (i.e., more consumers per single provider; Johnson, et al., 2005).

The fact that Resource Limitations in rural versus urban areas interacted with provider discipline is not surprising. Urban physical healthcare providers reported the fewest resource barriers of all groups, a finding that matches other data reporting provider shortages for primary health care for 3% to 58% of rural counties and for only up to 13% of urban counties (Merwin et al., 2003). Urban physical healthcare providers have greater access to referral resources and colleagues than any other group, confirming that health disparities are more likely to exist in rural, especially small rural, areas than urban areas and especially for patients with mental health rather than physical health concerns.

Confidentiality limitations. Difficulty assuring patients' confidentiality, concerns by patients over breach of confidentiality, access to sensitive records, and concerns over having to report information to authorities were rated more strongly as a barrier in rural than urban areas, and were most strongly rated as problematic by small rural providers. These findings are not surprising as "in the rural setting, no clear separation exists between practitioners' personal and professional roles and lives" (Barnett & Henshaw, 2002, p. 417). The close-knit nature of small rural communities in which everyone knows everyone else places significant challenges on confidentiality and privacy for consumers (e.g., Lyckholm et al., 2001). In small communities, it is virtually impossible for consumers not to be seen entering a care facility (Barbopoulos & Clark, 2003), a lack of privacy perceived as a challenge to care, with providers worrying about patients not accessing services because of their fear for breaches in confidentiality and taking special care to protect their clientele's privacy.

Confidentiality concerns differed slightly depending on providers' state of residence in interaction with rural versus urban region. Notably, providers in small rural and rural Alaska reported *more* barriers related to confidentiality than providers in small rural and rural New Mexico; however, in small urban areas, providers rated confidentiality problems as slightly *less* of a barrier in Alaska than in New Mexico. It is likely that the fact that almost all small rural and the majority of rural communities in Alaska are not connected to roads, can only be accessed by air or water, and are highly geographically isolated plays a role. Small rural and rural communities in Alaska are closed communities with little direct person-to-person contact to the outside world. In such closed communities, privacy is even more of a luxury than in small rural or rural communities that are more accessible to outside travel. More than likely, in New Mexico, patients can

travel to other communities more easily for health concerns that require the highest level of confidentiality (e.g., reportable diseases such as HIV), reducing the concern over being identified in the community itself.

Overlapping roles. Also related to the tight-knit nature of rural communities and the small number of residents in villages and towns is the issue of multiple relationships and conflicting roles (Erickson, 2001; Helbrook, 2003). It is difficult to avoid meeting patients outside the office in a town with only a few hundred residents, all of whom may have to buy their groceries in the same store or have their car repaired by the same mechanic. Thus, not surprisingly, our survey revealed that issues of contacts with clients or patients in non-professional settings (such as being asked for medical advice during coincidental meetings in the community) were rated as much more problematic by small rural providers and rural providers than by providers in urban settings. The smaller a community, the greater the opportunity for chance meetings and the greater the perceived burden on the provider to maintain clear boundaries and separate roles.

Provider travel. The burden of provider travel as necessary to serve patients well is greatest for small rural providers, followed by rural clinicians. Clearly, the smaller the community, the more providers have to travel to reach patients and the more they rate this issue as a burden. This finding was somewhat unexpected. Previous research has identified travel as a rural healthcare concern, but usually in the context of consumers having to travel to urban areas for care not available in their home community. Our data suggest that even rural and small rural providers perceive travel as burdensome and are called upon to access even smaller communities outside their home communities. This finding may be best understood in the context of rural Alaska, where providers have to make hazardous and costly trips from small communities to more remote communities by bush plane, snow machine, or small boat to reach patients.

Provider Travel as a barrier to care differed slightly for behavioral versus physical healthcare providers, with behavioral healthcare providers in small rural areas giving higher ratings to this issue as a barrier than healthcare providers of either discipline in all other geographic regions. This finding is most likely explained by the greater lack of behavioral healthcare than physical healthcare providers in rural and small rural communities. Mental health care provider shortages have been identified for 37% to 76% of rural counties and for only 1% to 34% of urban counties (Merwin et al., 2003).

Services access. Lack of access to services due to transportation difficulties, travel distances, and healthcare costs were reported overwhelmingly more by rural than urban providers. This finding mirrors prior research that documented that rural residents encounter great burdens in accessing healthcare due to weather, geographic remoteness, terrain challenges, and high transportation costs (e.g., Bull et al., 2001). Similarly, the economic instability and fragile economic base of many rural areas has been identified by rural consumers as a major roadblock to adequate health care (Strausser, 2003).

The issue of economics may account for the finding that Services Access was reported as more of a barrier in New Mexico than Alaska. New Mexico is poorer than Alaska and especially rural residents face greater economic burden *vis-à-vis* healthcare. Many rural residents in Alaska are Alaska Native and can access healthcare free of charge in local rural health clinics. They can also access travel funds for health-related travel to urban centers when their physical and health needs cannot be met in their rural community.

Training constraints. Findings revealed that both rural and small rural providers indicated significantly less access to training of various types due to time and staffing limitations than either small urban or urban providers; small urban providers, in turn, had less access than urban providers. The smaller the community, the less access to training providers perceived. This was true even more so for behavioral than physical healthcare providers. Access to training is best understood in the greater practice context for small rural and rural providers. Professional isolation for rural providers is profound and they have little opportunity to leave their practice for even short periods of time due to lack of vacation coverage (e.g., Gibb, Livesey, & Zyla, 2003). Training means travel for rural providers who are already overburdened and underpaid; hence it is not surprising that they perceive access to training as a great barrier to rural healthcare.

Language differences. Although only a small rurality effect was noted for language differences between providers and patients, these differences suggested more problems in urban than rural areas. An interaction with state of residence clarified that small rural and small urban providers in Alaska had the *fewest* problems with language differences. Conversely, providers in small rural and small urban areas in New Mexico gave the *highest* ratings. More than likely this state differences is due to the relatively larger proportion of Spanish-speaking patients in New Mexico as compared to the number of Spanish-speaking providers.

Patient avoidance of care. Rural providers confirmed that their patients avoided care for various reasons, including stigma, more so than patients of urban providers. Several traits of rural residents have been linked to not seeking prevention, screening, or treatment, including greater acceptance of poor health, values of independence, and stigma associated with illness (e.g., Brown & Herrick, 2002). Stigma is particularly relevant in tightly-connected, small rural communities (Fife & Wright, 2000), where it is extraordinarily difficult for patients to conceal themselves. However, rural (rather than small rural) areas faced more barriers related to stigma than other geographic region. It can be hypothesized that stigma is not the same in all rural areas. The more remote a community, the more its residents depend on each other for survival. Stigmatizing members in remote communities is a threat to the community as it excludes potentially valuable members from the resource system. Degree of stigma may also explain our finding that Patient Avoidance of Care was rated as more of a barrier by behavioral than physical healthcare providers, regardless of geography. Generally speaking, mental illness is more stigmatized than physical illness (Link et al., 1997).

Practice and policy implications

Rural providers have the difficult task of providing a diverse range of healthcare in settings that limit their effectiveness and success in many ways. The challenges and burdens encountered by rural and especially small rural care providers are numerous and not easily overcome. A few solutions are possible and the findings from this study help elucidate areas in which changes and accommodations are most needed to assure that rural residents receive adequate healthcare. Following is a list of recommendations that may help begin to decrease rural health disparities by supporting rural healthcare providers through practice- and policy-level changes. The list is structured around the key constructs discussed above, in order of concepts rather than in order of effect sizes. All these recommendations need to be embedded in an overall rural healthcare plan that is community-specific, focused on partnership building, and supportive of creative and sustainable alliances and collaborations.

- (1) *Resource limitations*: To overcome the inherent resource limitations of rural life and healthcare delivery, rural care providers must learn to be creative and flexible, capable of collaboration across disciplines, capable of building trust with local residents, willing to engage in an advocacy role that facilitates help-seeking, and sufficiently self-aware to know when to ask for help and when to initiate referrals. Networks of natural helpers, including clergy, families, neighbors, shelters, jails, peace officers, schools, and so forth can help create resources. Telehealth technologies can be of great use to rural generalists.
- (2) *Services access*: The rural literature has begun to recommend the integration of physical health, mental health, and substance abuse treatment under one roof to ameliorate burdens inherent in rural healthcare. Most relevant to issues of services access, including optimally confidential service access, integration builds local treatment networks, improves diagnosis, supports economic viability through building economies of scale, decreases professional isolation, facilitates treatment access, enhances quality and appropriateness of services, increases confidentiality, destigmatizes help-seeking, and boosts consumer satisfaction (Brown & Herrick, 2002; Russell et al., 2003).
- (3) *Patient avoidance of care*: Rural care providers and policy makers need to strive to be culturally competent and to reduce stigma for their consumers and in their communities. Policy makers and administrators need to support local marketing campaigns that increase awareness of the utility of prevention and screening services as well as the helpfulness of treatment (Rost et al. 2002) to help consumers begin to overcome psychological barriers to seeking care. Community educational campaigns may be needed that support the notion that seeking help is neither a sign of weakness nor a denial of the value of less formal support networks and to decrease stigma surrounding mental and certain physical illnesses.
- (4) *Training constraints*: Since training-related travel is difficult for rural providers, bringing training closer to home is helpful. This can be accomplished through the development of internet-based study groups and consultation, as well as employer-sponsored continuing education brought to the community and delivered in such a manner as to be relevant to a diversity of providers as well as paraprofessionals. Additionally, rural care providers can greatly benefit from good communication and regular contact with distant specialists who serve in consultant roles (Rosenthal & Campbell-Heider, 2001) and employers need to help build support systems that make such relationships possible from a money and time perspective.
- (5) *Language differences*: Language differences will be most effectively addressed by building a diverse healthcare workforce. More emphasis needs to be placed on language skills while training behavioral and physical healthcare providers to assure that clinicians can communicate with their patients without interpreters. Recruiting individuals from culturally diverse backgrounds and from rural areas of the US into the healthcare professions is a crucial component of decreasing language barriers.
- (6) *Provider travel*: In many small rural and remote areas provider travel will always be unavoidable. Solutions to the stress and time commitment created by travel to deliver care in remote areas will center on securing replacement care in the home community for the provider while she or he is away (to prevent backlogs of local work), subsidizing travel costs, and maximizing the use of telehealth technologies. Building networks of natural helpers who can step in and provide emergency or maintenance support may minimize the travel demands on rural providers.

- (7) *Confidentiality limitation*: Integrated care systems are excellent first-steps toward more confidentiality in healthcare delivery in rural areas as observers can no longer identify the type of service sought by a patient by virtue of the building the individual enters. If the same building houses a full range of physical, mental health, and substance abuse treatment providers, a modicum of privacy is possible for patients. Other adaptations may be necessary in rural settings, especially remote areas with closed communities that protect patients. Extra care in the storage of and access to patient charts may be needed to protect such material from the eyes of neighbors or family members who work in the clinic where services are sought.
- (8) *Overlapping relationships*: Rural, and especially small rural, providers will always face issues of overlapping relationships as such settings often do not provide options about where to shop for groceries, have a vehicle fixed, or have a roof repaired. Thus, rather than attempting to avoid overlapping relationships, rural providers need to learn how to live with such relationships without allowing them to interfere with clinical objectivity and without allowing them to lead to breaches of confidentiality. Maintaining excellent emotional and clinical boundaries is crucial to navigating rural healthcare environments.

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