4-2004

Are Advanced Practice Psychiatric Nurses a Solution to Rural Mental Health Workforce Shortages?

David Hartley PhD, MHA
University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center

Valerie Hart PhD, MSN

Nancy P. Hanrahan PhD, RN
University of Pennsylvania School of Nursing, Center for Health Outcomes and Policy Research

Stephenie L. Loux MS
University of Southern Maine, Maine Rural Health Research Center

Muskie School of Public Service

Are Advanced Practice Psychiatric Nurses a Solution to Rural Mental Health Workforce Shortages?

Working Paper #31 April 2004

USM
UNIVERSITY OF SOUTHERN MAINE

Are Advanced Practice Psychiatric Nurses a Solution to Rural Mental Health Workforce Shortages?

Working Paper # 31

April 2004

David Hartley, PhD, MHA
Valerie Hart, PhD, MSN
Nancy Hanrahan, PhD, MS
Stephenie Loux, MS

Maine Rural Health Research Center
Institute for Health Policy
Edmund S. Muskie School of Public Service
University of Southern Maine
Portland, ME 04104-9300
(207) 780-4430

This study was funded by a grant from the federal Office of Rural Health Policy, Health Resources and Services Administration, DHHS (Grant #4 UIC RH 00013-04-05). The conclusions and opinions expressed in the paper are the authors' and no endorsement by the University of Southern Maine or the funding source is intended or should be inferred.

Are Advanced Practice Psychiatric Nurses a Solution to Rural Mental Health Workforce Shortages?

Executive Summary

Advanced practice nurses specializing in mental health are typically referred to as advanced practice psychiatric nurses (APPNs). Clinical outcomes for these professionals have been found to be of high quality, as indicated by skill in diagnosis and treatment of mental illness (Merwin & Mauck, 1995). With an established scope of practice, including prescribing privileges, and with increasing numbers of APPNs seeking independent practice settings, it would appear that these mental health professionals may be an ideal mental health generalist for rural areas. This paper presents data on the geographic distribution of APPNs, and investigates the content of their training curriculum to determine what role this profession might play in addressing chronic shortages of mental health professionals in rural areas.

We find that training programs do not explicitly identify rural practice as a target for their curricula, but that the curriculum content of these programs is appropriate preparation for rural practice. More specifically, many programs focus on outreach to those with poor access to mental health services, which we believe is a key to effective rural practice. Unlike other mental health professions, without a background in advanced physical assessment skills, the APPN is equipped to provide a *full range* of services to clients, combining psychiatric assessment skills with primary care and medication management. This efficiency of personnel is most appealing in a rural setting, where there is a chronic shortage of psychiatric clinicians of any sort and particularly those who can treat the patient in a holistic fashion. It is this holistic framework that is evident in the program and course description of many of the programs analyzed in this study.

We find that significant numbers of APPNs are choosing rural practice. While nationally only thirteen percent of credentialed APPNs are located in rural areas, twenty states have at least 20 percent of their APPNs in rural practice. Many of these are states with a small total number of APPNs, however, a few, such as Iowa, Kentucky, Maine, New Hampshire, Oregon and Vermont, have significant numbers as well as percentages practicing in rural communities.

Unfortunately, psychiatric nursing accounts for a very small portion of the total mental health workforce. Nationally there are 3.11 APPNs per 100,000. However, in rural Maine, rural New Hampshire, and rural Vermont, we estimate ratios of APPNs per 100,000 to be 9.6, 8.7 and 10.4 respectively. While these numbers fall short of the national ratio for psychiatrists, the

preference of that profession for urban practice results in an estimated 3.9 psychiatrists per 100,000 in rural America (Hartley et al., 1999). Thus, in a few states at least, APPNs have become more prevalent than psychiatrists in rural areas. Moreover, psychiatric nursing continues to grow as a profession, and if APPNs continue to choose rural practice at the current rate, these provider to population ratios will grow in rural areas. Since 1995, the profession has grown at a rate of approximately 300 nurses per year. If that rate continues, the national ratio of providers per 100,000 in rural areas will be roughly the same for APPNs and psychiatrists by 2010.

Recommendations

1. To increase the proportion of APPNs choosing rural practice, financial incentives must be considered. These could include a reimbursement differential under Medicare and Medicaid for those practicing in designated mental health Health Professional Shortage Areas, and loan repayment programs under the National Health Service Corps or similar state programs.
2. Some states require that APPNs have a "collaborative relationship" with a physician. In rural areas the only physician available for such collaboration may be a family practitioner, who is unlikely to have sufficient psychiatric training to be appropriate for such clinical oversight. While a psychiatrist might be a more appropriate collaborator, most rural areas have none. Thus, those states that require such collaborations should consider peer-to-peer clinical supervision as an alternative to collaboration or supervision requirements currently designating a physician as the partnering clinician.
3. Currently, the Bureau of Primary Health Care is facilitating an expansion of Community Health Center sites, funding both new sites and satellite expansions of existing sites. Under this initiative, The BPHC should consider incentives for these Federally Qualified Health Centers to add APPNs to their clinical staffs.
4. The Health Resources and Services Administration currently offers a number of funding mechanisms for health professions training. Some of these existing programs could be modified to create incentives for training programs to be more explicit about preparing advanced practice nursing students for rural practice. The Quentin Burdick program has done this by funding curricula that use new and innovative methods to train health care practitioners to provide services in rural areas. It may be a good model for other incentives to university training programs.

Are Advanced Practice Psychiatric Nurses a Solution to Rural Mental Health Workforce Shortages?

Psychiatric Nursing is a growing profession that holds promise for relieving chronic shortages of mental health providers in rural areas, and for improving access to and quality of care for a range of mental health needs. Combining prescriptive authority and familiarity with an ever-changing psycho-pharmacy formulary with an array of physical and mental health diagnostic and treatment skills, these professionals may be the ideal mental health generalist for rural areas. This paper summarizes the clinical skills and prescriptive authority of Advanced Practice Psychiatric Nurses, and investigates current trends in their geographic distribution to determine what their future role may be in addressing rural mental health needs.

Background

Rural communities suffer from a shortage of mental health professionals (Knesper, Wheeler, & Pagnucco, 1984; Lambert & Agger, 1995; Stuve, Beeson, & Hartig, 1989). As of September 1999, over 85 percent of the designated Mental Health Professional Shortage Areas in the United States were located in non-metropolitan (rural) counties. These areas are home to roughly 57 percent of the country's rural population (Bird, Dempsey & Hartley, 2001). Variations in the supply of mental health professionals may be an important factor in explaining persistent differences observed in access to and use of mental health services in rural versus urban areas (Lambert & Agger, 1995).

A number of studies have demonstrated that mental health professionals are differentially distributed in rural and urban areas, with psychiatrists and Ph.D. level psychologists tending to practice in urban and suburban areas, leaving mental health professionals with master's level preparation or less as the most readily available mental health providers in most rural areas (Hartley, Bird, & Dempsey, 1999; Holzer, Goldsmith and Ciarlo, 1998; Goldsmith, Wagenfel, Manderscheid, & Stiles, 1997). For example, the supply of psychiatrists is 14.6 per 100,000 in urban areas as compared with 3.9 per 100,000 in rural areas (Hartley et al., 1999).[1]

[1] While national data for urban and rural supply of psychologists are not available, the most rural states have, on average, about 25% fewer psychologists per capita than the national average of 20 per 100,000 (Hartley, Bird and Dempsey 1999).

Due to these shortages of mental health specialty providers, it is generally accepted that at least half of the mental health services in rural areas are provided by primary care practitioners (Norquist & Regier, 1996). Typically, these PCPs are prescribing anti-depressants and other psychoactive medications because there are no psychiatrists practicing in rural areas, but, as generalists, most of these PCPs have difficultly keeping up with current drugs and current protocols (Rost et al., 2000).

With one recent exception, advanced practice psychiatric nurses (APPNs) are currently the only non-physician providers of mental health services licensed to prescribe medications.[2] Advanced Practice Registered Nurses are registered nurses who hold a minimum of a master's degree in an area of nursing specialization and have received supervised clinical experience in their specialty. Clinical Nurse Specialists and Nurse Practitioners are two common titles used by psychiatric nurses (Ivey, Scheffler, & Zazzali, 1998). Collectively, advanced practice nurses specializing in mental health are typically referred to as advanced practice psychiatric nurses (APPNs). Clinical outcomes for these professionals have been found to be of high quality, as indicated by skill in diagnosis and clinical results in the inpatient setting (Merwin & Mauck, 1995). The scope of clinical duties for these specialties often includes; 1) assessment, 2) diagnosis, 3) outcome identification, 4) planning, 5) implementation of treatment plan including psychotherapy, 6) case management, 7) consultation, 8) health promotion and maintenance, 9) prescriptive authority, and 10) referral. Typically, CNSs are trained in psychotherapy, and do not have prescriptive authority, while NPs place more emphasis on the biological model, including medications. In fact, NPs prescribe prescriptions quite frequently and the majority feel they have the knowledge to choose the most effective form of pharmacological treatment (Shell, 2001). Whether, and which APPNs can be granted prescriptive privileges varies by state, by training program, and by title. Current licensing laws in most states address APPN privileges in a general way, without addressing privileges granted to each respective specialty.

Certification of APPNs is done at the national level, by taking a certifying examination, administered by the American Nurses Credentialing Center. Until recently, there was only one national certifying exam, which was given to Clinical Nurse Specialists (CNSs). Technically, this left MH Nurse Practitioners with no official credential to practice. There is now a second national certification exam for NPs. Since the scope of practice of APPNs varies, and could

[2] Prescriptive authority has been approved for PhD Psychologists in New Mexico.

change for an individual practitioner over the course of his or her career, many APPNs are taking both exams.

Beyond the explicit privileges granted by national certification, state licensure, or effectively granted by the policies of third party payers, other factors are likely to determine the extent to which APPNs can relieve the shortages of other mental health providers. For example, despite federal incentives encouraging mid-level primary care practitioners to practice in rural areas, it has been observed that only 15-20 percent of nurse practitioners choose such practice settings (Lin, Burns, & Nochajski, 1997; Baer & Smith, 1999). Also, in some states, APPNs are required to have some kind of collaborative or supervisory relationship with an MD, limiting their ability to practice autonomously in remote areas. It should be noted, however, that voluntary collaboration appears to be chosen in many cases without a legal mandate (Talley & Richens, 2001).

Some training programs place more emphasis on psychotherapy, while others place more emphasis on a biological model of treatment, including medication management. It is not clear whether graduates of some programs can meet the spectrum of needs for outpatient counseling, case management, and medication management now in such short supply in our most rural areas. Moreover, providing all of these services in a small independent practice, and taking on the risks associated with treating those with serious mental illness, may be too much to expect of this emerging profession. Practice settings that provide collaborative relationships with other clinicians, on an equal basis, overcoming traditional clinical role relationships, are needed.

Despite considerable state-to-state variation in titles and supervision/collaboration requirements, the national credentialing exams offer some assurance that the scope of practice for APPNs may be more uniform than that of some other mental health professions (Haber et al., 2003, Hartley, Ziller, Lambert, Loux, & Bird, 2002). With an established scope of practice, including prescribing privileges, and with increasing numbers of APPNs seeking independent practice settings, it would appear that these mental health professionals may be an ideal mental health generalist for rural areas. This paper seeks to determine the extent to which APPNs should be viewed as a potential key component of the rural mental health system.

We examine this question from two perspectives that can be expressed as two questions:

1. Are APPNs clinically prepared to address mental health needs in rural areas?

2. Are APPNs choosing rural practice in sufficient numbers to represent a meaningful addition to the rural mental health workforce?

Research Questions:

1. Which states grant prescriptive authority to APPNs? To which titles of APPN do they grant such authority?

2. How many APPNs are now practicing in the US, state-by-state? Do we know how many of them are practicing in rural areas?

3. To what extent are APPN academic programs preparing graduates for rural practice? What proportion of recent graduates are choosing rural practice?

4. How does the curriculum content (and practice content) of MH CNS academic programs differ from that of MH NPs?

5. Are both the MH NP and the MH CNS appropriate for some rural settings, or is one of these significantly more promising for meeting rural needs?

6. To what extent can we look to APPNs to address the shortages of mental health services and practitioners in rural areas?

State Licensure and Prescriptive Authority

In 1999 the American Psychiatric Nurses Association conducted a study of licensure and prescribing laws and rules in all states. This study found that the titles recognized by statute vary from state to state, as do the prescribing privileges, and the extent to which APPNs are allowed to prescribe independently (American Psychiatric Nurses Association, 2001). That study has recently been updated, and recent findings are included here (Table 1) as part of this project (Haber et al., 2003). (See Appendix A for our methodology in summarizing that study.)

Table 1 illustrates that Psychiatric Nurse Practitioners are licensed and have prescriptive privileges in all 50 states, with the exception of Georgia, where their prescriptive authority is limited to protocols overseen by a physician. Florida also requires the use of protocols, but the requirement of physician oversight is less explicit. Clinical Nurse Specialists are licensed in 43 states, and may be granted some level of prescribing privileges in 32 states. While these data would seem to suggest that the CNS license might be less preferable for an independent rural practice, our findings on current trends in training programs suggest that many with the CNS

license are taking the NP exam and being granted prescriptive privileges. For that reason, we do not feel that the distinction between the CNS and NP licenses will be a determining factor in the ability of APPNs to provide needed services in rural areas.

Geographic Distribution of Advanced Practice Psychiatric Nurses

Using data from the American Nurses Credentialing Center, we assigned each APPN who is credentialed under any of the current exams to one of four categories on an urban – rural continuum. This continuum was developed using Rural Urban Commuting Areas (RUCA), as developed by the USDA and the WWAMI research center. RUCAs are based on census data, and use patterns of commuting to determine the extent to which census tracts are linked to urban or suburban areas, or to rural towns. Although the RUCA continuum includes 10 levels of urbanization, with several sub-categories based on the percentage of the population that is linked to a more urbanized area, a simplified approach has been suggested that collapses multiple RUCA categories into four levels: urban core, suburban, large town and small town/rural (The use of RUCAs in health care, 2002).

In addition, although the RUCA coding system is based on census tracts, WWAMI has developed a file that assigns RUCA codes to zip codes for use when the census tract is not known. Using the zip code file and the four-level RUCA-based continuum, we assigned each nurse in the ANCC dataset to one of the four levels. The results are shown in Table 2. Unfortunately, these data do not indicate how many of the nurses have prescribing privileges. However, for purposes of this investigation, the data are useful in indicating how many APPNs are choosing rural practice. With data from all states, it is also possible to identify states in which a greater proportion of APPNs are choosing rural practice.

What is apparent from the data presented in Table 2 is that significant numbers of APPNs are choosing rural practice. While nationally only thirteen percent of credentialed APPNs are located in rural areas, twenty states have at least 20 percent of their APPNs in rural practice. While many of these are states with a small total number of APPNs, a few, such as Iowa, Kentucky, Maine, New Hampshire, Oregon and Vermont, have significant numbers as well as percentages practicing in rural communities.

Training Programs in Psychiatric Nursing

The trend in Advanced Practice Psychiatric Nursing over the past decade has been to develop a new role for the profession, that of the Psychiatric Nurse Practitioner. This role emerged in response to a variety of changes in health care including: managed care demands; the shift to a biological approach in psychiatric care; decreasing enrollment in existing graduate psychiatric nursing programs; market demand; and lack of primary care services for chronically mentally ill patients (Lego, 1996; McCabe, 2000; Moller, & Haber, 1996; Williams et al., 1998). Psychiatric nursing programs, at the masters or graduate level, historically have prepared Clinical Nurse Specialists (CNSs) who functioned as expert clinicians, nurse psychotherapists, consultants and educators. The nature of this new role is illustrated in the differences in curriculum between CNS programs and NP programs, and also by the changes within both types of degree programs in recent years.

How does the curriculum content of CNS academic programs differ from that of NPs?

The core difference in curriculum for the Psychiatric Nurse Practitioner lies in the area of a biological focus, historically utilized by primary care providers. An important difference in the scope of practice is that of prescriptive authority. The American Nurses Credentialing Center (ANCC), the official credentialing body for the discipline, outlined the required coursework for CS's to be permitted to qualify for the first Psychiatric NP exam in October of 2000. The courses were: Advanced Physical Assessment, Pharmacology, and Biological Aspects of Psychiatric Care (or equivalent). These courses continue to be the cornerstone of graduate curriculum nationally for the Psychiatric NP and point to the role of providing primary care and prescriptive practice. In addition, typical other NP curriculum differences include an emphasis on case management, and cognitive or short-term therapy, or crisis intervention. Since managed care has embraced a short-term model of mental health care and sought symptom relief rather than character restructuring it has adopted such behavioral therapies as solution focused or brief therapy. A shift to short- term behavioral or cognitive therapy, more in line with crisis intervention than traditional psychotherapy, is a distinguishing feature of most Psychiatric NP programs.

In addition to the three required courses mentioned above, the psychiatric NP receives training in the assessment and management of physical symptoms not related to mental health

issues, and thereby has the skill set to make a differential diagnosis in cases where medical and psychiatric symptoms may confound the diagnosis. Not only can the NP distinguish between medical and psychiatric illness, but prescriptive practice allows for interventions in both psychotherapy and psychopharmacology. This clinician can also treat a range of ages, if trained in most programs that are certified as family nurse practitioner programs. As an NP the Psychiatric NP is capable of treating neuropsychiatric problems as well as providing primary health care for psychiatric patients.

To what extent are APPN academic programs preparing graduates for rural practice?

The American Association of Colleges of Nursing reports that 69 secondary education institutions offer a psychiatric mental health program for CNSs with 450 enrolled students and 149 graduates in 2002. Another 40 schools of nursing offer a psychiatric nurse practitioner program with 480 enrolled students and 137 graduates in 2002 (Berlin, Stennett, & Bednash, 2002)

Our investigation of the curricula of these programs was limited to nine states, chosen because they have a sizable rural population, we believed they were producing significant numbers of APPNs, and because of familiarity with some of the programs in the selected states. We contacted colleges and universities with graduate programs in nursing in Alaska, Iowa, Kentucky, Maine, New Hampshire, Ohio, Oregon, Washington and Vermont, and gathered detailed information on psychiatric nursing programs in these states. The APPN programs surveyed for this project are detailed in Appendix B.

. The various nursing graduate programs in psychiatric mental health nursing in the identified states were identified using a credentialing catalogue. The internet and telephone were utilized to contact college and university personnel to procure curriculum materials and an assessment was done to determine which type of program existed. Programs fell into a category of either having only CS or NP tracks or both or a combination CS/NP or dual preparation program. This was most often determined by explicit statement about what certification examination candidates would be prepared to take upon graduation. When this was not clear a closer look at the coursework made the determination obvious which preparation was the intended outcome of the program (CS or NP). Many of the programs also offer a Post-Masters

Certificate, comprised of courses related to biological aspects of mental illness, pharmacology, psychopharmacology (theory and practice), and advanced health assessment.

In reviewing the programs in this study it was clear that the tone of graduate psychiatric nursing curriculum has taken a turn in the past decade toward the biological model. The name "psychiatric nursing" is replaced with "behavioral health nursing" in some programs, further designating an emphasis on primary mental health care (University of Akron). Neurobiology and neuropsychiatric care are explicitly noted in program descriptions (Intercollegiate College). Courses like Biological Aspects of Psychosocial Disabilities (University of Washington), Biological Aspects of Mental Illness (USM), and Pathophysiology of Altered Health States (Ohio State) are examples of the emphasis on current biological/neurological research, which provide the core in the nurse practitioner curricula, and pave the way for safe prescriptive practice for these advanced practice nurses.

While the program at Husson College in Maine is the only program that specifically mentions the word "rural" in it's program description (HRSA Grant funded the program) most of the programs do have a focus on reaching out to patients who do not have access. In addition, the chronically mentally ill population is mentioned frequently in the mission statements of the programs or in the descriptions of the NP programs. Williams et al. (1998) called for APPNs to meet the needs of the chronically mentally ill in primary care settings, where their psychiatric needs are often "under diagnosed and under treated". Some programs specifically target "under-served and high-risk" psychiatric populations (University of Akron, Husson).

McCabe & Grover (1999) argue for a marriage of the psychiatric assessment skills of the CS with the primary care and medication management skills of the NP as the future role of the advanced practice psychiatric nurse. This "full-service" mental health professional is most appealing in a rural setting, where there is a chronic shortage of psychiatric clinicians of any sort and particularly those who can address both physical and psychiatric needs. While not explicitly touting "rural" as an agenda, these programs are in fact meeting a rural agenda, by way of the *type* of patient their graduates will be well trained to treat, as well as the *scope of practice* that best suits rural reality, that is one clinician to care for psychotherapy and medication needs for patients.

The reality of rural practice for the APPN is obviously one that is potentially fraught with problems, not the least of which is lack of a peer group for consultation and support, and

therefore proper methods of providing links to peers must be determined in order to bridge the isolation that is inherent in such a setting. In fact, this might be accomplished by redefining the collaborative or supervisory relationships specified in some licensure rules to encourage peer-to-peer clinical supervision.

Are both the MH NP and the MH CNS appropriate for some rural settings?

In general, nurse practitioner programs, with training in psychopharmacology, as well as shared curriculum with Family Practice NP programs, may better prepare students to managing a wide range of psychiatric problems. On the other hand, the literature is clear that medication in combination with counseling or other therapy, is the preferred treatment for many psychiatric problems. Moreover, many of the programs we surveyed offer both the CNS and the NP credential, and have experienced a shift in enrollment from the former to the latter, in some cases combining programs, since the introduction of the national NP examination in 2000. In addition, many graduates of CNS programs have sought additional training and taken the NP certification exam. We expect that the demand for prescriptive privileges will drive enrollment and curricula to an even greater extent in the future, making this question somewhat academic.

To what extent can we look to APPNs to address the shortages of mental health services and practitioners in rural areas?

Our findings contain good news and bad news. The good news is that, with nearly 9,000 APPNs practicing in the US, 1120 or about 13% are practicing in rural areas. This is in sharp contrast to 6.6% of psychiatrists (Hartley et al., 1999). Moreover, in several rural states, over 20 percent of APPNs have chosen rural practice. The scope of practice, the breadth of training, and the philosophy of the training programs all suggest that APPNs may well be the ideal rural mental health professionals, even though virtually none of the training programs we surveyed are explicit in targeting rural practice.

The bad news is that psychiatric nursing accounts for a very small portion of the total mental health workforce. For example, while our data indicate a total of 8,696 APPNs practicing in the US, there are an estimated 38,258 psychiatrists, 76,968 psychologists, and 96,268 social

workers[3] (West et al., 2000). To put these comparative data in another context, we are accustomed to using ratios of providers per 100,000 population as an indicator of the adequacy of the workforce. For the nation as a whole, current estimates are 11.3 psychiatrists, 27.5 psychologists and 36.2 social workers per 100,000 population. Nationally there are 3.11 APPNs per 100,000.

On the other hand, those rural states that have a larger number of APPNs with a greater proportion of them practicing in rural areas are somewhat more promising. For example, in rural Maine, rural New Hampshire, and rural Vermont, we estimate ratios of APPNs per 100,000 to be 9.6, 8.7 and 10.4 respectively. While these numbers fall short of the national ratio for psychiatrists, the preference of that profession for urban practice results in an estimated 3.9 psychiatrists per 100,000 in rural America (Hartley et al., 1999). Thus, in a few states at least, APPNs have become more prevalent than psychiatrists in rural areas. Moreover, psychiatric nursing continues to grow as a profession, and if APPNs continue to choose rural practice at the current rate, these provider to population ratios will grow in rural areas. Since 1995, the profession has grown at a rate of approximately 300 nurses per year. If that rate continues, the national ratio of providers per 100,000 in rural areas will be roughly the same for APPNs and psychiatrists by 2010.

Unfortunately, there will be increasing pressure on APPNs with prescribing privileges to become med-check mills for managed care insurers seeking a less costly alternative to psychiatrists. Already such organizations are approaching psychiatric nurses with lucrative offers (Hart, personal communication). These payers, however, are not typically interested in psychotherapy or other more time consuming (and costly) treatment regimens. They just want clinicians who are certified in psychopharmacology.

Recommendations

1. To increase the proportion of APPNs choosing rural practice, financial incentives must be considered. These could include a reimbursement differential under Medicare and Medicaid for those practicing in designated mental health Health Professional Shortage

[3] The number of social workers includes a significant number who do not deliver mental health services, e.g. discharge planners in general hospitals and nursing homes.

Areas, and loan repayment programs under the National Health Service Corps or similar state programs.

2. Some states require that APPNs have a "collaborative relationship" with a physician. In rural areas the only physician available for such collaboration may be a family practitioner, who is unlikely to have sufficient psychiatric training to be appropriate for clinical oversight. While a psychiatrist might be a more appropriate collaborator, most rural areas have none. Thus, those states that require such collaborations should consider peer-to-peer clinical supervision as an alternative to collaboration or supervision requirements currently designating a physician as the partnering clinician.
3. Currently, the Bureau of Primary Health Care is facilitating an expansion of Community Health Center sites, funding both new sites and satellite expansions of existing sites. Under this initiative, The BPHC should consider incentives for these Federally Qualified Health Centers to add APPNs to their clinical staffs.
4. The Health Resources and Services Administration currently offers a number of funding mechanisms for health professions training. Some of these existing programs could be modified to create incentives for training programs to be more explicit about preparing advanced practice nursing students for rural practice. The Quentin Burdick program has done this by funding curricula that use new and innovative methods to train health care practitioners to provide services in rural areas. It may be a good model for other incentives to university training programs.

References

American Psychiatric Nurses Association. (2001). *Advanced practice in psychiatric mental health nursing, State of the states: 2001*.

Baer, L. D., & Smith, L. M. (1999). Non-physician professionals and rural America. In T. C. Ricketts (Ed.), *Rural Health in the United States* (pp. 52-60). New York: Oxford University Press.

Berlin, L. E., Stennett, J., & Bednash, G. D. (2002). *Enrollment and graduations in baccalaureate and graduate programs in nursing*. (No. 01-02-01). Washington, D.C.: American Association of Colleges of Nursing.

Bird, D. C., Dempsey, P., & Hartley, D. (2001). *Addressing mental health workforce needs in underserved rural areas: Accomplishments and challenges*. (Working Paper #23). Portland, ME: University of Southern Maine, Edmund S. Muskie School of Public Service, Institute for Health Policy, Maine Rural Health Research Center.

Goldsmith, H. M., Wagenfel, R., Manderscheid, & Stiles, D. (1997). Specialty mental health services in metropolitan and non-metropolitan areas, 1983 and 1990. *Administration and Policy in Mental Health, 24*(6), 475-88.

Haber, J., Hamera, E., Hillyer, D., Limandri, B., Pagel, S., Staten, R., & Zimmerman, M. (2003). Advanced practice psychiatric nurses: 2003 legislative update. *Journal of the American Psychiatric Nurses Association, 9*(6), 205-216.

Hartley, D., Bird, D., & Dempsey, P. (1999). Rural mental health and substance abuse. In T. C. Ricketts (Ed.), *Rural Health in the United States* (pp. 159-178). New York: Oxford University Press.

Hartley, D., Ziller, E., Lambert, D., Loux, S., & Bird, D. (2002). *State licensure laws and the mental health professions: Implications for the rural mental health workforce.* (Working Paper #29). Portland, ME: University of Southern Maine, Rural Health Research Center.

Holzer, C. E., Goldsmith, H. F., & Ciarlo, J. A. (1998). *The availability of health and mental health providers by population density*. (Letter to the Field No. 11). Denver: Frontier Mental Health Services Resource Network.

Ivey, S. L., Scheffler, R., & Zazzali, J. L. (1998). Supply dynamics of the mental health workforce: Implications for health policy. *Milbank Quarterly, 76*(1), 25-57.

Knesper, D. J., Wheeler, J. R., & Pagnucco, D. J. (1984). Mental health services providers' distribution across counties in the United States. *American Psychologist, 39*(12), 1424-1434.

Lambert, D., & Agger, M. S. (1995). Access of rural AFDC Medicaid beneficiaries to mental health services. *Health Care Financing Review, 17*(1), 133-145.

Lego, S. (1996). Long live the CNS and the NP in psychiatric nursing: Do not blend the roles. *Online Journal of Issues in Nursing,* Available http://www.nursingworld.org/ojin/tpc1/tpc1_1.htm (Access date: July 10, 2003).

Lin, C., Burns, P. A., & Nochajski, T. H. (1997). The geographic distribution of nurse practitioners in the United States. *Applied Geographic Studies, 1*(4), 287-301.

McCabe, S. (2000). Bringing psychiatric nursing into the twenty-first century. *Archives of Psychiatric Nursing, 14*(3), 109-116.

McCabe, S., & Grover, S. (1999). Psychiatric nurse practitioner versus clinical nurse specialist: Moving from debate to action on the future of advanced psychiatric nursing. *Archives of Psychiatric Nursing, 13*(3), 111-116.

Merwin, E., & Mauck, A. (1995). Psychiatric nursing outcome research: The state of the science. *Archives of Psychiatric Nursing, 9*(6), 311-331.

Moller, M. D., & Haber, J. (1996). Advanced practice psychiatric nursing: The need for a blended role. *Online Journal of Issues in Nursing,* Available http://www.nursingworld.org/ojin/tpc1/tpc1_7.htm (Access Date: July 10, 2003).

Norquist, G. S., & Regier, D. A. (1996). The epidemiology of psychiatric disorders and the de facto mental health care system. *Annual Review of Medicine, 47,* 473-479.

Rost, K., Nutting, P., Smith, J., Coyne, J. C., Cooper-Patrick, L., & Rubenstein, L. (2000). The roles of competing demands in the treatment provided primary care patients with major depression. *Archives of Family Medicine, 9*(2), 150-154.

Shell, R. C. (2001). Antidepressant prescribing practices of nurse practitioners. *The Nurse Practitioner, 26*(7), 42-47.

Stuve, P., Beeson, P. G., & Hartig, P. (1989). Trends in the rural community mental health workforce: A case study. *Hospital and Community Psychiatry, 40*(9), 932-936.

Talley, S., & Richens, S. (2001). Prescribing practices of advanced practice psychiatric nurses: Part I--Demographic, educational and practice characteristics. *Archives of Psychiatric Nursing, 15*(5), 205-213.

The use of RUCAs in health care. (2002). [Web Page]. URL http://www.fammed.washington.edu/wwamirhrc/rucas/use_healthcare.html [2004, January 28].

West, J., Kohout, J., Pion, G. M., & Wicherski, M. M. (2000). Mental health practitioners and trainees. In R. W. Manderscheid, & M. J. Henderson (Eds.), *Mental health, United States, 2000* (pp. 279-315). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Williams, C. A., Pesut, D. J., Boyd, M., Russell, S. S., Morrow, J., & Head, K. (1998). Toward an integration of competencies for advanced practice mental health nursing. *Journal of the American Psychiatric Nurses Association, 4*(2), 48-56.

Table 1: Psychiatric Nurses and Requirements for Prescriptive Authority

State	NP	CNS	Protocols	Collaboration
Alabama	•	o		√
Alaska	•	**NA**[1]		
Arizona	•	o		
Arkansas	•	•		√
California	•	o		√
Colorado	•	•		
Connecticut	•	•		√
Delaware	•	•		
Florida	•	•*	√	√
Georgia	o*f*	o*f*	√	
Hawaii	•*	•*		
Idaho	•	•		√
Illinois	•	•*		√
Indiana	•	•		√
Iowa	•*	•*		
Kansas	•*	•*		√
Kentucky	•*	•*		√
Louisiana	•*	•*		√
Maine	•	o		
Maryland	•	o		√
Massachusetts	•	•		√
Michigan	•	**NA**		√
Minnesota	•	•		√
Mississippi	•	o		√
Missouri	•*	•*		√
Montana	•*	•*		
Nebraska	•*	•*		√
Nevada	•*	•*		√
New Hampshire	•	•		
New Jersey	•	•*		√
New Mexico	•	•		
New York	•	**NA**		√
North Carolina	•	**NA**		√
North Dakota	•	•		√
Ohio	•	•		√
Oklahoma	•*	•*		√
Oregon	•	o		
Pennsylvania	•	o		√
Rhode Island	•	•		√
South Carolina	•*	•*		√
South Dakota	•	o		√
Tennessee	•	**NA**		√
Texas	•	•		√
Utah	•*	•*		
Vermont	•*	•*		
Virginia	•	o		√
Washington	•	**NA**		
West Virginia	•	**NA**		√
Wisconsin	•	•		
Wyoming	•*	•*		

o	Licensed, but does not have prescriptive authority
•	Licensed with prescriptive authority
NA	Not licensed in the state
*	Can prescribe if licensed as an APRN
+	Licensed as an APRN only
f	May order through protocol with physician

[1] "CNSs from other states are eligible for certification as ANP", Haber (2003) Table 1

Table 2. Distribution of Advanced Practice Psychiatric Nurses (APPNs) by State and Rurality[1]

State	Urban	Suburban	Large Town	Rural	Total	% Rural Population[2]	% of APPNs in Urban & Suburban[3]	% of APPNs in Large Town & Rural[4]
AK	39	4	6	3	*52*	32.4%	82.7%	17.3%
AL	41	9	4	9	*63*	58.2%	79.4%	20.6%
AR	12	3	11	3	*29*	13.6%	51.7%	48.3%
AZ	87	10	10	6	*113*	52.9%	85.8%	14.2%
CA	315	23	8	4	*350*	3.3%	96.6%	3.4%
CO	118	13	1	14	*146*	18.6%	89.7%	10.3%
CT	315	98	9	18	*440*	8.6%	93.9%	6.1%
DC	29	0	0	0	*29*	0.0%	100.0%	0.0%
DE	23	1	0	1	*25*	20.3%	96.0%	4.0%
FL	217	28	7	8	*260*	7.0%	94.2%	5.8%
GA	181	12	17	11	*221*	30.2%	87.3%	12.7%
HI	22	16	7	5	*50*	28.0%	76.0%	24.0%
IA	39	3	7	15	*64*	54.1%	65.6%	34.4%
ID	12	1	6	2	*21*	65.4%	61.9%	38.1%
IL	152	10	8	12	*182*	14.8%	89.0%	11.0%
IN	85	21	11	2	*119*	27.5%	89.1%	10.9%
KS	73	9	11	3	*96*	42.5%	85.4%	14.6%
KY	79	15	18	18	*130*	51.1%	72.3%	27.7%
LA	25	5	4	7	*41*	24.4%	73.2%	26.8%
MA	727	93	34	47	*901*	1.5%	91.0%	9.0%
MD	328	57	23	14	*422*	7.2%	91.2%	8.8%
ME	66	44	16	49	*175*	59.8%	62.9%	37.1%
MI	157	29	17	16	*219*	17.8%	84.9%	15.1%
MN	162	14	18	26	*220*	29.2%	80.0%	20.0%
MO	106	6	7	18	*137*	32.0%	81.8%	18.3%
MS	36	5	7	6	*54*	67.4%	75.9%	24.1%
MT	5	2	8	5	*20*	76.8%	35.0%	65.0%
NC	127	19	16	18	*180*	32.0%	81.1%	18.9%
ND	13	0	7	2	*22*	54.8%	59.1%	40.9%
NE	38	4	14	1	*57*	46.6%	73.7%	26.3%
NH	44	33	22	22	*121*	37.5%	63.6%	36.4%
NJ	301	39	4	2	*346*	0.0%	98.3%	1.7%
NM	48	10	9	2	*69*	42.4%	84.1%	15.9%
NV	11	2	2	0	*15*	11.7%	86.7%	13.3%
NY	612	49	30	40	*731*	7.9%	90.4%	9.6%
OH	263	25	15	3	*306*	18.9%	94.1%	5.9%
OK	18	2	7	0	*27*	38.7%	74.1%	25.9%
OR	60	14	23	7	*104*	28.8%	71.2%	28.9%
PA	338	42	25	16	*421*	15.4%	90.3%	9.7%
RI	96	24	1	0	*121*	8.0%	99.2%	0.8%
SC	79	12	7	5	*103*	29.8%	88.4%	11.7%
SD	5	0	1	4	*10*	64.4%	50.0%	50.0%
TN	142	24	22	11	*199*	32.3%	83.4%	16.6%
TX	197	38	17	12	*264*	14.7%	89.0%	11.0%
UT	74	3	3	3	*83*	24.0%	92.8%	7.2%
VA	230	38	26	21	*315*	21.4%	85.1%	14.9%
VT	8	4	10	31	*53*	67.1%	22.6%	77.4%
WA	345	53	16	12	*426*	16.7%	93.4%	6.6%
WI	73	10	7	8	*98*	32.0%	84.7%	15.3%
WV	19	5	7	6	*37*	57.6%	64.9%	35.1%
WY	3	0	3	3	*9*	69.9%	33.3%	66.7%

State	Urban	Suburban	Large Town	Rural	Total	% Rural Population	% Urban & Suburban	% Large Town & Rural
US	6595	981	569	551	8696	19.7%	87.2%	12.9%

Source: American Nurse Credentialing Center, Center, Economic Research Service, USDA 2002

Four Tiered Consolidation of RUCA Codes

Consolidation Class	RUCA Codes
Urban Core Areas	1
Suburban Areas	2, 3, 4.1, 7.1, 8.1, 10.1
Large Town Areas	4, 5, 6, 7.2, 8.2, 10.2
Small Town and Isolated Rural Areas	7.0, 7.3, 7.4, 8, 8.3, 8.4, 9, 9.1, 9.2, 10, 10.3, 10.4, 10.5

[1] The degree of rurality was defined using the 1990 zip code version of Rural Urban Commuting Areas (RUCA) codes. We used a four tiered consolidation of the RUCA system which collapses them into urban core, suburban, large town and small town and isolated rural areas. The table shown above illustrates how each of these areas was defined.

[2] Percent of population living in rural areas in 2002. These data were obtained from the state fact sheets found on the USDA's Economic Research Service site, www.ers.usda.gov/state facts/. Rurality was defined using Rural Urban Continuum Codes. Metropolitan counties were classified by size of MSA (using codes 0 through 3) and non-metropolitan counties were classified by degree of urbanization and proximity to metropolitan areas (using codes 4 through 9).

[3] Percent of mental health APRNs in urban and suburban areas.

[4] Percent of mental health APRNs in large town and rural areas.

Appendix A

Methodology for Table 1.

We obtained information about the status of licensure and prescriptive authority of psychiatric nurse practitioners (NPs) and clinical nurse specialists (CNSs) from a recent article addressing legislative and licensure issues. (Haber et al., 2003). The data were collected from state boards of nursing, each state's professional organization or American Psychiatric Nurses Association and national organizations. The table included in this article summarizes the authors' findings with three pieces of information for each state. First, Haber and her colleagues list the nursing titles recognized by each state. This category also included information on whether NPs or CNSs were included under the title of Advanced Practice Registered Nurse (APRN). Second, the table lists whether a CNS or NP has prescriptive authority. Lastly, for those with prescriptive authority, the table provides the type of prescriptive authority given, including collaborative, independent, or supervised.

Appendix A
Psychiatric Nursing Programs contacted for this study.

Alaska:

University of Alaska- Anchorage School of Nursing
Program: Psychiatric-Mental Health Nursing- 32 cr, CS-Adult and PNP-Adult
Program typically runs every other yr- with cohort of 5 students.

Iowa:

1. Allen College- is a private college for nursing and allied health professions in Waterloo, in northeast Iowa established in 1989. It developed out of the original Allen Memorial Hospital Nurses Training School (which originated in 1925). The college offers programs in nursing and radiology.
It has joint ventures with the University of Northern Iowa (Cedar Falls) and Wartburg College (Waverly) for general education instruction.

Programs: Family Nurse Practitioner program, not psychiatric. Masters of Science in Nursing with focus on Leadership or Health Education.

2. Drake University- HAD a graduate nursing program, which closed in May of 2003. It no longer has Nursing at either Grad or undergrad level.

Kentucky:

1. University of Kentucky- Large Graduate program (17 faculty), and there is even an Assistant Dean for Advanced Practice Nursing. There are many Master's level tracks and subspecialties including Adult Psychiatric/Mental Health Nurse Practitioner (others include Acute Care Nurse Practitioner, Adult Clinical Nurse Specialist, Parent-Child Nursing, Primary Care Nurse Practitioner, Public Health Nursing, Geriatric Nurse Practitioner, Neonatal Clinical Nurse Specialist, Public Health Clinical Specialist).

The Psych NP program identifies the severely mentally ill adult and their family as a particular focus along with those with "common problems" or acute and chronic problems and co-morbidities. The program is a total of 44 Credit Hours. It is a typical Psych NP curriculum- with Psychopharm, Pathophysiology, Health Assessment included. There is also a Post Master's Certificate Program Option-

2. Spaulding University- in Louisville- Sisters of Charity of Nazareth, both undergrad and grad liberal and professional studies- mission statement stresses an emphasis on service and promotion of "peace and justice".
School of Nursing offers a Master of Science in four tracks: Leadership in Nursing; Nurse Practitioner: Adult, Family and Pediatric. No Psychiatric Program.

3. Northern Kentucky University- Department of Nursing offers both undergrad and Grad nursing. The MSN program offers nursing administration and Primary Care Nurse Practitioner- focusing on Adult, Pediatric, Family and Geriatric. Also a post-master's certificate is offered. An on-line MSN program began Fall of 2003. No Psychiatric NP.

4. Murray State- Department of Nursing offers both undergrad and Masters Of Science in nursing- Clinical Specialist, Family Nurse Practitioner and Nurse Anesthetist. No Psychiatric program.

Maine:

1. Husson College – private college in Bangor.
Programs: Advanced Practice Psychiatric Nursing, CS in Child/adolescent or Adult and PNP – 43 cr
Typical cohort – 6 students.
Post-Masters Certificate- (for already certified Clinical Specialists) 12-18 cr Only program that explicitly stresses rural practice.

2. University of Southern Maine - Portland
Programs: Psychiatric-Mental Health Nursing-45 cr CS in Adult or PNP in Adult
Post-Masters Certificate- 12 cr Total student enrollment 8-10

New Hampshire:

Rivier College
Psychiatric-Mental Health NP- 43 cr, Post- Masters Certificate
Student enrollment, approximately 5/yr

Ohio:

1. Kent State
Psychiatric Mental Health Nursing, CS and CS/NP- 45, 55 cr, Post Masters- 20 cr
Students: average 6/yr, majority are CS

2. University of Akron
Behavioral Health Nursing, CS or NP, Adult- 49 cr
Students: average 5students/yr

3. Ohio State
Psychiatric Mental Health Nursing, CS or dual psych /adult NP (cert as adult NP)
Students - currently 13

4. University of Cincinnati

Psychiatric Nursing, CS- 60 quarter cr hrs
New program as of summer ’02 currently 2 students

Oregon:

Oregon Health Sciences University- Large program- national leader- campuses in Ashland, Klamath Falls, LaGrande, Portland, Eugene and Bend, Tacoma WA, Bozeman MT, and Provo UT (Coursework and programs delivered online).
Programs: The NP program is offered in Ashland and La Grande as well as in Bend and Eugene. The Clinical Nurse Specialist program is also offered in Ashland and in Eugene.

The Masters program Psychiatric Mental Health Nurse Practitioner is available in Portland and Ashland, Klamath Falls and LaGrande.

The PsychNP program- stresses the role of "primary mental health care provider: and intervention with "vulnerable populations".

The curriculum is one of the longest nationally- 65 Credits

A Post-Masters Certificate is also available

(Note: University of Portland offers both undergrad and grad nursing. Graduate programs include: Family Nurse Practitioner; and Leadership in Health Care Systems. No Psych program.)

Vermont:

University of Vermont-
Programs: Both undergrad and grad NP programs. Grad program offers Adult Health; Community Health, Adult and Family Nurse Practitioner. No Psych program.

Washington:

1. Intercollegiate College of Nursing
Programs: Psychiatric-Mental Health Nursing, PNP- 47-50 cr
Students: 40 currently enrolled; 10 admitted/yr typically 3 yrs to complete program

2. Seattle University School of Nursing
Programs: Psychiatric Mental Health NP- 59-62 cr (Also eligible for addictions certification)
Students: admitted 5 in June, 2003

3. Gonzaga University
Psychiatric-Mental Health Nursing, CS or PNP- 50 cr, Post- Masters Certificate- 31 cr

Muskie School of Public Service

Muskie School of Public Service
96 Falmouth Street
PO Box 9300
Portland, ME 04104-9300

telephone (207) 780-4430
tty (207) 780-5646
fax (207) 780-4417
www.muskie.usm.maine.edu

usm
UNIVERSITY OF
SOUTHERN MAINE