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A Rural Mental Health Research Agenda: Defining Context and Setting Priorities

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ABSTRACT

This article provides a brief overview of research perspectives on rural mental health services and suggests the importance of building an agenda to bring coherence to studies in this area. The need for sound theory and methodology to guide research is emphasized. The importance of better conceptualization of the rural context as a focus of research is addressed, and 14 propositions concerning issues the authors think will advance rural research are presented. This article is intended to stimulate discussion about a research agenda that will lead to better understanding of rural needs for mental health services as well as more responsive service models.

The mental health of rural America has been an issue of concern to small groups of behavioral science researchers and service providers for more than two decades (Flax, et al., 1979; Hollister, et al., 1974; Mazade, 1992; Wagenfeld, et al., 1994). There has been a sustained interest in various aspects of rural mental health, the spawning of at least two national professional organizations devoted to rural mental health or related human service issues, evidence of related interest in mainstream professional organizations (American Psychological Association Office of Rural Health, 1995) and, more recently, a series of federally supported conferences on rural services and research. By 1993, the literature had produced nearly 1,000 citations related to mental health and rural America (Wagenfeld, et al., 1994) and a number of useful reviews concerning related issues (Mazade, 1992; Murray, et al., 1991). Finally, in the early 1990s the National Institute of Mental Health, at the direction of congressional appropriations committees, initiated a program devoted to rural mental health research (Windle, 1992).

This broad range of interest represents a sometimes fragmented effort to build a framework for understanding (1) the unique qualities and problems of rural communities and rural life, (2) effective modes of rural mental health service delivery, (3) the various forms of research needed to support improved mental health services, and (4) current training practices to prepare providers for services in rural environments. Until recently, the related research literature has been driven mostly by focused interests and not by any clear plan or priorities. This article suggests the issues that might be addressed through a more planned research agenda. Two comprehensive annotated bibliographies with accompanying overviews (Flax, et al., 1979; Wagenfeld, et al., 1994) as well as various review articles (Murray, et al., 1991) provide perspective on the issues that have been of interest to researchers in this area. While this paper is not intended as a comprehensive review of the literature, the preparation for this analysis included PsycINFO and Medline searches of recent publications directly related to rural mental health services and psychiatric disorders in rural Canadian and U.S. locations. Although different search terms and limiters yielded varying results, 106 articles and chapters of particular relevance to this analysis published between 1996 and the end of 1998 were identified. The articles were categorized according to the focus of study and the methodologies applied. Depending on the design of the study, one

article might have several foci. The largest portion of the articles (34.9 percent) primarily examined delivery system issues (e.g., agency or community design or activities) using database-oriented case studies. Smaller numbers of articles examined rates of mental disorders (13.5 percent) or related social behaviors and indicators (13.5 percent) from epidemiologic or demographic perspectives. Still smaller numbers of articles used case study or qualitative data to examine delivery system (8.5 percent) or professional and ethical (4.8 percent) issues.

This review suggests 14 “propositions” to guide future work and focus dialogue on common assumptions about the rural mental health research agenda. It is hoped that these propositions will be tested in the field and will move us toward a more careful examination of the relationships between rurality and the variety of mental health outcomes that the literature describes. It is thought that it is in these explanations of linking relationships where researchers will advance the field toward a theoretically sound endeavor.

Beyond the formal literature, the comments presented here are based on discussions with service providers and policy-makers as well as scholars and researchers at a variety of institutions, as well as a review of the literature of several decades. These comments also are stimulated by informal data collected at recent conferences such as a 1996 Grand Forks, N.D., conference on rural mental health research and a 1997 Oxford, Miss., conference where participants were surveyed about their perceptions of research needs and the ways in which research might inform wise public policy and mental health service delivery. Through analysis and use of propositions, it is hoped that this article will encourage a more coherent, meaningful and consensual agenda for rural mental health research.

It is thought that the ongoing effort to develop a theoretical framework for rural mental health research will continue to define and clarify the common vocabulary of rural researchers. It is hoped that this effort also will foster a research network that respects the diversity of rurality while illuminating the characteristics that are particularly rural and have significant effects on the mental health and well-being of rural residents. Theory development is crucial to this effort. Past research efforts have sometimes been hampered by a lack of dialogue and the isolation of individual efforts from the larger picture of coordinated efforts to understand the rural context and its relationship to mental health. In a sense, this

review’s fractionated efforts are a metaphor for the phenomenon we struggle to understand-the relationship of segregated, isolated and insular contexts to mental health. Better theory, communication and coordinated planning needs to be used if progress is to be made in understanding rural mental health.

Beeson (1992) observed that the issue of what is specific to rural is a critical question that has largely been unresolved in ways that would be useful for rural mental health researchers. As St. Lawrence and Ndiaye (1997) note in commenting on rural prevention research ”The research literature contains few theoretical models that can inform rural research and there is compelling need for theoretical models to guide rural research methods and for better descriptions of the research methods that *are* effective in rural communities. Rural researchers invariably are faced with the need to understand the social, life-style, organizational, and institutional factors that prevail in rural areas and to adapt their research methods into rural ecologies” (p. 546). Thus, the most important priority for rural mental health research may be conceptualizing and measuring rural in ways that support meaningful research.

Sechrest and Walsh (1997) also have emphasized the importance of clear theory to rural mental health research. Other observers have likewise noted that rural mental health research has largely not been guided by well-defined theoretical models (Beeson, 1992). Research not guided by clear theoretical models will inevitably be limited in its ability to explain rural phenomena. Most will agree that, for the most part, rural mental health research could be improved by sound theory. One important aspect of the theory framework is related to conceptualizing the notion of rural.

Conceptualizing the Rural Context

Scholars, researchers and assorted agencies within federal and state governments have attempted to define rurality for a variety of purposes. The various dimensions used to describe "rural" will not be reviewed here.
The focus of different dimensions depends to a large degree on the interests of the observer. For example, economists may offer one perspective, demographers another and health planners yet another. A common conclusion or observation relates to the diversity of rurality.
Indeed, it is difficult to capture in any brief descriptions

the full range of demographic, socioeconomic, 'ethnic or cultural, or geographic characteristics of rural America. There also are various efforts to portray the unique psychological characteristics that may be associated with rural life.

Inevitably, researchers have attempted to describe rural settings according to differing typologies. Hewitt (1989) reviewed a variety of typologies designed to capture the various qualities of rural settings. These typologies address such concepts as: (1) overall population size of a community or county, (2) population density of a geographic area, (3) measures of adjacency to a metropolitan area, (4) measures of urbanization, (5) commuting and employment patterns, and (6) economic and sociodemographic characteristics. No universal acceptance of any one typology is known presumably because no typology can fully capture the unique qualities of a particular rural community. Still, typologies potentially allow researchers to place their particular research in a rural community context along several commonly defined dimensions. Future researchers can then relate their efforts to this previous work by reference to these typologies and, thus, begin to build the web or net that illuminates the larger context of rural.

Some might ask whether the notion of rural, because of its diverse implications, even serves a meaningful purpose for guiding research in mental health. The answer is yes for a variety of practical reasons. Rural creates an image that allows researchers, service providers and policymakers alike to focus attention on issues that need to be addressed by service providers and researchers alike. Rural allows for meaningful, if not always precise, dialogue and advocacy in government and political settings where important decisions that affect rural communities and mental health are likely to be made. It also enables interested parties from diverse settings to coalesce around practical matters of common interest, including the sense that their needs have sometimes been overlooked by health and mental health planners and policymakers at the state and federal levels.

From a research perspective, it would, however, seem that past efforts to answer these questions have been relatively imprecise and often not guided by sophisticated methodologies that allow researchers to address skillfully a variety of important questions. Earlier attempts to understand rural mental health issues were perhaps a necessary part of the evolution of moving toward more sophisticated conceptualizations.

However, attempts to make any simple comparisons of rural and metropolitan are doomed to frustration and inconsistency of fjndings because rurality must be defined by a complex set of variables that allow for meaningful study and comparisons of a wide range of contexts.

Better Definitions of Rural Variables. Proposition *1.* To be meaningful, research that attempts to use rurality as an explanatory variable must define which specific context variables are being used (and measured) to account for any rural effects.

More recent efforts to improve the focus of rural mental health research have noted the importance of better defining the complex variables associated with the notion of rural (Sechrest, et al., 1997). These authors have pointed out that rural is a proxy for a variety of other variables that characterize rural settings. For research to be meaningful it must be based on theory that takes into account these other variables that can be defined and measured directly. They suggest an "ecocultural approach that allows for the clear measure of the contexts in which people function. For them, the ecology includes the resources and constraints of an environment, and the culture includes the learned pattern of beliefs and values that guide actions. The application of such an approach would encourage researchers to better define and measure the various domains and themes of a particular rural context and relate these to the behaviors of people in rural contexts. Their domains include: subsistence, service use, structuring of home, domestic routine and workload, social network and social support, information, and rural values and norms. Each domain has a number of central themes that contribute to an understanding of the ecocultural context.

In a complementary vein, the recent research of Hoyt and colleagues (1997) has noted increasing variability and diversity within rural areas. Their studies of psychological distress and help seeking in rural settings emphasized the importance of assessing variables that characterize the likely relationships between such variables as geographic characteristics, local economic characteristics and psychological distress. Their examination of depressive symptoms found size of place effects for men but not women, as well as a relationship between level of stigma toward mental health care and size of place. Hoyt and colleagues' (1997) research also illustrates the importance of clear theory and careful definition of rural variables.

Rural-Urban Comparisons. *Proposition 2.* Rural-urban comparisons, by themselves, are of limited research value because they fail to capture the diversity of rural settings. Comparisons should be based on specific contextual variables rather than using rural as a unitary concept or proxy variable (a corollary to Proposition 1).

The history of rural mental health research involves a variety of comparisons of rural and urban or metropolitan differences. Most of these comparative studies included generalizations about rural-urban differences in, for example, rates of psychopathology based on limited samples of rural settings. Other studies examined the distribution of mental health services or availability of professionals. While these studies have, perhaps, correctly drawn attention to overlooked needs of rural communities, most have suffered from conceptual and methodological limitations: They have been flawed by the use of rural as a proxy variable for other variables that may be more important but unrecognized. Again, more sophisticated research methodology should be encouraged that moves away from simplistic conceptualizations of rural or urban and toward better conceived and better measured models of rurality. Only when this is accomplished will better data and more meaningful comparisons across different settings be available.

It is thought that useful theory will grow out of studies that provide explanations for the relationships found between context and disorder, not just static descriptions of disorder or rural-urban differences. These illuminated relationships are key to theoretical understandings that will not only guide future research but also will speak to the intervention direction required by social policy-makers and service providers to address the mental health needs of rural citizens.

Epidemiology of Rural Mental Disorders and Related Social Problems. *Proposition 3.* A more sophisticated definition and study of rural context variables will lead to a better understanding of the relationship between these variables and the incidence and prevalence of formal mental disorders as well as the various social problems that are comorbid with these disorders. Likewise, this effort should illuminate the interplay between these rural context variables and the comorbidity of mental disorders with each other and with substance abuse.

Better definitions of rural presumably will lay the groundwork for better theory about the incidence and

prevalence of mental disorders in various rural contexts. Within the framework of such theory, it is important that future studies explore more fully the relationship between rural variables and the rates of various disorders. Wagenfeld and colleagues (1994) describe three generations of studies that address epidemiologic evidence for mental disorders in rural settings. In general, there seems to be evidence of a relationship between economic stress and disorganization and the onset of mental health problems. However, much of the research in this area lacks methodologic sophistication. Several major studies (Blazer, et al., 1985; Kessler, et al., 1994) derive rural-urban comparisons for rates of psychiatric disorders, but each of the analyses are flawed to some degree based both on the limitations of the rural sample and from an ecocultural perspective.

Wagenfeld and colleagues (1994) proposed a series of questions that still need to be addressed in this area. Well-developed literature already exits on the relationship between rates of serious mental disorders and socioeconomic variables. Various examples of epidemiological studies of disorders and mental health problems that take into account the diversity of the rural context are emerging (Hoyt, et al., 1997), and more should be encouraged. Again, simplistic rural-urban comparisons should be viewed with skepticism. Future studies of morbidity and comorbidity should take into account a better-developed range of socioeconomic or ecocultural variables, as opposed to less sophisticated analyses based on proxy variables. They also should be designed in a way that allows them to consider changing socioeconomic circumstances and stressors over time. Likewise, they should be designed in a way that allows an analysis of the relationship between rural life and specific behaviors that may be of interest to researchers.

Proposifion 4. Studies of mental disorders in rural communities must go beyond reliance on formal diagnostic categories and also examine other personal and socially dysfunctional behaviors that have contextual relevance for the populations studied.

Research focused primarily or exclusively on formal diagnostic categories (i.e., DSM-IV categories, American Psychiatric Association, 1994) is inevitably limited and likely to overlook important issues that are related to rural community conditions and predictive of future morbidity. There exist a range of what psychiatrist and epidemiologist Mazer (1976) called ”parapsychiatric events,” which are related to the mental health of individuals

and of a community context. Many of these events may be comorbid with formal psychiatric disorders or contribute to the later development of diagnosable disorders. Other such events are likely to both be products of, and contribute in various ways to, family and community distress. These include, for example: child abuse and domestic violence and attitudes toward such behavior in the community; crime, especially violent crime, harassment, threats, and driving under the influence of substances; economic crime, especially among teens and young adults; substance use and abuse; children in treatment or referred for treatment of certain developmental disorders or disruptive behaviors in school or other settings; and unplanned teen pregnancies and teen parenting. Such problems may be viewed as evidence of social disruption or "pain" and should be studied in relation to mental health and illness in rural communities. The ability to define the ecocultural context of small communities makes the study of such variables relatively more manageable in rural settings.

An example of the value of a broader perspective on psychological disorder in studying rural environments is found in the rural crisis related to family agriculture in the Midwestern United States and Great Plains in the 1980s. Understanding the cultural and economic context in which specific behaviors occurred was critical both to those who sought to understand the personal and social problems and to those who sought to alleviate the distress.

Research on Specific Populations and Diagnostic Groups. *Proposition 5.* Study of specific at-risk or disadvantaged rural populations and the relationship of their status to mental disorders should be a research priority. Such research is likely to help us better understand the development of mental disorders and related prevention and service needs in rural contexts.

A variety of specific populations are likely to be represented at disproportionately higher rates in rural areas. Examples of this include people in dependency age groups, people in poverty and people who are part of stressed or dysfunctional subcultures, such as those living on American Indian reservations. An important part of any rural research agenda must be to recognize the potential relationship between rural contexts and the development of certain social, health and mental health problems. The concept of rural is helpful in identifying those variables that should be high priorities for study based on rates of prevalence in rural settings. However, it will be important for research into these problems to

be based on clear hypotheses about the relationship between rural contextual variables and the populations or problems that are the focus of study.

Five particular types of problems or clinically related issues are identified that should be a focus of attention. These are labeled as subitems of Proposition 5.
5a. Dually diagnosed individuals who present
Five particular types of problems or clinically related
with symptoms of both mental disorders and various forms of substance abuse. Alcohol use and abuse is a frequently identified problem in diverse rural settings (Wagenfeld, et al., 1994) and requires special attention.

5b. Serious and persistent mental illness. This is a common occurrence in diverse rural settings (Wagenfeld, et al., 1994) and presents special problems in terms of mobilizing effective treatment efforts in communities that often have limited resources.

5c. People with major depression. Major depression is the single most prevalent psychiatric disorder in terms of its lifetime prevalence (Kessler, et al., 1994). Because there is ample evidence that this disorder is treatable when those affected seek help, and because there is emerging evidence that rural residents may receive different levels of care than their metropolitan counterparts (Rost, et al., 1998), it seems important to continue careful study both of this disorder as it occurs in rural settings and best practices for its care in rural settings.

5d. Violence in various forms, including domestic violence and conduct problems among children and youth. Although rural settings have generally not experienced some of the forms of gang-related violence common in urban settings, mental health providers often have reported a significant impact of violence in diverse types of rural communities. Of particular concern is a lack of sound data about rates of domestic violence in rural settings and the potential relationship between such forms of violence and various aspects of the rural ecocultura1 context. Better information could lead to programming that is responsive to identified needs in rural communities.

5e. Developmental disabilities of various forms. Relatively little is known either about rates of developmental disabilities in rural settings and the capacity

of schools and communities to respond appropriately. Rural communities often are poorly equipped to manage effectively the problems that are associated with developmental disabilities. Rural school systems, in particular, are likely to lack the resources necessary to identify or intervene effectively with many forms of developmental disabilities. Better data about such disabilities and the special needs of children in rural settings could lead to more responsive school and community services.

The amount of existing research on these areas is quite variable. Depression in rural areas has been studied from various perspectives over decades. By contrast, literature searches on violence and developmental disabilities in rural contexts reveal few published studies.

Research on Community and Social Support.

Proposition 6. The study of community function, particularly social support, coherency and responsiveness, will yield a better understanding of the relationship between the rural context and mental illness or health.

The potential relationship between various rural eco-cultural characteristics and the development of psychopathology or other forms of dysfunctional behavior raises important questions for researchers. Mazer (1982) is among a small group who have studied the relationship between rural community life and psychopathology. He observed the following:

> . . . the structure of the community, its network of interpersonal relationships, and its repertory of human services may in large part determine whether its inhabitants succumb to the stresses to which they are inevitably exposed. Whether or not they develop frank psychiatric disorder will largely depend upon two factors: (1) the quality of their repertory of coping techniques and (2) the support system available to them, both personal and social. (Mazer, 1982, pp. *56-57).*

Mazer (1982) thought that rural communities had greater potential than metropolitan communities to actively decrease the rates of psychiatric disorder because of their smaller populations and their ability to develop a psychological sense of community that would provide the social support needed to buffer stresses. His concept of "coherent communities" focused on social structures that supported a clear order or shared belief in a moral order, and his concept of "responsive communities"

focused on social structures that actively addressed the needs of people overwhelmed by stress.

From this perspective, the various ecocultural aspects of a rural community could contribute positively or negatively to the ability of community members to respond adaptively in their individual and family lives or to be more or less vulnerable to the development of psychopathology. Kenkel (l986) also noted the importance of the rural community in supporting health and wellness or illness and distress. She offered a model for planning preventive interventions that includes (1) identification of a community's particular stressors, (2) reduction of the stressors through macro-level interventions, (3) building residents' coping skills, and (4) increasing social support systems. While a rationale for the model is supported by a variety of anecdotal literature, little evidence is found to demonstrate the application and study of the framework in rural communities.

Among the variables that might be defined and examined in rural research are (1) aspects of social support in rural communities; (2) the psychological sense of community; (3) residence patterns and community participation; (4) networks of social interaction; (5) social stratification and fluidity of social boundaries, including opportunities for upward mobility; (6) economic conditions and community well-being, including expectations for youth; and (7) future orientation and educational aspirations for youth. This list of variables is incomplete but provides an example of the factors that might be examined. Any research agenda for rural mental health will need to consider carefully these social aspects of the rural community. A better understanding of these variables *also* will pave the way for the planning of preventive programs as well as services that capitalize on community strengths as opposed to weaknesses.

Proposition 7. Longitudinal and cross-sectional population studies *can* contribute to better understanding of the impact of ecocultural variables on mental health or disorder. The various buffering effects of the rural *eco*cultural context should be studied through longitudinal and cross-sectional population studies to identify variables that enhance or detract from the development of behavioral health and wellness in rural settings. Significant improvement in rural mental health research methodologies will require development of larger scale studies that capitalize on longitudinal and multi-setting, multi-population, cross-sectional strategies. Single-community, ”snap-shot” studies leave too many unanswered

questions about unassessed variables and threats to generalization to substantially improve the current knowledge base. Because of the diversity of rural contexts, larger efforts that specify ecocultural contexts in multiple settings will allow researchers to examine commonalities and differences across settings and populations. A number of populations, including age cohort, gender, socioeconomic status, diagnostic groups and risk groups can be studied in multiple community contexts with assessment of the above mentioned community variables and other mental health status variables.

Longitudinal studies provide an opportunity within well-defined communities to examine over time the impact of rural community context on such mental health-related measures as depression, violence, substance abuse, perceived stress and the like. These studies also allow for the capture of the longitudinal impact of acute and chronic environmental stress conditions. Economic, cultural and community function factors, as well as specific traumatic events, can be the focus of these longitudinal studies. Hoyt and colleagues (1997) have illustrated this methodology in a panel study that collected data before and after the 1993 floods that devastated parts of Iowa.

Combinations of these two methodological strategies offer the best hope for rural mental health research that answers questions about the role of context specific stressors on mental illness and well-being, the relative effects of acute vs. chronic stressors, recovery from acute stress-induced dysfunction, the amelioration of dysfunction in light of community-specific contexts and delivery systems, the buffering effects of community function variables, the effectiveness of targeted intervention, and prevention strategies (St. Lawrence, et al., 1997).

These larger scale studies also will require improved measures of both the mental health phenomena of interest and the community context variables that may substantially vary across settings and populations. These studies require a greater focus on community contextual description using consistent measures that allow comparison across settings. As noted above, greater use of variables that address community functioning, like social support, cohesion and responsiveness, and measures of collateral stress, such as economic conditions, need to be encouraged.

Services Research. Despite frequent discussions of rural service delivery issues in the mental health literature (Wagenfeld, et al., 1994), there exists little solid data about rural services and ways in which they may be affected by the rural context or different from services in non-rural areas. This presents special challenges for policy-makers and service planners as the model of service delivery changes independently of the history of services in a particular setting. A frequent focus of the existing literature is on perceived barriers to rural mental health services, but there exists little beyond anecdotal evidence of barriers.

Proposition 8. Barriers to mental health services delivery should be carefully studied in relation to the particular characteristics of rural communities, particularly the community function variables noted above.
Barriers to care may include: (1) geographic characteristics of a region and formal governmental boundaries, (2) sociocultural barriers to engaging in care, and (3) economic barriers that interfere either with an individual's ability to afford care or a state or county's ability or desire to support access to affordable care. Barriers may be minimal in some rural areas or extreme in others, depending upon the particular combination of factors that exist. Well-designed services research that focuses on barriers and access issues in rural settings will improve both the ability to assess service needs and to design services that are appropriately and fully used by the people living in a region.

Proposition 9. Research that examines the impact of managed care on rural service delivery and utilization in rural communities and service systems should be a high priority.

A characteristic noted across various types of rural service systems is the fragdity of the service system (New York Rural Health Research Center, 1997). Many think that rural services will be at particular risk during the fast-moving transition to managed mental health care. As managed mental health care becomes more common in rural communities, it will be especially important to monitor the quality of care funded by both private and public sector programs. Likewise, it will be important to monitor need for services, demand for services, and service utilization as service models change.
As Wackwitz (1997) notes, there are important differences between demand, need and use. The transition in service models has important implications for each.

Proposition 10. The reality and potential of integrating mental health and primary health care in rural settings should be fully studied.

In many rural areas, a fast-moving trend toward integrating mental health care with primary health care has been observed. Although the integration of care has received increased attention in recent years (Bird, et al., 1998; Lambert, et al., 1998) the research literature on this topic is still relatively sparse. The potential of increased efficiencies in a managed care environment and the relatively smaller size of many rural programs may make integrated models more attractive to rural communities. The integration of care may take various forms. For example, Van Hook and Ford (1998) have described an interorganizational linkage model for placing mental health staff within general health care settings. By contrast, Bray and Easling (1997) have described a model that fully integrates the role of mental health providers in contributing to the patient's health care, as opposed to various forms of parallel assessment and treatment of mental disorders. Bird and colleagues (1998) reviewed the experiences of 53 primary care organizations across 22 states and identified four models of integration-diversification, linkage, referral and enhancement-that typically appear in combinations with each other. It is important to carefully study various models of integration and their impact on both health and mental health care in rural settings. Bray and Easling also suggest that research address the development and refinement of outcome indicators relevant to new models of practice.

Proposition 11. Various forms of preventive mental health interventions should be studied in the rural context.

Relatively little research about the prevention of mental disorders and related social and developmental problems in rural settings exists (Spoth, 1997). Many of the unique qualities of the rural context lend themselves to prevention research, but much of the existing work in this area has not been guided by clear conceptual models nor well evaluated (Keller, et al., 1997). Meaningful rural prevention strategies must be integrated into the community infrastructure to survive. Rural prevention research must focus on the structure of natural community social and helping networks and the entry and acceptance of preventive interventions into rural communities.

Proposition 12. Alternative services that may be provided by various forms of natural helpers or helping networks, or by family or consumer-developed and supported programs that operate outside the formal provider systems should be the subject of research. Many rural communities have unique histories of traditional natural helping networks that operate outside of, or in a complementary relationship with, formal health and mental health service systems (Hollister, et al., 1985). In other instances, rural culture groups such as American Indians may provide specific forms of healing or healers that are outside the formally sanctioned or funded system. Little research has addressed either the process or outcomes of such alternative services. These services are likely to be important in many rural settings and should be studied more extensively.

Proposition 13. Professional training and support of the human resources needed to provide effective rural services should be the focus of additional research.

Human resource issues in rural service delivery have received a modest amount of study throughout recent decades. Relevant issues include professional training for rural roles; recruitment, staffing and retention of rural providers; and continuing education and support of rural providers (Wagenfeld, et al., 1994). If one accepts the observation that the primary mental health professions tend historically to have an urban orientation, that rural service systems tend to be marginally staffed in terms of professional providers and generally fragile in nature, it is reasonable to attempt to learn more about relevant human resource issues. Specifically, more needs to be known about (1) the distribution of mental health providers and their skill and training levels in reference to needs for mental health services, (2) professional training models that are responsive to the service needs of rural settings, and (3) effective strategies for recruitment and retention of providers.

Proposition 14. Telecommunications has the potential to play an increasing role in rural mental health services delivery, and its effectiveness both in training service providers and improving assessment and treatment outcomes requires thorough study.

Despite controversy about the cost-effectiveness of implementing new technologies to support rural services (Brown, 1998; Werner, et al., 1998), many observers think it is a given that future service delivery systems, especially in more sparsely populated rural and frontier settings

that do not adjoin metropolitan areas, will rely increasingly on telehealth technology to improve both service access and quality (Office of Rural Health Policy, 1997). The wise and effective application of such technology requires careful study to identify effective application of appropriate models that are suitable to diverse rural contexts. The cost-effectiveness of such applications should be studied carefully so that service planners can make wise decisions about the application of technology. A particular challenge in this area of study is the rapid rate at which technology is changing, making the focus of research a moving target. It is important that the effectiveness of funded telehealth projects that support mental health services be measured carefully and that the outcomes related to various applications of such technology be related to the characteristics of particular rural contexts.

Conclusions

Research related to rural mental health and illness has been largely fragmentary to date. Although there exists considerable and growing literature on rural people, communities, and mental health and illness (Wagenfeld et al., 1994), most conclusions are based on limited observations or anecdotal evidence, as opposed to reliable data drawn from adequate samples that would allow development of a valid knowledge base about topics of interest. Moreover, there has been a lack of well-developed theory to guide the research.

This decade has produced some important ground-
,Institute of Mental Health program focused on rural mental health research (Office of Rural Mental Health Research) (Windle, 1992). This program has spawned funded research centers at a variety of institutions. These multidisciplinary centers are able to apply substantial resources to addressing important questions about rural mental health. They also bring a new level of sophistication to rural research and offer great potential for moving a rural research agenda forward.

Table 1. Summary of 14 Propositions for Improving Rural Mental Health Research.

Proposition 1	To account for rural effects, define specific ecocultural context variables.
Proposition 2	Rural-urban comparisons, *per se*, are of limited value unless based on specific context variables.
Proposition 3	Use specific rural context variables to illuminate relationships among social problems, mental disorders and other comorbid disorders.
Proposition 4	Go beyond studying formal diagnostic categories and examine other parapsychiatric events and behaviors.
Proposition 5	Study the relationship between specific rural at-risk or disadvantaged populations and mental disorders.
Proposition 6	Study rural community function variables in relationship to mental disorder and health.
Proposition 7	Use longitudinal and cross-sectional population studies to study the effects of ecocultural variables on mental health or disorder.
Proposition 8	Examine barriers to mental health service delivery in relationship to rural context variables.
Proposition 9	Study the impact of managed care on rural service delivery.
Proposition 10	Examine both the status and potential for the integration of rural mental health and primary health care services.
Proposition 11	Study opportunities for and barriers to preventive mental health interventions in rural communities.
Proposition 12	Study alternative services provided by natural helpers, and family and consumer-supported networks in rural communities.
Proposition 13	Study the professional training and support needs of effective rural mental health service systems.
Proposition 14	Continue to examine the potential and effectiveness of telecommunications for rural professional training and improved service delivery.

Recent conferences in Grand Forks, N.D., and Oxford, Miss., provided an opportunity for a national dialogue about a broad scope of rural research issues, ranging from preventive interventions to integration of primary health and mental health care. Considerable attention was given to the need to develop an appropriate research methodology for rural mental health research. The perspectives included in this article and the propositions for a research agenda were, in part, stimulated by the presentations and dialogue at these conferences.

Table 1 summarizes the 14 propositions addressed in this article. Each proposition is intended to stimulate further attention from researchers. If public policy is to be wisely informed and service delivery is to be improved, it must be based on sound evidence.

In summary, rural mental health research is moving forward with new attention to the development of appropriate research methodologies, support of resources for rural mental health research at a number of multidisciplinary centers, and continuing dialogue about an agenda that will bring new coherence to research efforts. It is hoped that the propositions contained in this article contribute to the continuing dialogue about rural mental health research and, ultimately, the improvement of rural services and communities.

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