




Rural Mental Health Training: an Emerging Imperative to Address Health Disparities

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The lack of access to mental health services in the USA is a clear cause for concern for psychiatric educators. As reviewed by Fortney et al. [1], the problem is so severe that most individuals with a current mental health disorder residing in the USA do not receive necessary specialty services. Inadequately treated mental health disorders, moreover, account for approximately one-quarter of all disabling health conditions in the country.

The shortage of mental health resources in the USA, as in other countries, is far worse in rural communities, where there may be a complete lack of specialty providers and significant delays between onset of psychiatric illness and formal diagnosis. Thomas et al. [2] found that nearly every county (96%) in the USA had a shortage of psychiatrists—three-quarters had a “severe” shortage—and a significant minority had a shortage of non-psychiatrist mental health professionals. Rural counties overall had more significant shortages.

Frontier communities, which have been defined as less than or equal to 6 persons/mi²; 2.3 persons/km² [3], are the most remote and among the most underserved of communities in the USA. A recent review [4] indicated that more than 60% of all US counties and 80% of all rural US counties do not have a single psychiatrist (let alone psychiatric subspecialists for specialized populations such as children/adolescents). In rural US counties overall, 590 psychiatrists serve more than

27 million Americans (2.2 per 100,000), in comparison to 612 psychiatrists per 100,000 people in New York. At the lowest end of the range, there is only 1 psychiatrist per 100,000 people in rural Idaho. While almost 8.7% of the US population lives in rural counties, just 1.6% of US psychiatrists practice in those same areas. In evaluating counties on the basis of level of rurality (metropolitan, micropolitan, small adjacent, and remote rural), Bennett et al. [5] found that between 2000 and 2010 the already high proportions of counties without community mental health facilities (ranging from 73% in urban settings to 92% in all rural areas) increased even further to 78% in urban areas and 94% in all rural areas. It is noteworthy that, in rural settings, families often must travel hundreds of miles to visit relatives hospitalized in chronic mental illness facilities. Between 2000 and 2010, there were even increases in percentages of rural counties without primary care physicians (11.5% to 12.5%).

The impact of such shortages is felt among dually-diagnosed and vulnerable populations in rural areas. An analysis of health and other demographic trends across the urban-rural spectrum [6] indicates that in more rural areas, the population tends to be older, and in general there are higher rates of smoking, obesity, physical inactivity, child/adolescent/young adult death, unintentional injury, suicide, and serious mental illness. Of note, substance abuse and drug overdoses are a significant problem in rural areas, particularly with lack of access, stigma, isolation, and unemployment [7]. Of interest, climate change and drought will further exacerbate mental health issues in rural communities [8].

Further, 50% of psychiatric disorders begin before age 14 and 75% by age 26. Unfortunately, the approximately 8000 child and adolescent psychiatrists in the USA are not equitably distributed, and rural populations areas are among the most underserved. Since early intervention is the most important means for prevention of chronic mental illness, the consequences of workforce shortages in these areas will have the greatest impact on the trajectory of morbidity and mortality

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[9–11] (see). Nguyen et al. [3] found that rural counties and areas in Nebraska with high proportions of children and elderly face significant challenges in recruiting and retaining behavioral healthcare professionals.

Beyond reduced healthcare resources, Bennett et al. [5] found that the 2000–2010-era recession disproportionately and negatively affected rural America, which consequently experienced serious income loss and population decline. Because of variations in income levels, job availability, and availability of state Medicaid expansions, rural individuals are more likely than urban counterparts to be uninsured or underinsured [12], even in the context of the Affordable Care Act. Inequities in healthcare access are seen in several sub-populations, including women veterans/beneficiaries of Veterans' Affairs services [13], patients with end-of-life care needs [14], and patients with dementia [15]. As much as rural hospitals may have an important role in being a "safety net" for rural communities [16], several rural hospitals across the country have closed in the context of financial shortfalls [17, 18].

The Role of Psychiatric Educators

Psychiatric educators will need to work to improve medical students' and psychiatry residents' interest, comfort, and skill in delivering mental health care in rural settings. The literature has described promising programs to prepare for eventual rural careers. Based on their literature survey, Nelson et al. [19] suggested three strategies for integrating rural training into psychiatry programs, including didactics on contextual issues affecting rural psychiatry, rural clinical experiences and preceptorships, and rural psychiatry fellowships. Gillig and Comer [20] described implementation of a rural didactic curriculum and rural clinical training in an academic department/state agency partnership that delivered direct psychiatric services. Shore et al. [21] described the role of a resident Veterans Administration-based rural telepsychiatry service in training and in improving care for rural populations. These authors advocated for including telepsychiatry as a required component of residency training. Ng et al. [22] have pointed out the considerable value that rural psychiatrists can provide to enhance training opportunities for academic programs.

Nash et al. [23] found that among psychiatry trainees in rural placements in New South Wales, Australia, there were positive experiences regarding supervision, consultants, the site training coordinator, and the rural lifestyle. However, there were also challenges with peer isolation, progressing through training exams, workforce shortages, and accessing formal educational courses, expert unit experience, and advanced training opportunities.

In a 20-year follow-up study of the University of New Mexico Rural Psychiatry Residency Program, Bonham et al. [24] found that 37% of graduates practice in rural

communities in comparison to 10% of graduates from the traditional residency track. The rural track involved community site visits in postgraduate years (PGY) 2 and 3 and longitudinal community work (2 days per week, throughout the year) during PGY-4; encouragement to participate in community activities such as support groups and networking with tribal governments; and attendance at the biannual meeting of the Rural and Community Psychiatry Network of New Mexico. These authors described that barriers to practice in rural areas include professional isolation, lack of referral resources, and travel distances. They identified well-designed rural community health clinic experiences, practical systems-level skill building, and telepsychiatry as particularly important in building rural mental health capacity. Indeed, it is especially promising that in the past decade, there has been increased growth of telepsychiatry service and educational programs, as even brief learning experiences may increase the likelihood that residents will incorporate rural telepsychiatry into future practice [25]. Telepsychiatry training is especially essential for psychiatric education in locations that—beyond just being rural—simply are not otherwise geographically reachable, such as isolated islands in the state of Hawai'i [26].

Cowley et al. [27] described a regional psychiatry residency track model, based at the University of Washington, School of Medicine, to increase rates of practice in smaller communities. Recently, Talib et al. [28] demonstrated the success of teaching health centers, or community-based ambulatory patient care sites that sponsor primary care residencies, in attracting residents from multiple specialties, including psychiatry, into practice in underserved settings.

It should be noted that certain mechanisms that currently exist for primary care specialties to expand into rural training tracks [29] may not be as easily accessible for specialties like psychiatry, which are not uniformly accounted for in the same category as primary care but clearly also in short supply.

Overcoming Challenges and Seeing the Opportunities of Rural Practice

Indeed, there are several challenges to practicing in rural and underserved settings that need to be addressed in order to make this career trajectory a viable one for future practitioners of all specialties. In their commentary on the "elusive rural psychiatrist" Cook and Hoas [30] identified that reimbursement issues, continual on-call coverage, a heavy workload, and profound resource scarcities (notably lack of treatment facilities for the wide spectrum of psychiatric illness) are important barriers to rural practice that need to be overcome. Singh [31] further discussed challenges with career and job opportunities for spouses and educational and recreational opportunities for children.

Physicians in nonmetropolitan areas provide more care overall and more specialty services (e.g., surgery, maternity, emergency, nursing facility) than metropolitan counterparts, which may be attractive for certain physicians who enjoy a broader scope of practice [32]. While the diversity of practice activities may be a positive aspect for recruitment, there is an important need to address professional isolation through technology and purposeful collaboration [33]. Using videoconferencing technology for medical appointments has shown promise in managing conditions such as diabetes in rural settings [34], and this approach appears to be particularly applicable for psychiatric care as well. The principle of Project Extension for Community Healthcare Outcomes (Project ECHO) is to de-monopolize specialized medical knowledge and expertise and to increase access to this specialized knowledge and expertise in rural and underserved areas through videoconferencing technology and case-based learning [35]. Psychiatry and addictions-focused ECHO programs seem to be effective in increasing primary care physicians' knowledge and self-efficacy and in potentially reducing feelings of isolation [36].

In addition to being prepared for potential rural psychiatric practice, the future psychiatrist, particularly in a global context, needs to be prepared to be an educator and consultant for rural primary care providers. Fortney et al. [1] describe several telepsychiatry models applicable for rural settings, including the traditional telepsychiatry referral model, the telepsychiatry collaborative care model, the telepsychiatry behavioral health consultant model, the telepsychiatry consultation–liaison model, and the telepsychiatry curbside consultation model. Several studies in the academic psychiatric literature indicate significant needs for more psychiatric education among primary care providers both in the USA and internationally, including rural Nepal [37] and rural Guatemala [38].

Olfson [39] made the case that in addition to service models that integrate mental health consultants into general medical care, other potential evidence-based approaches to enhancing recruitment into mental health shortage areas include expansion of loan repayment programs for mental health professionals practicing in underserved areas (e.g., National Health Service Corps loan repayment program and state repayment programs) and increased Medicaid reimbursement for treating serious mental illness. Olfson also proposed that one policy option is to relax certain citizenship requirements for loan repayment programs and to allow rural health care organizations that are unable to fill positions with US citizens to hire qualified immigrants via a visa waiver mechanism. Indeed, any approach to improving psychiatrist recruitment and retention in rural practice will have to address realistically the financial and other personal impacts of career choice.

Current US psychiatry training guidelines (and for that matter, current psychiatry training guidelines for Canada, the United Kingdom, and Australia/New Zealand) do not specify either rural rotations or telepsychiatry as requirements [40–43]. Even family medicine [44] has reported variability in degree to which training programs incorporate training in rural practice. Other specialties, such as emergency medicine, have noted that, while required rural rotations may increase resident selection of rural careers, only a small percentage or residency programs (5%) have such a requirement [45].

Nevertheless, we believe that the specialty of psychiatry needs to proactively ensure provider competencies in care aspects that are essential for clinical practice with underserved populations and in underserved contexts. Rural practice represents an extraordinary opportunity for doing good and for growing the competencies of psychiatrists. We need to appreciate the full impact of the diseases we treat on morbidity and mortality, and we need to remember the lives that are at stake should we allow our services to remain as inaccessible as they are. It is certainly to our advantage that so much of the care we deliver can be effectively delivered remotely, especially with modern technology. It is also helpful that, at the time of this writing, the American Psychiatric Association [46] and the American Academy of Child and Adolescent Psychiatry [47] provide important resources to assist with rural practice.

On the basis of the current literature, we recommend specifically that psychiatry training programs consider the following 13 actions:

1. Develop (and/or maintain) formal affiliations with academic medical centers to establish clinical learning environments for rural psychiatric practice and/or essential, high-yield components of psychiatric care for the underserved, notably telepsychiatry;
2. Develop integrated care service models that bridge primary care specialties (e.g., family practice and pediatrics) and psychiatry and that might include assisting primary care specialists in screening for and treating mental disorders and assisting psychiatrists in managing more complex medical problems;
3. Designate and support at least one faculty “champion” for rural psychiatry services, training, and mentorship; there ideally should be an adult and a child and adolescent “champion,” and specialty “champions” may serve as consultants in geriatrics and substance use;
4. Explore models that enable even urban-based faculty to work part-time in rural settings and to thereby contribute to rural psychiatry program development and training;
5. Include cultural and regional education in rural areas so that residents appreciate the demographics, norms, and customs of the rural areas in which they serve;
6. Identify local mental health personnel in schools, hospitals, and community health centers who may serve as

liaisons to help introduce and endorse “outside” residents and psychiatrists to the community;

7. Expand primary care in psychiatry education, to enable psychiatrists to more comfortably manage common medical conditions or medication side effects in rural settings;
8. Build experience in psychotherapy modalities practical for rural settings (e.g., cognitive-behavioral therapy via telepsychiatry and problem-solving skills training for families);
9. Encourage graduates who enter rural psychiatric practice to maintain connections with the academic program (e.g., via volunteer faculty appointments and participation in grand rounds and other remotely available forums);
10. Encourage multidisciplinary grand rounds in teaching hospitals around the psychiatric and primary care needs of rural communities;
11. Collaborate with the institution’s graduate medical education office and local medical community to seek funding opportunities for rural psychiatry training, clinical services development, and workforce development (e.g., through loan repayment, expansion of visa waiver programs, and other creative recruitment/retention approaches);
12. Advocate for state and national funding to support the mental health needs of rural communities and outcomes-based research on clinical and social services needed in rural communities;
13. Survey rural psychiatrists to establish their educational, clinical and administrative needs and to develop action plans for addressing those needs based on that information.

These recommendations will advance collaborations between academic departments of psychiatry and rural communities and stakeholders, amplify resources, and support novel clinical programs and educational experiences. We anticipate that these efforts will strengthen the training of highly talented psychiatrists, no matter where they ultimately serve professionally, and also help grow the rural health care workforce. These activities may inspire research and ecologically-attuned health policy in the long run, and such work will help to ensure robust standards of care across communities and address health disparities that deeply affect the lives of individuals who reside in rural and frontier areas.

Compliance with Ethical Standards

Disclosure On behalf of all authors, the corresponding author states that there is no conflict of interest.

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