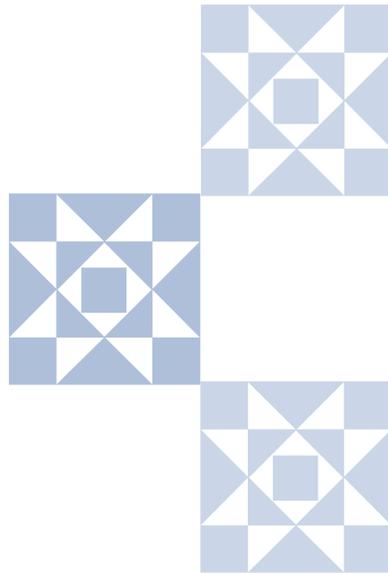


Rural Health
Research In Progress
in the Rural Health Research Centers Program

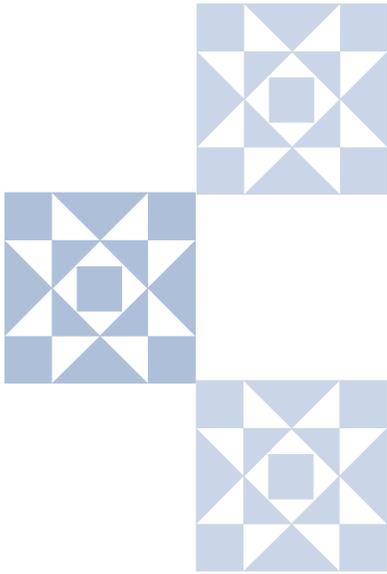


Rural Health Research In Progress

in the Rural Health Research Centers Program

Ninth Edition

February 2005



Acknowledgments and Credits

Rural Health Research in Progress is produced annually by the Maine Rural Health Research Center with support from the Federal Office of Rural Health Policy. We greatly appreciate the cooperation of the other rural health research and policy analysis centers and the guidance of our project officer, Joan Van Nostrand.

- Karen B. Pearson, Editor
- Christine Richards, Richards Design and Production

Database for Rural Health Research in Progress

<http://www.rural-health.org/database>

Information about current rural health services research conducted by the Rural Health Research Centers Program of the Federal Office of Rural Health Policy (ORHP) and many other investigators is available on the internet. The Maine Rural Health Research Center at the University of Southern Maine receives funding from ORHP to maintain a searchable database of rural health services research and policy analysis in progress. This database includes all ORHP-funded studies, as well as research funded by other federal agencies, major private foundations and other sources.

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This book describes the research and policy analysis projects underway in the Rural Health Research Centers Program of the Federal Office of Rural Health Policy (ORHP), Health Resources and Services Administration, U.S. Department of Health and Human Services. The objective of this program is to produce research and policy analyses that will be useful in the development of national and state policies to assure access to quality physical and behavioral health services for rural Americans.

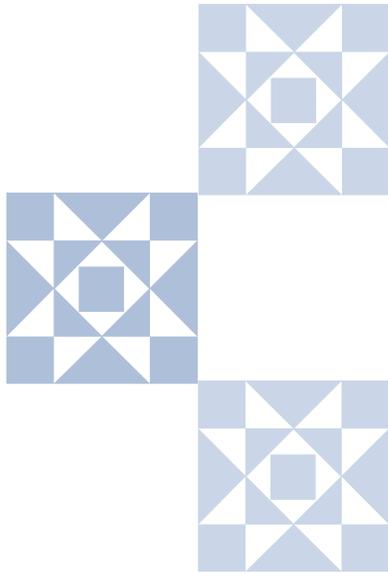
The individual grantees and the eight research and policy analysis centers currently funded in part or in whole by the Federal Office of Rural Health Policy are addressing a wide range of problems in the financing, organization and delivery of rural health care, including:

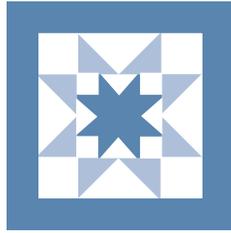
- Behavioral Health
- Bioterrorism Preparedness
- Defining Rural
- Emergency Medical Services (EMS)
- Health Insurance and the Uninsured
- Health Promotion
- Hospitals
- Hospitals: Rural Hospital Flexibility Program
- Long Term Care
- Medicaid and S-CHIP
- Medicare
- Public Health
- Quality
- Racial and Ethnic Populations
- Research-Policy Interface
- Service Delivery
- Special Needs of Women and Children
- State-level Data
- Workforce

This ninth edition summarizes the Rural Health Research Centers' current research in these areas and provides an anticipated completion date for each project. Descriptions of the Centers and lists of their current publications are located in the last section of this publication.

For additional information on the Rural Health Research Center Program, please contact Joan Van Nostrand at 301-443-0835 or visit the ORHP website at <http://ruralhealth.hrsa.gov>

Office of Rural Health Policy
Parklawn Building Room 9A-55
5600 Fishers Lane
Rockville, MD 20857





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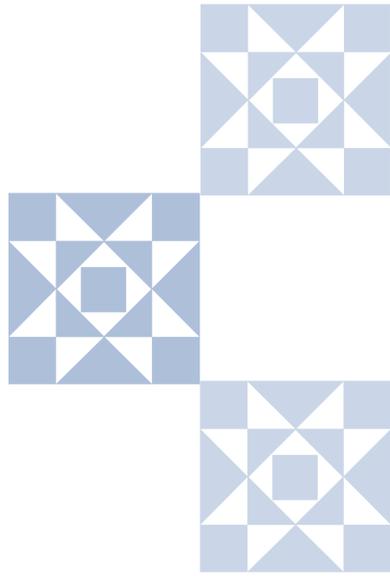
The projects are grouped by topic. Abstracts include the purpose and methodology of the project along with its policy relevance and any anticipated publications. Contact information is provided for each project.

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Part 1: Current Projects

Behavioral Health



Assessing Demand and Capacity for Behavioral Health Services in Northern Minnesota

University of Minnesota Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: Donna D. McAlpine, Ph.D., 612-625-9919 or mcap1004@umn.edu

Funder: Generation Health Care Initiatives

Challenges to delivering mental health services in Northern Minnesota mirror those experienced in rural settings throughout the nation. Yet, little is known about how services can best be organized to meet these challenges. This project gathered the information necessary to measure demand and capacity and develop policy recommendations to improve the organization of behavioral health services in Northern Minnesota. The project has three central objectives:

- Assess demand and capacity for behavioral health services

- Develop a model to monitor demand/capacity over time
- Propose recommendations to improve the organization of behavioral health services.

The project included key informant interviews and the collection of primary data over a one-year period from organizations and providers who serve persons with mental health care needs in the region. The data will be used as input to a model that will be developed to forecast the balance of demand and capacity for mental health services over time.

Differential Effectiveness of Enhanced Depression Treatment for Rural and Urban Primary Care Patients

WICHE Rural Mental Health Research Center

Expected completion date: September 2005

Principal Investigator: Kathryn Rost, Ph.D., 303-221-3904, or Kathryn.Rost@uchsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Rural primary care practices encounter greater challenges than their urban counterparts when they try to improve the quality of care their depressed patients receive. Rather than assume that “one size fits all,” investigators need to evaluate whether depression treatment quality intervention has comparable effectiveness in improving outcomes in rural and urban patients. This project will explore whether rural populations

achieve outcomes with intervention comparable to their urban counterparts, and whether differences are explained by treatment mediators (e.g., evidence-based care) or psychosocial mediators (e.g., stressful life events and social support). This project will test pre-specified hypotheses by conducting secondary analyses of an RCT known as the Quality Enhancement for Strategic Teaming (QuEST) study, consisting of a

consecutively sampled cohort of 479 depressed primary care patients recruited from 12 practices in 10 states (Colorado, Michigan, Minnesota, New Jersey, North Dakota, North Carolina, Oklahoma, Oregon, Virginia, and Wisconsin); 160 of these depressed primary care patients are recruited from practices in non-MSA counties in 4 states (Minnesota, North Dakota, Oregon, and Wisconsin). The study's strength is its ability to extend preliminary explorations the research

team has conducted to a definitive study of differential intervention effectiveness, identifying mediators that explain any differential effects of the intervention on outcomes. These mediators can then be targeted for intervention refinement before these initiatives are disseminated to rural populations. This project will produce a manuscript for peer-reviewed publication, a working paper, a research summary, a brochure, and a conference/grand rounds presentation.

Effects of Alcohol Use on Educational Attainment and Employment in Rural Youth

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or jprobst@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

As they pass from teens to early adulthood, a significant portion of American youth initiate alcohol use. The rates of alcohol use rise dramatically, from 3 percent at age 12 to 49 percent at age 20. Previously, it was believed that strong social connections present in rural areas reduced youthful consumption of alcohol and substance abuse, but recent studies suggest that the rural-urban gap has closed. Alcohol use in youth has been demonstrated to lower educational attainment, but little is known about whether or not youthful alcohol use affects employment opportunities and lower wages. This study proposes to

examine the effects of alcohol use during the teen years on subsequent educational attainment and employment in a panel of rural residents. If the effects of youthful alcohol use are more severe and more long lasting in rural areas, then programs targeting these locales should be researched and advocated by the Substance Abuse and Mental Health Administration. This study will use a longitudinal panel study design for the period 1979 to 1998, employing the National Longitudinal Survey of Youth-1979 data set, which is an ongoing annual panel survey of persons who were between the ages of 14 and 22 in 1979.

Estimated Mental Health Care Utilizations in Rural Areas

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or jprobst@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will provide a descriptive picture of mental health and substance abuse treatment utilization among the rural population with the emphasis on rural minorities. Rural minority populations may be at a higher risk for poor outcomes due to their vulnerability and lack of adequate internal resources such as education and external resources such as health insurance. This research will focus on the following types of

mental health and substance abuse utilization:

- Type of mental health and/or substance abuse treatment received
- Setting of treatment received (e.g., office based)
- Receipt of prescription drugs for mental health and/or substance abuse treatment.

Identifying At-Risk Rural Areas For Targeting Enhanced Depression Treatment

WICHE Rural Mental Health Research Center

Expected completion date: December 2005

Principal Investigator: John C. Fortney, Ph.D., 501-257-1726 or fortneyjohnc@uams.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will identify rural areas that should be targeted for early adoption of evidence-based depression treatments based on community need. The goal is to provide health plans with a scientifically-based method to identify counties in greatest need and to inform national, regional, and local decision-makers about distributing scarce resources to areas which would most benefit from enhanced depression treatment. The results of this research will benefit health plans that cover these communities, particularly if adoption of evidence-based depression treatments can reduce the elevated rates of hospitalization observed in depressed rural residents. The rate of depression-related hospitalizations is the best nationally available proxy for a population's need for enhanced

depression care programs.

Project staff will conduct a secondary database analysis of the Statewide Inpatient Database (SID), containing the universe of hospital discharge records from all community hospitals in participating states. De-identified hospitalization data will also be collected from other national databases such as claims records from managed behavioral health plans (i.e., carve-outs) as well as encounter data from the Department of Veterans Affairs. In addition, the project will investigate the degree to which geographic areas at risk for depression-related hospitalizations can be predicted by rurality, economic factors, access to care, and demographics. Although prevalence rates have not been found to differ across rural and urban

areas, it is expected that rurality is associated with hospitalization rates due to a number of reasons including poor access to outpatient specialty care and poor economic conditions. In combination with small area variation analysis methodologies, a Geographic Information System (GIS) will be used to examine spatial variation in need across geographically defined populations and to identify geographic areas of high risk. Specifically, the GIS will be used to spatially reference data from various sources and geographically join layers of

spatially referenced information to create community health profiles.

Two papers will be generated from this project. The first paper will describe community-level risk factors for depression-related hospitalizations. The second paper will identify those counties in the U.S. where residents at the highest risk for a depression-related hospitalization. Future research projects will focus on developing strategies to implement evidence-based care for depression in these high risk communities.

The Impact of Mental and Emotional Stress on Rural Employment Patterns

Maine Rural Health Research Center

Expected completion date: September 2005

Principal Investigator: Lisa Morris, Ph.D., 207-780-5876 or lmorris@usm.maine.edu

Contact Person: Stephenie Loux, M.S., 207-780-5774 or sloux@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

Although society provides supplemental security income to individuals with serious and persistent mental illness, those with less serious emotional disorders or sub-acute mental distress lack eligibility for these benefits. However, poor mental health status can result in significant negative effects on the worker, his or her family, and the local community and its economy. Given the smaller, less diversified rural economy, the lack of Employee Assistance Programs and mental health insurance benefits, and the shortage of mental health providers, the effects of mental health problems are likely to be exacerbated in rural areas. In this study, the National Longitudinal Survey of Youth will be used to investigate how mental health symptoms affect employment patterns, and the extent to which these effects differ by

rural and urban residence.

Specifically, the following questions will be addressed:

- Are there rural-urban differences in the prevalence of mental health problems, ranging from clinical conditions to sub-acute, undiagnosed mental and emotional stress among labor force participants/nonparticipants and employed/unemployed persons?
- To what extent do mental and emotional symptoms and their severity predict lower job retention and longer unemployment spells and are there rural-urban differences?
- Does the impact of mental and emotional health symptoms differ according to the type of job transition (left for another job, left for no new job, remained in same job but at

reduced hours) and are there rural-urban differences?

Developing a better understanding of how mental health problems affect rural workers will not only assist health and human service providers in targeting interventions to workers needing support,

but will also inform employers about how they might help employees continue to function productively on the job. Findings from this study will include a working paper, presentations at national conferences, and submission to a peer-reviewed journal.

Maine Mental Health Evidence-Based Practice Planning Initiative

Maine Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: David Lambert, Ph.D., 207-780-4502 or davidl@usm.maine.edu

Funder: National Institutes of Mental Health

This project was part of a one-year planning grant for the state of Maine's Department of Behavioral and Developmental Services (BDS) to assess the state's need, capacity and readiness for implementing evidence-based practices (EBP) at the community mental health level. An important issue is the capacity of implementing EBP in rural areas, given infrastructure and transportation challenges they face. Major collaborators on the planning grant are

the Muskie School, University of Southern Maine; Department of Psychiatry Research, Maine Medical Center; and the New Hampshire-Dartmouth Psychiatric Research Center. The Muskie School's role was to develop and conduct a survey of community providers and BDS regional and area officials to assess the current knowledge, perceived need, and strategies for enhancing and implementing EBP.

Mental Health Encounters in Critical Access Hospital Emergency Rooms: A National Survey

Maine Rural Health Research Center

Expected completion date: March 2005

Principal Investigator: David Hartley, Ph.D., 207-780-4513 or davidh@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will survey Emergency Room (ER) managers in a nationally representative sample of Critical Access Hospitals (CAHs) to determine the proportion of ER encounters involving mental health pathology, types of mental health problems most commonly seen in these encounters, and resources available to CAHs to address the problems

encountered. Project staff will also investigate whether the presence of the other two safety net provider types in the community (primary care and mental health), the rurality of the community (as indicated by RUCA classification), or the presence of another hospital in the county affect the volume or types of mental health problems encountered.

Mental Health Services: The Effect of Variations in State Policies

Southwest Rural Health Research Center

Expected completion date: March 2005

Principal Investigator: Catherine Hawes, Ph.D., 979-458-0081 or hawes@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Nationally, the rate of mental illness is similar for persons living in urban and rural areas. However, the availability and use of mental health services is worse in rural areas than urban ones. Many factors contribute to the relatively low use of mental health services in rural areas. In particular, state licensure or “scope of practice” acts are thought to have a profound effect on access since third party payers often base their payment and coverage decisions on these state policies.

This study identified variations in state licensure and payment or coverage

policies and examined the effect of these variations on the availability of mental health services in rural areas. The study design is intended to classify states by the mix of their policies on licensure, payment and coverage for mental health services, and to examine the effects of these combined policies on the availability of mental health services in rural areas. Final products will include a report with policy recommendations, a policy brief, and two presentations targeted at rural stakeholders and state policymakers.

National Study of Substance Abuse Prevalence & Treatment Services in Rural Areas

Maine Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: David Hartley, Ph.D. M.H.A., 207-780-4513 or davidh@usm.maine.edu

Contact Person: John A. Gale, M.S., 207-228-8246 or jgale@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

Substance abuse is a major and growing threat to the health and well-being of rural individuals, their families, and their communities. It frequently co-occurs with mental and/or physical health problems and is detrimental to effective school, job, and parenting performance and highly correlated with anti-social and criminal behavior. These problems may be more pervasive in rural areas given that higher rates of substance abuse are associated with higher levels of poverty and unemployment and lower levels of income. Substance abuse strains rural service systems which are often

overextended and under-resourced relative to urban systems. The ability to organize effective substance abuse delivery systems in rural communities is hampered by limited supplies of specialized providers and services, low population densities, and long travel distances for rural persons to obtain care.

Given the apparent disparity between need and the availability of services in rural areas, this project will explore these issues through the development of a rural substance abuse chartbook. Two national surveys sponsored by the Substance Abuse and Mental Health Services

Administration will be used to examine the prevalence of the use of different substances relative to the availability and use of treatment services, as well as how this relationship may vary in rural communities of different sizes, regions of the country, and among different demographic groups.

This project will produce a comprehensive national chartbook on the prevalence of the abuse of legal and

illegal substances across rural populations, the extent to which rural individuals are receiving treatment for their substance abuse, barriers to the receipt of treatment, and the distribution of substance abuse services across rural areas. A rural substance abuse briefing paper will also be prepared identifying national and regional issues for future rural substance abuse research and policy.

Preventing Hospitalization in Depressed Rural Patients

WICHE Rural Mental Health Research Center

Expected completion date: September 2005

*Principal Investigator: Kathryn Rost, Ph.D., 303-221-3904 or
Kathryn.Rost@uchsc.edu*

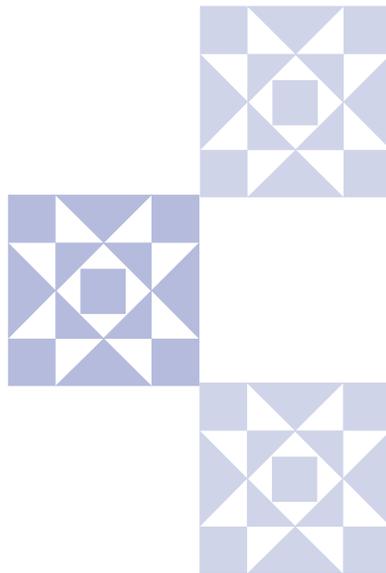
Funder: Federal Office of Rural Health Policy, HRSA

Research in the early 1990s indicated that depressed rural residents in a single state were more likely than their urban counterparts to be hospitalized for depression and other health reasons over the course of a year. This project will explore whether depressed rural patients residing in multiple states are more likely than their urban counterparts to be hospitalized for depression and other health reasons over the course of two years; explore whether any current rural-urban hospitalization differences are reduced in models which control for previous intensive outpatient specialty care utilization, suggesting that rural providers may still be substituting more restrictive/expensive forms of depression treatment when intensive outpatient specialty care is less available; and explore rural-urban differences in the prevalence and consequences of administrative constraints on intensive outpatient specialty care use. Project staff will address this question by conducting a secondary database analysis of the

Quality Improvement for Depression (QID) database. The QID database consists of a consecutively sampled cohort of 1,498 depressed primary care patients recruited from 108 practices in 14 states (California, Colorado, Maryland, Michigan, Minnesota, New Jersey, North Carolina, North Dakota, Oklahoma, Oregon, Texas, Virginia, and Wisconsin); 198 of these depressed primary care patients are recruited from practices in non-MSA counties in 5 states (Colorado, Minnesota, North Dakota, Oregon, and Wisconsin).

The major strength of this study is its ability to extend intriguing statewide findings about rural service substitution patterns to a broader geographic area using a more current longitudinal database to examine how intensive specialty care utilization impacts subsequent hospitalization, and how administrative barriers impact subsequent intensive specialty care utilization. This line of research will contribute to the discussion of whether/

how reduction of “excess” hospitalizations in depressed rural populations could provide additional monies to expand outpatient specialty care programs. This project can inform a systematic outreach intervention to rural purchasers to encourage health plans to provide evidence-based outpatient treatment rather than substitute expensive hospitalization. This project will produce a manuscript for peer-reviewed publication, a working paper, a research summary, a brochure, and a conference/grand rounds presentation.





Attention from the Top? Roles of State Offices of Rural Health Policy in Preparing for Bioterrorism and Other Health System Emergencies

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Curt Mueller, Ph.D., 301-951-5070 or mueller-curt@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

This project followed up with the state offices of rural health (SORH) to identify their current involvement with emergency preparedness in rural areas, particularly in the use of funds earmarked for bioterrorism preparedness. In 2002, the federal Office of Rural Health Policy (ORHP) released its report on emergency preparedness in rural communities as perceived by directors of state offices of rural health. Results of this study indicated that although many of the state offices of rural health were participating in planning, office respondents in a number of states were concerned about their state's lack of resources for preparedness in rural areas. State directors expressed concerns over rural hospital workforce shortages and whether hospital and public health infrastructure capacity was adequate for meeting preparedness needs. Since release of this report, billions of dollars have been used

by the states to strengthen their capacity to respond to bioterrorist threats and other emergencies resulting from terrorism. While general guidelines have been issued to assist state personnel with preparation of plans for use of these funds, whether funds are to be explicitly targeted to meet rural needs depends on decisions by personnel in the states.

Walsh Center staff re-surveyed rural offices of the states and re-visited issues that were raised in the earlier ORHP survey. Roles of the offices were identified and information on the extent of office resources devoted to bioterrorism preparedness were collected. Activities and roles of the most- and least-involved state offices were compared. A report and Policy Brief will be prepared for distribution to policymakers and persons on the Center mailing list.

Impact of Bioterrorism on Rural Mental Health Needs

University of California, Los Angeles

Expected Completion Date: August 2005

Principal Investigator: Jennie C. I. Tsao, Ph.D., 310-824-7667 or jtsao@mednet.ucla.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project aims to assess and improve the preparedness of rural primary care professionals to care for mental health conditions in the wake of bioterrorism and other public health emergencies. Relatively little attention has

been paid to the mental health needs of rural communities in the wake of such major catastrophic events. Prior experience with natural disasters suggests that first responders typically focus on immediate medical trauma or injury, leaving rural

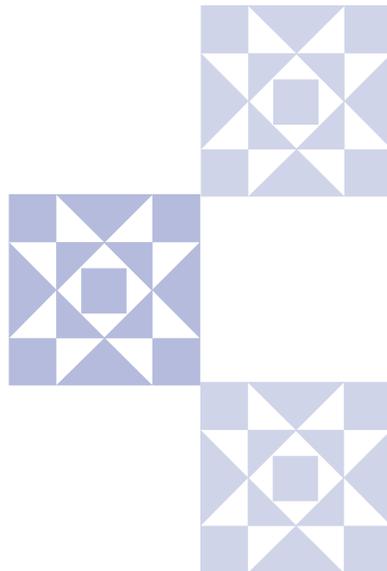
communities to struggle with the burden of unmet mental health needs both in the immediate aftermath and over the longer term.

This project will integrate qualitative (provider and administrator interviews) and quantitative (knowledge-based testing) methodologies to assess existing resources for mental health needs and anticipated resources that would be necessary following bioterrorism and similar mass casualty events. Based on these findings, an intervention will be developed to educate rural primary care providers concerning important aspects of mental health care. The educational intervention will focus on post-traumatic stress disorder (PTSD), since PTSD has high post-event prevalence rates and yet has been neglected in primary care settings relative to other mental disorders such as depression. Education focused on the unique mental health concerns of rural communities will increase the preparedness of rural providers and thereby improve unmet local and

neighboring community health needs following bioterrorism.

Recommendations will be developed for policymakers to improve preparedness to meet mental health needs in rural communities following bioterrorist events and other public health emergencies.

Anticipated products from this project include written educational materials about PTSD and related mental disorders for rural primary care providers and an educational in-service about these psychological disorders to be delivered at rural primary care practices. Anticipated publications from this project include peer-reviewed and white papers describing the existing network of care for mental health needs and how existing care may be improved in anticipation of bioterrorist events, and analysis of the impact of the educational intervention on rural primary care providers' knowledge of likely post-event psychological disorders.





Rural-Urban Commuting Area (RUCA) Development Project: Demographic Description and Frontier Enhancement

WWAMI Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: L. Gary Hart, Ph.D., 206-685-0401 or ghart@fammed.washington.edu

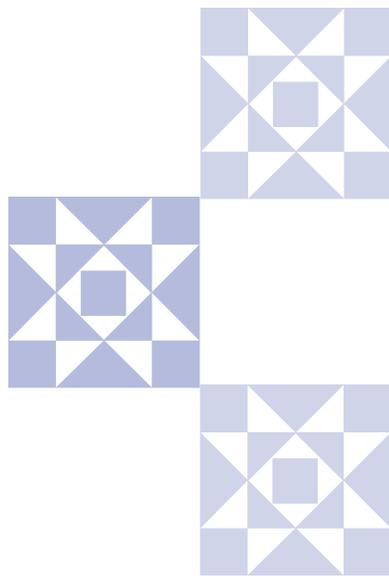
Funder: Federal Office of Rural Health Policy, HRSA

There is considerable current debate and political lobbying about how to define frontier areas. Rural-Urban Commuting Areas (RUCAs) are a new census tract-based classification scheme that utilizes the standard Bureau of Census Urbanized Area (UA) and Urban Place (UP) definitions in combination with commuting information to characterize all the nation's census tracts regarding their rural and urban status and relationships. The codes are based on whether a Census tract is located in a UA or UP and on the destination of its largest and second largest commuting flows. The methods used to accomplish the demographic description of the RUCA codes involved

standard cross-tabulation analysis of the code areas nationally, regionally, and by state.

This project augments the initial RUCA work by:

- Producing and describing the base 1998 demography of the RUCA code areas
- Creating quality state maps of the RUCA codes
- Making this information and the codes easily available on the Web at <http://www.fammed.washington.edu/wwamirhrc/rucas/rucas.html>.





Advantages and Disadvantages of Hospital-Based Emergency Medical Services in Rural Areas

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

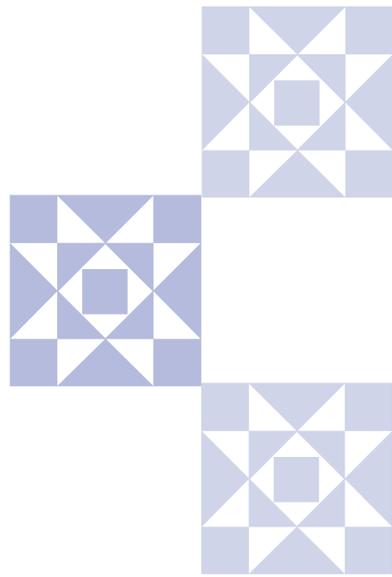
Principal Investigator: Curt D. Mueller, Ph.D., 301-951-5070 or mueller-curt@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

Many rural areas are served by low-volume EMS providers. By definition, these providers are high cost providers because the costs of capacity cannot be spread over a larger number of EMS transports. Revenue sources of low-volume providers are varied, and the new Medicare Ambulance Fee Schedule may be changing revenue for many providers. Under this environment, there may be strong incentives for the rural hospital to acquire the local EMS provider. The purpose of this project was to clarify issues surrounding the hospital's decision to acquire and maintain ownership of community ambulance services. Advantages and disadvantages of ownership are identified and analyzed, both conceptually, and informed by data from a national survey of ambulance service providers and information obtained from hospital administrators, ambulance directors, and local government officials who are familiar with overseeing the provision of emergency medical services.

Research questions under study included the following:

- What are the advantages and disadvantages of hospital ownership of an ambulance from the rural hospital's perspective?
- What are the major economic and non-economic challenges confronting rural hospital-based ambulance service providers?
- What are the advantages and disadvantages of hospital ownership of an ambulance from the rural community's perspective?
- Why is EMS hospital-based in some communities and not in others?
- Are hospital-based ambulance services able to utilize more paid staff, thereby avoiding the extent of reliance on volunteer staff that often characterizes government-operated, rural ambulance service providers?
- Are hospital-based ambulance services better able to meet equipment and supply costs than government-operated, rural ambulance service providers?
- What is the future of ambulance ownership by the hospital?





Effects of Uninsurance During the Preceding 10 Years on Health Status of Rural Working Age Adults

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or jprobst@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project utilizes data from the 1979 National Longitudinal Survey of Youth, which has over twenty years worth of data on individuals who were between the ages of 14-22 in 1979, in order to determine the effects of long-term, continuous uninsurance on health status. This study will compare people in rural and urban areas to determine if differences in health insurance and its effect on health status occur between these two populations.

The following hypotheses will be tested:

- Workers with longer periods of uninsurance, in multivariate analyses controlling for income, poverty and status/behavior at the beginning of the time period, will be more likely to be overweight, to smoke, to report experiencing hypertension or diabetes, or to describe their health as “fair” to “poor.”
- Effects of uninsurance will be greater in rural than in urban respondents, and greater for minority rural populations than for white rural populations.

Health Insurance Dynamics of Uninsured Rural Families

Maine Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Andrew F. Coburn, Ph.D., 207-780-4435 or andyf@usm.maine.edu

Contact Person: Erika Ziller, MS, 207-780-4615 or eziller@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

Numerous studies have found higher uninsured rates among rural versus urban residents, yet our understanding of the health insurance coverage of rural families remains limited. This is because the previous studies have focused on the insurance status of rural individuals despite growing recognition among researchers and policymakers that health insurance is what the Institute of Medicine (IOM) calls “A Family Matter” (IOM 2002). To better understand the dynamics of insurance coverage among rural and urban families, this study will use the Medical Expenditure Panel Survey (MEPS) to compare family health insurance coverage among non-elderly rural and urban families.

This study has three objectives:

- In households with at least one uninsured member, to determine if there are rural-urban differences in family-level insurance status (fully insured, partially insured, or completely uninsured)
- Among families with mixed coverage, to identify the insurance status of other family members (Medicare, Medicaid, employer-sponsored, and non-group private)
- To determine what employment and socioeconomic characteristics are associated with rural families’ health insurance mix and whether these

characteristics are the same or different than for urban families.

Given that current strategies to address the uninsured appear to be focused almost exclusively on incremental health insurance reform, the findings from this study will assist policy-makers in determining how to build on

existing insurance systems in ways that will be most effective for rural families.

Findings from this study will include a working paper, a research and policy brief, presentations at national conferences, and submission to a peer-reviewed journal.

Premium Assistance Programs: Exploring Public-Private Partnerships as a Vehicle for Expanding Health Insurance to Rural Uninsured

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: August 2005

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Contact Person: Pam Silberman, JD, Dr.PH., 919-966-2670 or pam_silberman@.unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Many states have created public-private partnerships to expand health insurance coverage to the uninsured. Among these, one group of programs, "premium assistance programs," are designed to help lower-wage workers pay the premium costs of their employer-sponsored health insurance. States can finance premium assistance programs through state-only funds, or can seek to share the costs with the federal government through Medicaid and/or State Children's Health Insurance Program (SCHIP) premium assistance programs. Recently, the Centers for Medicare and Medicaid Services (CMS) has given states more flexibility in designing premium assistance programs through Health Insurance Flexibility and Accountability (HIFA) 1115 waivers.

Currently, there are 16 states that have operational premium assistance programs. This project will examine the experience of those states in implementing premium assistance

programs in rural areas. The project will assess whether there are certain design features or certain types of rural communities where these programs may be more feasible. The study will include three components:

- A survey of state Medicaid and/or SCHIP agencies that have implemented or are considering implementing a premium assistance program
- A secondary data analysis of the communities in which premium assistance programs have been most successful to determine characteristics that could explain the success or failure of this program in different geographic locations
- In-depth case studies of premium assistance programs in four states.

Study results will be presented in a working paper and findings brief.

Trends in Uninsurance Among Rural Minority Children

South Carolina Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or jprobst@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Over the past decade, there have been multiple expansions of Medicaid access for children. Assessments of the effects of these expansions have yielded conflicting results. The S-CHIP program reaches the end of its initially legislated funding in 2006; OMB estimates that enrollment will begin to decline in 2005. In order to contribute to probable debate regarding continuation or evolution of S-CHIP, it is necessary to ascertain whether the program has positively affected rural

children, and whether all rural children, including minority children, have benefited equally. To provide perspective, and to distinguish, to the extent possible, between year-to-year fluctuations and long term trends, trends in health insurance coverage and health services utilization among rural children were analyzed. Data was drawn from the National Health Interview Survey, 1980 through 2001.

Uninsurance and Welfare Reform in Rural America

RUPRI Center for Rural Health Policy Analysis

Expected completion date: April 2005

Principal Investigator: Timothy D. McBride, Ph.D., 314-977-4094 or mcbridet@slu.edu

Funder: Federal Office of Rural Health Policy, HRSA

Former recipients of welfare are likely to face significant difficulties obtaining health insurance in rural areas, perhaps even greater than in urban areas, primarily because jobs in rural areas are less likely to offer health insurance but also because difficulties with the Medicaid program might be exacerbated in rural areas. The loss of health insurance coverage for mothers who leave welfare could impose a significant risk factor on their families, especially if the mother or children have health conditions or disabilities. Women who have made the transition to work but have lost their health insurance coverage because the job does not offer insurance coverage may return to Temporary Assistance for Needy Families (TANF) coverage, knowing that TANF will provide Medicaid coverage.

This project will research the following hypotheses:

- Transitions off of welfare are often not accompanied by the acquisition of private health insurance or the continuation of Medicaid coverage
- Transitions off of welfare, accompanied by health insurance coverage, will lead to improved health status, and improved access to health care, for former welfare recipients
- Transitions off of welfare, not accompanied by health insurance coverage, will lead to declines in health status, and declines in access to health care, for former welfare recipients.

This project will proceed in two phases. In the first phase, project staff will use widely-accepted databases to examine the recent history of uninsurance rates in the U.S., focusing on the low-income population that could be eligible

for welfare. In the second phase, the focus will be on how welfare reform has impacted the health insurance coverage of welfare recipients and other low-income persons over the period of time when welfare reform was phased in.

Why Are Health Care Costs Increasing and Is There a Rural Differential in National Data?

RUPRI Center for Rural Health Policy Analysis

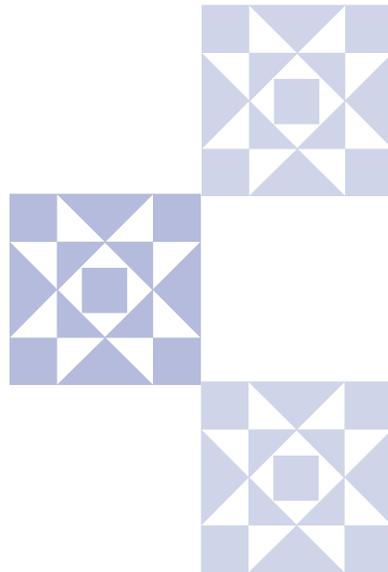
Expected completion date: April 2005

Principal Investigator: Timothy D. McBride, Ph.D., 314-977-4094 or mcbriDET@slu.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will determine whether growth in health insurance premiums and out-of-pocket spending differs in rural areas as compared to urban areas. Rising health care spending is an increasing concern to rural residents, employers, taxpayers, and legislators. Following a six-year period in which health care spending experienced an unprecedented lull in growth, total health care spending in the U.S. grew in 2000 and 2001.

The project will be conducted in two phases. First, a concept document will be produced discussing the reasons for the rise in health care costs, and whether or not we would expect to find a rural differential. Second, MEPS data over time will be used to analyze medical care costs in urban and rural areas. Two policy papers and two policy briefs will be produced.





Breast, Cervical, Colorectal, and Prostate Cancer Screening in Rural America: Does Proximity to a Metropolitan Area Matter?

WWAMI Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: Mark Doescher, M.D., 206-616-9207 or mdoesche@u.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

Because local cancer screening services frequently are not available in rural locations, many persons need to travel great distances to medical facilities for screening. Lower levels of education, income and health insurance coverage among rural residents and minority group members serve as additional barriers to cancer screening. However, no studies using nationally representative data have explored whether persons residing in remote rural locations fare worse on cancer screening, and few studies have examined the issue of cancer screening among rural minority group members. For this study, non-public use

data from the Behavioral Risk Factor Surveillance System (BRFSS) was used to explore the prevalence and trends of screening for four types of cancer (colorectal, breast, cervical, and prostate). The study compared screening rates among various levels of rural versus urban BRFSS respondents and among white respondents versus those from racial/ethnic minority groups. This project will result in a policy brief and a working paper. A manuscript will be submitted for publication to a peer-reviewed journal, and findings will be presented at appropriate regional and national conferences.

Evaluation of the RWJ/HRSA Demonstration Project “Creating an Integrated Outreach System to Isolated Colonia Residents in Hidalgo County, Texas”

Southwest Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Craig Blakely, Ph.D., 979-862-2419 or blakely@srph.tamhsc.edu

Funder: The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation (RWJ), in a joint effort with the Health Resources Services Administration (HRSA), previously funded a major demonstration project in the Rio Grande Valley targeting promotoras lay health workers in Colonias in Hidalgo County, Texas. The major goals of the demonstration project included improving the capacity of the lay health workers to impact the health behaviors of the

residents, and integrating their activities with the actions of the health providers in the area to change access and utilization rates.

This project will provide a rigorous evaluation of the intervention activities in order to determine the impact of the RWJ/HRSA demonstration project. A series of pre- and post-demonstration household surveys and analysis of administrative data from health services

facilities in the Colonias areas will be used to assess project impact. In particular, the evaluation will monitor communication patterns between promotoras and residents as well as promotoras and providers at various levels in the health delivery systems used by residents. Attention will also be

directed to the impact of this intervention on the political and functional interactions of the relevant health providers. Finally, the project team will look toward the potential of this model to impact disaffected populations across the U.S./Mexico border region.

Rural Healthy People 2010 Expansion: Access to Long-Term Care and Rehabilitation Services, Educational and Community-Based Programs, and Public Health Infrastructure

Southwest Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: Larry Gamm, Ph.D., 979-458-2244 or gamm@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

The Rural Healthy People 2010 project reviews research literature and models for practice on rural health priority areas among the Healthy People 2010 focus areas and objectives with a focus on rural urban disparities in prevalence, morbidity/mortality, barriers, and proposed solutions. This project will expand the work of Healthy People 2010 by focusing on the rural constituency, and document any associated disparities, barriers, and solutions unique to rural America.

The companion document to date addresses the following focus areas: access to quality health services, cancer, diabetes, heart disease and stroke, immunization and infectious diseases, injury and violence prevention, maternal, infant, and child health, mental health

and mental disorders, nutrition, oral health, substance abuse, and tobacco use.

During the 2003-2004 project year, the project researchers expanded the document by adding additional chapters and associated models for practice in the following topic areas: Education and Community-Based Programs, and Public Health Infrastructure. Three additional chapters will be added in 2005: Access to Long Term Care and Rehabilitation Services; Immunizations and Infectious Diseases in Rural Areas; and Injury and Violence Prevention in Rural America. These five new focus areas and associated models can be viewed at the Rural Healthy People 2010 website: <http://www.srph.tamhsc.edu/centers/rhp2010>.



Evaluation of New Hampshire's Rural Hospital Flexibility Program

Maine Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: John Gale, M.S., 207-228-8246 or jgale@usm.maine.edu

Funder: Bureau of Rural Health and Primary Care, Department of Health and Human Services

Evaluation of the New Hampshire Rural Hospital Flexibility Program (NH Flex Program) focuses on the experience of the hospitals that have converted to Critical Access Hospital (CAH) status, the assistance provided to the remaining hospitals that are eligible for conversion, and the satisfaction of the staff of the hospitals and related community organizations with the support and assistance provided to them.

Also being evaluated is the role of the Access Improvement Plans prepared by the CAHs to increase local collaboration, enhance primary care, improve access to primary care, and strengthen the emergency medical services systems in their communities. Data collection efforts include the review of documents and materials related to the NH Flex Program; interviews and focus groups with NH Flex Program staff, key state officials in agencies that collaborate with the NH

Flex Program, key stakeholders and members of the Rural Health Advisory Committee, hospital and community agency staff, and community representatives; and site visits to two hospitals that have converted or are in the process of converting to CAH status.

The evaluation team will analyze this data and prepare recommendations and findings for the future development of the NH Flex Program. The evaluation team will also assist the NH Flex Program staff identify performance measures to monitor program implementation, and help program staff develop and implement a performance monitoring system to guide the program. This performance monitoring system will help New Hampshire to prepare for the development of Program Logic Models that will be implemented as part of the evaluation of the National Rural Hospital Flexibility Program.

The Impact of Declining Access to Obstetric Services

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Lan Zhao, Ph.D., 301-951-5070 or zhao-lan@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

The latest medical malpractice insurance crisis is once again bringing the issue of access to medical care to public attention. Among the specialties most affected by the current liability insurance crisis is obstetrics. This project investigated the reasons for the decline in the number of hospitals offering obstetric services and

evaluate how this decline has affected rural patients' access to obstetric care and the quality of health outcomes.

This project addressed the following research questions:

- Is the number of rural counties where hospital-based obstetric services are available continuing to decline?

- What are the causes of the loss of local access to obstetric services in hospitals?
- What is the impact of reduced access to obstetric services provided in local hospitals?
- What can be done to reverse the trend of declining access to obstetric care in rural areas, and what can be done to ensure the quality of obstetric care where it is available?

Data from the American Hospital Association for the years 1989-1995 and 2000 and from the Census Bureau, plus data on the states' scope of practice laws and medical malpractice liability reforms were used to estimate the number of hospitals no longer providing obstetric

care and to examine the factors underlying these changes. Natality data from the National Center for Health Statistics (NCHS), including data on demographics, geographic area, and variables including birth weight, gestation, prenatal care, attendant at birth, and Apgar score was used to estimate changes in sites of delivery and relationships with birth outcomes. Experiences in counties experiencing a loss in obstetric resources was compared with experiences elsewhere. Interviews with members of communities experiencing a loss of resources supplement empirical findings. A report and policy brief along with policy recommendations will be prepared for distribution to policymakers and persons on the Center mailing list.

Investments in Health Information Technology by Rural Hospitals

NORC Walsh Center for Rural Health Analysis

Expected completion date: September 2005

Principal Investigator: Julie A. Schoenman, Ph.D., 301-951-5074 or

schoenman-julie@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

Recent years have witnessed a rapid growth in interest in the application of information technology (IT) to the health care industry for the purpose of improving quality of care. Despite this burgeoning interest, however, little is currently known about the scope of IT investments by rural providers or the factors affecting their adoption of new information technologies. On the one hand, financially-strapped rural providers may decide that they cannot justify sizeable investments in health IT, particularly when many of the benefits accrue directly to patients or insurers rather than to the provider. These providers may also lack the staff and other infrastructure required to select, implement, and maintain IT applications. On the other hand, the smaller scale of rural health care systems may facilitate the implementation of system-wide technological advances, and the increased financial stability experienced by most

critical access hospitals should improve the ability of these rural facilities to invest in health IT.

This study will survey a large sample of rural hospitals to gather data about their IT investments. The sample will be stratified by the rurality of the hospital's location and by CAH status. Survey questions will ask about the hospital's IT structure and readiness for implementing IT systems; current applications used by the hospital; integration of other community-based providers (e.g., local physicians, clinics) into the hospital's system; barriers to adoption of health IT; benefits realized from health IT investments; and future plans for IT investments. Survey responses will be compared for different types of rural hospitals, using a variety of bivariate methods. The project will culminate in a final report and a policy brief that will be widely distributed.

Options for Structuring Disproportionate Share (DSH) Payments to Account for Uncompensated Care: Impact on Rural Hospitals

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or sutton-janet@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

This study identified options for development of an equitable Disproportionate Share (DSH) payment adjustment that accounts for hospital uncompensated care costs, and determined the financial impact of each of these proposals on rural hospitals. A hospital's eligibility to receive DSH payments is based on a set of complex formulas that historically have been biased against rural hospitals. Compared to their urban counterparts, rural hospitals had to achieve a higher threshold of low-income patients to qualify for DSH payments, and those that did qualify for this adjustment received a lower fixed percentage add-on to the base DRG payment amount. The Medicare, Medicaid, and SCHIP Benefit Improvement and Protection Act of 2000 (BIPA) and the Medicare Prescription Drug, Improvement, and Modernization

Act made substantial advances toward achieving equity in the DSH formula. However, research suggests that more fundamental changes in the DSH formula are necessary to ensure that the original purpose of the adjustment - preserving access to care for the poor - is achieved.

Walsh Center staff reviewed the health services literature to identify alternative models or recommendations for revising the DSH payment to incorporate measures of uncompensated care, and used hospital financial statement data from nine states to simulate the impact of these changes. Results will be presented in the aggregate as well as by selected hospital characteristics that include size, state, teaching status, and ownership. A report and policy brief will be prepared for distribution to policymakers and persons on the Center mailing list.

Patient Bypass Behavior and Critical Access Hospitals: Implications for Patient Retention

West Virginia University Institute for Health Policy

Principal Investigator: Jiexin (Jason) Liu, M.S., M.B.A., Ph.D., 304-347-1241 or jxliu@hsc.wvu.edu

Expected completion date: September 2005

Funder: Federal Office of Rural Health Policy, HRSA

A number of patients "bypass" their local healthcare providers and seek treatment outside their communities, often traveling longer distances. This pattern is referred to as "bypass" hereafter. The purpose of this study is to identify policy issues related to bypass in order to offer evidence and guidance to policymakers, hospital administrators, and

planners on the location of healthcare resources, the alteration of planning programs, and the adjustment of policies in order to retain patients locally. This study will identify factors associated with bypass, reasons that some patients favor external (outside their immediate community) healthcare providers and bypass their local community hospitals, and ways to retain

patients locally. This study will address these issues from the perspective of rural residents who have been hospitalized in the last 12 months or received outpatient care in the last six months. In addition, this study will assess how bypass patterns and travel distances/times impact rural residents' health and their healthcare utilization.

Data will be collected through a random telephone-based survey of the general population within a 15-20 mile

radius of each of 25 randomly selected IHPR designated rurally-defined, critical access hospitals. A sample size of 1,000 valid surveys will be collected with 40 responses from each of the twenty five (25) designated hospitals. Each group of 40 completed surveys will include 25 subjects above the age of 18 who had inpatient care in last 12 months and the remaining 15 who will have had outpatient care in last 6 months.

The Role of Intensive Care Units in Critical Access Hospitals

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: February 2005

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

The number of small rural hospitals that have chosen to convert to CAH status has been greater than many people had anticipated, and concern has been voiced by some individuals about whether the provision of services in an intensive care unit (ICU) is appropriate in these institutions. As information regarding ICUs in CAHs is currently extremely limited, the purpose of this study is to inform any

policy process that aims to affect the provision of ICU services in CAHs.

The study will describe the types of cases treated and services provided, the nursing intensity of the care, and the alternatives (of lack thereof) available to patients. Information will be gathered through telephone interviews with nursing directors at CAHs with ICUs. The study findings will be presented in a working paper and findings brief.



Rural Hospital Flexibility Performance Monitoring Project

University of Minnesota Rural Health Research Center,

Ira Mocovice, Ph.D.

University of North Carolina Rural Health Research & Policy Analysis Center,

Rebecca Slifkin, Ph.D.

University of Southern Maine Rural Health Research Center

Andrew F. Coburn, Ph.D.

Under contract with the federal Office of Rural Health Policy, the Rural Health Research Centers at the Universities of Minnesota, North Carolina, and Southern Maine (the Flex Monitoring Team) are cooperatively conducting a performance monitoring project for the Medicare Rural Hospital Flexibility Program (Flex Program). The monitoring project will assess the impact of the Flex Program on rural hospitals and communities and the role of states in achieving overall program objectives, including improving access to and the quality of health care services; improving the financial performance of Critical Access Hospitals; and engaging rural communities in health care system development.

The monitoring project has three main components. The first component, "State Performance Management," uses a Program Logic Model approach to track state program activities and develop tools that allow states to systematically monitor their accomplishments in the context of Flex Program goals. The second component, "Institutional Performance," uses secondary and primary data to assess the impact of the Flex Program on hospital financial status and quality of care, and to develop benchmarks for

financial performance and quality improvement for small rural hospitals. The third component, "Community Impact," assesses the Flex Program impact at the community level, including the local availability and accessibility of health services, and the value of community partnerships developed with health care organizations.

The monitoring project has a strong dissemination component that emphasizes rapid distribution of information to key federal, state, hospital, and community stakeholders. The web site for the Flex Monitoring team includes the updated CAH list, the quarterly e-mail survey results, and an extensive publications list. The web address is <http://www.flexmonitoring.org>.

In the coming year, the Flex Monitoring Team will continue the three core components in its state-level evaluation strategy: 1) the development and refinement of program logic models for state performance management, monitoring, and evaluation; 2) the analysis and synthesis of the 2004-2005 state Flex grant plans; and 3) continued tracking of CAH conversion and state level activities.

State Performance Management

Analysis of 2004-2005 State Flex Grant Plans

Maine Rural Health Research Center

Expected completion date: March 2005

Principal Investigator: Andrew F. Coburn, Ph.D., 207-780-4435 or andyc@usm.maine.edu

Contact Person: John A. Gale, M.S., 207-228-8246 or jgale@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

As part of the Flex Monitoring Team's ongoing work to monitor state level Flex program activities, the University of Southern Maine and the University of Minnesota will collaborate to analyze and synthesize the states' annual state Flex program plans. The research team for this project will analyze state Flex grant applications and related budget and work plan revisions using a data extraction template. The analysis will focus on state activities in the core Flex program areas of networks, quality improvement, and EMS. The data collected through this process will be useful to individual members of the Flex Monitoring Team in conducting their research activities, such

as the EMS special study. A briefing paper will be produced highlighting trends in the development and implementation of state Flex programs. This paper will summarize the range of activities undertaken by all participating states across the core Flex Program goals and highlight interesting activities and initiatives (e.g. EMS, QI, Networks) from select individual states. This paper will be useful not only to state level Flex stakeholders who are interested in the activities of other state Flex Programs but also to national stakeholders who are interested in an easily accessible summary of the Flex Program.

Critical Access Hospital Conversion Tracking and Quarterly E-mail Surveys

University of North Carolina Rural Health Research & Policy Analysis Center

Expected completion date: August 2008

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Contact Person: Indira Richardson, 919-966-5541 or richardson@schsr.unc.edu

This project will continue its work tracking Critical Access Hospital (CAH) conversions. A quarterly e-mail survey will be sent to state Flex program coordinators to monitor new CAH conversions and to identify emerging issues. Information gathered during these e-mail exchanges will be compiled and added to the CAH management information dataset that is currently housed at UNC. In addition, the management information dataset will be

updated with information on conversions supplied by the Centers for Medicare and Medicaid Services. The products of this activity include a designated-CAH dataset; a spreadsheet, updated quarterly, that summarizes states' CAH conversions; and a list of certified CAHs, which will be posted on the Flex Monitoring Team website (<http://www.flexmonitoring.org/cahlist>).

Using Program Logic Models to Monitor the Performance of State Flex Programs

Maine Rural Health Research Center

Expected completion date: August 2008

*Principal Investigator: Andrew F. Coburn, Ph.D., 207-780-4435 or
andyc@usm.maine.edu*

Contact Person: John A. Gale, M.S., 207-228-8246 or jgale@usm.maine.edu

This project will use a program logic model approach to track state program activities and develop tools that allow states to systematically monitor and manage their accomplishments in the context of Flex Program goals. As applied to a state Flex Program, a program logic model provides a systematic way to present the relationships among the resources available to operate a program, the activities planned under the program, and the results that are expected as a result of undertaking those activities. The program logic model links short and long term outcomes with program activities/ processes and resources of the state program.

To insure the development of a program logic model that is useful to the states, project staff will work with the federal Office of Rural Health Policy (ORHP), TASC, the Flex Committee of the National Organization of State Offices of Rural Health, and six state Flex Programs during the second year of the project (2004-05) to refine the generic national Flex Program logic model and finalize the

toolkit that other states may use to implement their own Flex Program logic models. The demonstration states will also receive help from project staff to customize and implement the model for their programs and to use the model as a strategic planning tool to manage their programs. Refinements to the model will be made based on feedback from the six states and the project partners.

To further insure the applicability of the Flex Program logic model to the states, the Flex Monitoring Project Advisory Committee will help guide the process, provide input into the development of the models, and offer feedback on the materials and process. During the subsequent years of this project, the revised program logic model and toolkit will be offered to all state Flex Programs who choose to use it for purposes of managing their programs and providing data to the Flex Monitoring Team.

Institutional Performance

Analyzing the Relationships among Critical Access Hospital Financial Status, Organizational Linkages, and Scope of Services

University of Minnesota Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

Contact Person: Michelle Casey, M.S., 612-627-4251 or mcasey@umn.edu

This project will systematically analyze the relationships among pre- and post-conversion Critical Access Hospital (CAH) financial performance, the

organizational linkages in which the hospital participates (e.g., health care systems and/or networks), and the scope of services (i.e., the number and type of

services) provided. The project will use data from four sources: Medicare cost reports, three national surveys of CAHs conducted by the Tracking Project and the Monitoring Team in 2000, 2001, and 2004, the American Hospital Association annual survey of hospitals, and the Area Resource File.

Research questions to be addressed by this project include the following:

- To what extent does improved financial performance (as reflected in operating margins) allow CAHs to add and/or expand specific services?
- Are expansions in these services most likely to occur within 2 years after conversion, or more than 2 years after conversion?
- Does participation in a system and/or a network increase the likelihood that

a CAH will expand and/or add specific services post-conversion?

- Are CAHs that have stronger relationships with their support hospitals more likely to expand and/or add specific services?
- What are the characteristics (e.g. scope of services, organizational linkages) of CAHs that exhibit improved financial performance in the short term?

A final report describing the results of the analyses will be prepared and disseminated at the end of 2005.

Developing a Quality Performance Measurement System for Critical Access Hospitals

University of Minnesota Rural Health Research Center

Expected completion date: August 2006

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

This project will measure changes in the quality of care provided by CAHs by developing and testing a prototype performance system that will provide information on a core set of CAH quality measures on an ongoing basis. In Year 1 of the project (2003-04), we identified an initial core set of 20 quality measures relevant for rural hospitals with less than 50 beds. In conjunction with another project supported by CMS, we currently are field testing the feasibility of collecting and using these quality measures in 20 rural hospitals in Minnesota, Utah and Nevada in collaboration with the two Quality Improvement Organizations (QIOs) responsible for those three states. During Year 2 of the project (2004-05), we will further refine and field test the rural hospital quality performance measurement system and assess its

relevance for CAHs. The field test of the revised set of CAH quality performance measures will begin during the final two quarters of Year 2. The field test will require approximately 15 months to complete with the first six months dedicated to state selection, QIO/Flex and hospital association staff training, hospital recruitment, development of data collection tools and hospital staff training; the next six months dedicated to hospital data collection; and the last three months dedicated to analysis and final report writing.

The final report will be available by the end of Year 3 (2006) of the project and will document the complete set of activities involved with the development, testing and implementation of a CAH quality performance measurement system.

Financial Performance Measures of Critical Access Hospitals

University of North Carolina Rural Health Research & Policy Analysis Center

Expected completion date: August 2008

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Contact Person: George Pink, Ph.D. 919-966-5541 or gpink@schsr.unc.edu

This project will use research and expert opinion to select dimensions and indicators of financial performance, develop appropriate bases or methods of peer comparison, investigate the relationship between quality of care and financial performance, and identify characteristics of high performing CAHs. Investigation will start with a review of academic and practitioner journals, reports, websites, and the data and methods used by existing performance initiatives.

An expert advisory committee of CAH managers, health practitioners and

policy analysts will be assembled to evaluate the validity and usefulness of performance dimensions and indicators. Multiple passes of indicators for all CAHs, including descriptive statistics and scatter plots will be generated. Outliers will be investigated and an extensive search of data errors and problems will be undertaken. Findings will be presented that investigate the relationship between CAH financial performance and the quality of care provided.

Community Impact

Community Impact Assessment

University of North Carolina Rural Health Research & Policy Analysis Center

Expected completion date: August 2008

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

This project will evaluate the impact of the Flex program on local communities. Activities will focus on identifying the ways in which the program could have a measurable effect, as well as the ways in which Flex program coordinators intended to affect community health. In Year 2 of this project (2004-05), we will produce a briefing paper that integrates information on scope of services, networking, and quality. This information will be used to assess CAHs' efforts to add or revise services which enhance the health of the communities they serve, create new partnerships and networking relationships that will presumably result in better and more efficient care, make capital improvements or improve available medical technology, and improve patient care processes. In

Year 2 we will also conduct case studies in six CAH communities. The purpose of these case studies is threefold:

- To serve as a mechanism for validating our conceptual framework of community impact
- To investigate and describe places that are identified as good examples of Flex program activities that have focused on local communities, including details on the processes and outcomes of these activities
- To help us identify additional dimensions of community impact that should be included in our Year 3 telephone survey, and potential future community impact activities.

Special Study

Special Study of EMS Issues

Maine Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Andrew F. Coburn, Ph.D., 207-780-4435 or andyc@usm.maine.edu

Contact Person: John A. Gale, M.S., 207-228-8246 or jgale@usm.maine.edu

The University of Southern Maine and the University of North Carolina at Chapel Hill will collaborate to conduct a special study of EMS issues during Year 2 of the Flex Project (2004-05). The study will focus on state, community, and hospital level initiatives designed to build the infrastructure to support EMS service capacity and encourage the integration of these services into the rural healthcare infrastructure in the areas of quality improvement, financing, staffing, medical control, and networking and integration. Using data from multiple sources, the study will identify six “promising EMS practices” for further study and analysis. Telephone interviews will be conducted with the broad range of key informants

involved with these programs to understand their goals and objectives, the development of these “promising practices,” the resources and partnerships necessary to undertake these initiatives, the role of the Flex Program in supporting these initiatives, the barriers to implementation, and the extent to which these initiatives can be replicated by other states and communities. The study will focus on initiatives designed to build long term capacity to support and enhance EMS services at the hospital and community level.



The Burden of Chronic Illness Among Rural Residents: A National Study

WWAMI Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Mark Doescher, M.D., MSPH, 206-616-9207 or mdoesche@u.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA; RWJ Foundation/AHRQ

Better information about the prevalence of and trends in chronic illness is needed for rural Americans. This study will use data from the Behavioral Risk Factor Surveillance System (BRFSS) to examine the prevalence of and trends in four important conditions—hypertension, diabetes, hypercholesterolemia, and asthma—by type of geographic location and by key risk factors. The study also will explore patterns of screening for two of these conditions, hypertension and hypercholesterolemia. The aim is to determine the prevalence of and trends in each of these four conditions among all rural BRFSS respondents and also among rural minority group members and residents of remote rural counties. Similarly, the study will assess the prevalence of and trends in screening for hypertension and hypercholesterolemia among rural residents overall and among rural minority group members and residents of remote rural counties.

For this study, annual BRFSS data from 1994 to 2003 will be used. Chi-square testing will be used to compare unadjusted prevalence rates of each condition or screening by geographic category and race/ethnicity. Logistic regression analyses will be performed to compare outcomes adjusted for sociodemographic, health and health care system factors. Trend assessment will include time (in years) as an additional covariate in models. This project will result in at least two policy-briefs and a working paper that will be distributed widely to researchers and policymakers interested in the health of rural Americans. Also, at least two manuscripts will be submitted for publication to a peer-reviewed journal emphasizing prevention or rural health. Presentations at appropriate regional and national conferences will also be given.

Disability Burdens Among Rural and Urban Older Americans

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: James Laditka, Ph.D., 803-251-6317 or jladitka@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

The number of older Americans is projected to grow dramatically over the next several decades, and will include more minorities. Costs of providing formal long-term health care are also growing rapidly, exceeding \$100 billion. There is evidence that disability trends

vary substantially among groups of older Americans. Compared with men, women live longer, and live a greater percentage of their lives with severe disability. Compared with whites, African Americans live shorter, more disabled lives. Less is known about disability

patterns over the later life course by area of residence. Some research suggests that people living in rural areas have lower levels of disability and mortality than those in urban areas. This is paradoxical in that people living in rural areas generally are less likely to have health insurance, have lower incomes, have less access to health services, and have greater travel time to obtain health care.

This project will use the 1994-2000 Second Longitudinal Study of Aging, a nationally representative sample of community-dwelling adults age 70 and over, to develop detailed estimates of healthy, disabled, and total life expectancy among rural and urban

populations. To address anticipated differences among populations, we will develop and compare the estimates between women and men, by race/ethnicity, and across differing levels of education. A greater understanding of differences in the burden of disability among groups defined by these characteristics would help national and local policymakers anticipate needs for services of various types.

Findings from this study will be presented at national meetings addressing rural health policy issues in addition to papers submitted to peer-reviewed journals.

Medicaid Budget Cuts: Effects on Rural Nursing Homes and Rural Elderly and Disabled

Southwest Rural Health Research Center

Expected completion date: April 2005

Contact Person: Charles D. Phillips, Ph.D., MPH, 979-458-0080 or phillipsd@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will investigate whether nursing home quality and access to nursing home care have eroded in rural areas as a result of changes in Medicare payments or reductions in Medicaid nursing home payments over the period from calendar year 2000 to calendar year 2003. The basic, general hypothesis for this study is that rural nursing homes and those frail elderly in rural areas will be more disadvantaged by these changes than the facilities and elderly in other types of areas. To test this hypothesis,

researchers will analyze national facility and resident level data combined with surveys of Medicaid state agencies to determine the impact of cuts to Medicare and Medicaid services on quality and availability of long term care in rural versus urban areas. In addition to a final report submitted to the federal Office of Rural Health Policy that will be made available on-line at the Center's website, the key findings will also be published in professional journals.

Medicaid Budget Cuts and Long-Term Care Supplement

Southwest Rural Health Research Center

Expected completion date: December 2004

Contact Person: Catherine Hawes, Ph.D., 979-458-0081 or hawes@srph.tamhsc.edu,

Funder: Federal Office of Rural Health Policy, HRSA

According to the National Governor's Association and the National Conference of State Legislators, the majority of states are facing serious budget crises. To meet this challenge, states are turning to a variety of mechanisms to decrease expenditures including cuts to Medicaid, a significant source of state expenditures. While children and those who would be uninsured without current state programs are at significant risk, the elderly and

disabled also face significant reductions in services. This project collected data on each state, identifying all the changes made to their Medicaid program in the area of long-term care or related services to the frail elderly and disabled. A policy paper addressing the impact of Medicaid cuts on long term care services, particularly among the elderly in rural areas, will be produced.

Rural and Urban Differences in Utilization of Formal Home Care

Agency for Healthcare Research and Quality

Expected completion date: August 2005

Principal Investigator: William J. McAuley, Ph.D., 301-427-1412 or mcauley@ahrq.gov

Funder: Federal Office of Rural Health Policy, HRSA

This project is using the Medical Expenditure Panel Survey Household Component (MEPS-HC), the Area Resource File, CMS Provider of Service data, and other data sources to examine rural and urban differences in the utilization and costs of formal home care, including changes in utilization patterns and costs across residence types over time. The paper, based upon the 1998 MEPS-HC data, examined the factors that predict use of formal home care, including rurality. A major finding is that without adjustments older people in more rural counties (nonmetropolitan counties having no town of 10,000) are significantly more likely to use any formal health care, as well as Medicare home health care. Fully adjusted logistic analysis results point to an interplay between residential status and Medicaid coverage with regard to formal home care use. In comparison with metropolitan residents covered by Medicaid, the adjusted relative risk of formal home care

use from any source is significantly higher for Medicaid enrollees residing in nonmetropolitan counties having no people of 10,000 or more. Use of Medicare home health care is significantly greater for residents of the most rural counties, irrespective of their Medicaid coverage, as well as Medicaid-covered residents of nonmetropolitan counties having a town of at least 10,000 people. A second paper, examining rural and urban differences in the cost of formal home care, is in process. Following these papers, more in-depth analyses of rural and urban differences in utilization and cost trends will be completed. The MEPS-HC is a very useful resource for the examination of formal home care utilization because its question format leads to the gathering of information on reimbursed home care of all types and from all sources.

Trends in Swing Bed and Skilled Nursing Facility Use in Rural Hospitals, 1996-2003

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: August 2005

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Contact Person: Kathleen Dalton, Ph.D., 919-966-7957 or kathleen_dalton@unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This study will examine trends in the distribution of skilled nursing facility (SNF) services in rural hospitals during a period of dramatic change in Medicare reimbursement, most notably the transition from cost-based reimbursement to SNF prospective payment system (PPS). The supply and organization of skilled nursing care have been shown to be very sensitive to changes in Medicare regulations, as the majority of patients receiving SNF services following a hospitalization are elderly or disabled, and the majority of such services are covered by Medicare. Using national licensure files for information on supply, and Medicare's hospital and nursing facility cost reports for information on costs and utilization, we propose to analyze changes in the role of rural hospitals in providing SNF services as they respond to the new reimbursement environment.

The primary study objectives are to document changes in rural hospitals' skilled nursing care delivery, and to identify rural hospitals' responses to changes in skilled nursing payments. While many of the measures described above are tracked by CMS and are available at the national level, they have not been documented specifically for rural providers, or at the detailed level of rural-urban continuum codes. These questions, therefore, will be addressed with extensive descriptive statistics. Multivariate models will be constructed to identify geographic and organizational factors associated with changes in hospital SNF participation over time, and to investigate differences between PPS and CAH providers. Findings will be presented in a working paper describing all parts of the study, plus two to three more narrowly focused findings briefs on specific topics.



Access to Health Care for Young Rural Medicaid Beneficiaries

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: February 2005

Principal Investigator: Victoria Freeman, DrPH, RN, 919-966-6168 or victoria_freeman@unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This study examined access to health care among rural children ages 0-17 who are enrolled in some type of Medicaid managed care program, and compared this access across types of programs and, within program type, to that of urban beneficiaries. Access to care was assessed by means of a mailed survey sent to the parents of Medicaid children in four

states chosen for their geographic diversity. Questions focused on such issues as the ability to find a participating health care provider within a reasonable distance, coordination of care concerning services such as specialty care that are more likely to be located in urban areas, use of dental services, and transportation problems.

Impact of The Medicaid Budget Crisis on Rural Communities: A 50-State Survey

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: February 2005

Principal Investigator: Rebecca Slifkin, Ph.D. 919-966-5541 or becky_slifkin@unc.edu

Contact Person: Pam Silberman, JD, DrPH., 919-966-2670 or silber@mail.schsr.unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Most states are facing severe budget crises, forcing them to reduce Medicaid program costs. States have many different options to reduce Medicaid expenditures, including cutting optional eligibles or optional services, reducing provider payments and increasing recipient cost sharing. Many of the states' actions to reduce Medicaid program costs may have a differential impact in rural areas.

In an attempt to ascertain the impact of Medicaid cuts on rural recipients and providers, project staff conducted a 50-state survey of state Medicaid agencies, offices of rural health and rural health

associations. The organizations were surveyed on topics such as specific options states have taken to reduce Medicaid expenditures, whether provider participation in Medicaid has changed over the last three years, changes in eligibles, and potential interest states have in recent proposals to block-grant the Medicaid program. The study findings will be presented in a short policy brief and a paper submitted to a peer-reviewed journal.

A National Study of Rural Medicaid Disease Management

The Council of State Governments

Expected completion date: August 2005

Principal Investigator: Trudi L. Matthews, M.A., 859-244-8157 or tmatthews@csg.org

Funder: Federal Office of Rural Health Policy, HRSA

Currently there are differing estimates of the number of states offering disease management (DM) services through Medicaid. It is also not known how many Medicaid disease management programs offer services to rural clients. The Council of State Governments (CSG) will conduct a national study of Medicaid disease management programs to determine how many states provide DM services in rural areas and what the opportunities and challenges are for states establishing DM programs that serve rural areas. The primary research component will be a national survey of all state Medicaid programs. This survey will identify which states offer disease management (DM) through Medicaid managed care contracts or through stand alone disease management programs. The survey will

also identify where these programs operate in rural areas and identify the unique challenges that state DM programs in rural areas face. CSG's research team will also produce an analysis of state and federal legislation and regulation related to Medicaid disease management in rural areas. Based on the survey results and legal analysis, CSG will conduct thorough interviews with four states that can serve as best practice case studies for operating Medicaid DM in rural areas. CSG will prepare a policy brief and other resources based on the study results that will be disseminated to state legislative and executive branch policymakers.

The State Child Health Insurance Program (S-CHIP) and Access to Medical Transportation Program Services

Southwest Rural Health Research Center

Expected completion date: December 2004

Contact Person: Craig Blakely, Ph.D., MPH, 979/862-2419 or blakely@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

In 1997, Congress created the State Children's Health Insurance Program (S-CHIP) in response to concern over the growing number of children and families nationally without health insurance. Despite the growth and expansion of S-CHIP, there is practically no empirical information available regarding either the use of S-CHIP resources to assure access to medical services or analysis of the barriers to adequate transportation. Given this disparity, the purpose of this research was to create a typology of S-CHIP models and the interface between each and the existing Medical

Transportation Program (MTP) available to Medicaid recipients in select states.

In addition, the project compared rural and non-rural variances in patterns of utilization of MTP service in S-CHIP programs, and identified the strengths and weaknesses of the various approaches utilized by the different state MTP models. Finally, the project compared the performance of the various state models in assuring access to covered medical services and identified barriers to S-CHIP services.



Access to Physician Care for the Rural Medicare Elderly

WWAMI Rural Health Research Center

Expected completion date: February 2005

Contact: L. Gary Hart, Ph.D., 206-685-0402 or ghart@fammed.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

There is some concern that the care provided to elderly Medicare beneficiaries living in small and isolated rural towns is less, more distant, and reflects a different mix of specialist care than their urban and large rural city counterparts. This study describes where Medicare beneficiaries in five states obtain their health care, how far they travel for that care, and the mix of physician specialties from which they obtain ambulatory care. Special attention was paid to beneficiaries who have dual Medicare-Medicaid status, who reside in poorer income areas, and who live in designated Health Professional Shortage Areas. Analyses examined the care obtained by beneficiaries with selected

chronic conditions. The data upon which the analyses were based consisted of the 1998 Medicare Part B data for South Carolina, North Carolina, Idaho, Alaska, and Washington. These data contain information on physician visits, specialty type, patient home and encounter locations, diagnoses and procedures, and patient demographics. Demographic and Rural-Urban Commuting Area (RUCA) codes were linked to the encounter data, and road travel distances and times involved in obtaining care are being determined.

Access to State-of-the-Art Hospice Care for Rural and Minority Hospice Users

University of Minnesota Rural Health Research Center

Expected completion date: December 2006

Principal Investigator: Beth Virnig, Ph.D., 612-624-4425 or virni001@umn.edu

Funder: American Cancer Society

This project will develop and map hospice care service areas that will allow for the measurement of access to hospice care for rural and minority Medicare beneficiaries who die of cancer, and recommend options for increasing access to hospice care in underserved rural areas. This project will incorporate the analysis of home health service areas conducted by Dr. Virnig. This analysis will use the Medicare 100% hospice and 100% denominator files for 1999, 2000, and 2001. Using Medicare cost report data, the project will also evaluate the effect of hospice size, ownership and

rural/urban location on amount of Medicare payments allocated to pharmacy costs, use of radiation or chemotherapy; estimate the proportion of the population served by freestanding hospices providing limited availability to such treatments; and recommend options for improving access to these symptom management options for hospice patients with cancer. Final products will include a map of hospice service areas along with an analysis of both home health and hospice service areas.

Assessing the Community Impact of the MMA

RUPRI Center for Rural Health Policy Analysis

Expected completion date: August 2005

Principal Investigator: Keith J. Mueller, Ph.D., 402- 559-4318, kmueller@unmc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will measure the community-level impacts of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) and will provide immediate feedback to policymakers regarding the impact of the MMA on its policy targets (providers and beneficiaries), in the context of rural places. This project will also establish a methodology for studying community impacts of health policies that will be the basis of a broader effort within the Rural Policy Research Institute to study the impacts of national policies on rural places.

There are two levels to this analytical plan: (1) the proximate effects of policy change on the targeted persons and organizations and (2) the effects on the broader community. Four rural communities will be selected for detailed study, from four different regions of the country. The immediate impacts of the MMA will be assessed with quantitative and qualitative data derived from

activities of local providers, including pharmacies, hospitals, ambulance providers, home health agencies, skilled nursing homes, federally qualified health centers, rural health clinics, and physician clinics. A unique contribution of this study will be measuring the aggregate effect of the multiple changes to payment and regulatory policy on the health sector of rural communities. The immediate effect of the prescription drug discount card will be assessed by measuring its local use with qualitative assessments supplied by agencies serving the elderly of the community. The broader community impacts of the MMA will be assessed using a modification of the Social Accounting Matrix approach.

Products of this research will include a study methodology suitable for replication by others, a policy brief based on the quantitative analysis, a policy paper based on the total analysis, and journal submission based on the total analysis.

Chronic Disease Management in Rural Areas: Examination of Medicare and Medicaid Managed Care Programs

Southwest Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: Jane Bolin, Ph.D., JD, RN, 979-862-4238 or jbolin@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Rural populations show higher incidence of disease in a number of areas including heart disease, respiratory disease, disability associated with chronic health conditions, and obesity. Disease management (DM) is an appropriate tool to coordinate care and improve health outcomes for such populations and to

reduce needs for more costly care. DM, however, has been most widely utilized in urban settings where it is promoted by large health plans interested in efficiently reaching large numbers of enrollees to reduce costs of care while improving outcomes. The goal of this project is to advance knowledge of the

use of DM to address chronic conditions among rural populations. Of particular interest is information from participating health plans and providers about special challenges and effective strategies in DM initiatives targeting rural populations.

Based on analysis of this information, the project team identified issues of public policy and service management that can advance effective DM for rural populations.

Colorectal Cancer Care Variation in Vulnerable Elderly

WWAMI Rural Health Research Center

Expected completion date: January 2005

*Principal Investigator: Laura-Mae Baldwin, M.D., M.P.H., 206-685-0401 or
lmb@famned.washington.edu*

Funder: The National Cancer Institute

This study, aimed at improving colorectal cancer care for the elderly, examined differences in receipt, diffusion, and cost of recommended colorectal cancer treatments between more and less vulnerable elderly populations, and evaluated different measures of comorbidity and costs.

The project was conducted by a multidisciplinary research team consisting of members of the Department of Family Medicine, Group Health, the Department of Gastroenterology, the Department of Surgery, and the Department of Radiology. A supplemental study, also funded by the National Cancer Institute,

compared quality of surgical care for colorectal cancer and the extent of surgical complications across different Medicare populations. A more recent NCI-funded study is comparing non-cancer care for Medicare beneficiaries with and without colorectal cancer, and a study has just been funded by the Centers for Disease Control to examine health systems in which ovarian cancer patients receive care in eight states, to identify whether vulnerable populations receive care in systems associated with favorable outcomes. Several papers are currently in draft form and will be submitted for publication by the end of the year.

Impact of the Home Health PPS on Access in Rural America

NORC Walsh Center for Rural Health Analysis

Expected completion date: May 2005

Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or sutton-janet@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

This study is designed to provide information on how the shift to prospective payment has affected access to home care in rural communities. The home health prospective payment system (PPS) was implemented in October 2000 to reduce growth in Medicare home health expenditures. Under the PPS, home care agencies are reimbursed based on a 60-day episode of care, with adjustments to the base payment that reflect differences in resource needs. This

case-mix adjustment classifies home health patients into Home Health Resource Groups (HHRGs) based on their clinical characteristics, functional status, and service utilization. This study is designed to provide information on how the shift to prospective payment has affected access to home care in rural communities. This study will explore the impact of the PPS on patterns of home health utilization. The following research questions will be examined:

- How do the demographic and clinical characteristics of rural and urban Medicare beneficiaries who received home care prior to the PPS compare to those who received home care following the PPS?
- Are there subgroups of rural and urban beneficiaries for whom access to home care is more limited following implementation of the PPS? For whom home care is more accessible following implementation of the PPS?
- To what extent has the PPS had an effect on patterns of home care utilization?
- Has the quality of care provided to home care users been affected by the PPS?

Data to conduct this study will be obtained from the 5 percent MEDPAR file and the Home Health 5-percent Standard Analytical File.

Is Medicare Beneficiary Access to Primary Care Physicians at Risk?

RUPRI Center for Rural Health Policy Analysis

Expected completion date: June 2005

Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or kmueller@unmc.edu

Funder: Office of Rural Health Policy, HRSA

This project will examine the impact of changes in Medicare payment to physicians on access to care for rural beneficiaries. If rural practices are threatened by the cumulative effects of reduced payment and increased expenditures, physicians may be forced to abandon the community to merge into larger urban-based practices, perhaps in other states. Access to primary care services would decline, and a vital contribution to the local social capital and economic development would be lost.

This project will research the following hypotheses:

- Rural primary care physicians are more likely to declare policies not to see new Medicare patients than are urban primary care physicians or specialists (urban or rural)
- Rural primary care physicians are less likely to declare policies not to see new Medicare patients than are urban primary care physicians, due to the factor of “everybody knows everybody”

- Declines in seeing new Medicare patients will vary by region of the country, related to the percent elderly in the region, payment from other sources, and practice costs
- The primary reason physicians cease to accept new Medicare patients is the rate of payment; secondary reasons include complexity of the Medicare program, intensity of treatment needed for elderly patients, and personal preference.

Three completed surveys will be used to address these issues, with multiple regression analysis as the principal methodology used to analyze those data. In addition, a telephone survey will be conducted with a sample of state medical associations and state chapters of the American Academy of Family Medicine. Based on the telephone survey, three site visits will be made for the purpose of gaining a more in-depth understanding of the economic and other effects of treating a significant percentage of elderly patients on rural primary care practices.

Medicare Beneficiary Outcomes in Rural and Urban Home Health Agencies

NORC Walsh Center for Rural Health Analysis

Expected completion date: August 2005

Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or sutton-janet@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

The home health prospective payment system (PPS) resulted in major changes in patterns of utilization of home care services. There is some evidence to suggest that some of the post-PPS changes in utilization could compromise quality of care. To date there is little empirical information to assess the quality of home care services and how it varies by rural and urban location. This study is designed to compare the performance of rural and urban home care agencies and to identify the agency characteristics that contribute to better patient care outcomes. Of particular interest, this study will ascertain whether the availability of and pattern of utilization of skilled and ancillary services following implementation of the home health agency PPS is related to performance.

This study will address the following research questions:

- Do rural and urban home health agencies differ in the quality of home care provided?
- To what extent are the following agency characteristics associated with better or worse outcomes?
- To what extent do differences in staff composition, caseload and service intensity contribute to differences in patient outcomes?

Data for this study will be obtained from the Medicare Providers of Services file and the Medicare Home Health Compare (HHC) database. Results will provide preliminary data that may be used in the on-going monitoring of Medicare home care policies on rural communities. Results will be disseminated through a final report and a policy brief.

Monitoring Medicare Hospital Outpatient Payments: Trends and Evidence of Impacts of Payment Policy

NORC Walsh Center for Rural Health Analysis

Expected completion date: September 2005

Principal Investigator: Curt D. Mueller, Ph.D., 202-887-2356 or

mueller-curt@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

Under the new outpatient prospective payment system (OPPS), outpatient departments that face relatively high costs of producing certain services receive payments which may be less than the individual facility's costs. By contrast, a number of small rural hospitals are currently exempt from OPPS and are paid

on a cost-basis, such as critical access hospitals (CAHs) and sole community hospitals (SCHs). In contrast to OPPS facilities, CAHs and SCHs are expected to receive payments that more closely approximate costs on average. The purposes of this project are to document recent trends in the provision of Medicare

hospital outpatient services under both the new outpatient prospective payment system (OPPS) and cost-based (CB) mechanism used for critical access hospitals, and to assess evidence on the impacts of Medicare OPPS on Medicare and total outpatient revenue.

Research questions to be addressed include the following:

- What are characteristics of the supply-side of the market for hospital outpatient department services, and how is the supply-side changing in rural areas?
- How has Medicare's outpatient payment policy affected provision of outpatient services?
- What have hospitals done to help prepare for OPPS?

Data sources for this project include Medicare Cost Reports, the American Hospital Association's 2000 and 2002 surveys, and the Area Resources File (ARF), and qualitative information obtained from selected hospitals. Products will include a working paper that presents descriptive statistics and empirical results informed by discussions with administrators and a policy brief that summarizes analysis of outpatient revenue and trends and evidence on impacts of outpatient payment policy on rural facilities.

National Study of Home Health Care Access in Rural America

University of Minnesota Rural Health Research Center

Expected completion date: May 2005

Principal Investigator: Beth Virnig, Ph.D., 612-624-4425 or virni001@umn.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will develop home health care service areas that will allow for the measurement of access to home health care for rural Medicare beneficiaries who die of cancer, and recommend options for increasing access to home health care in underserved rural areas. Additionally, the project will map and estimate the proportion of the population served by home health care agencies providing

limited availability to such treatments, and recommend options for improving access to these symptom management options for patients with cancer. Final products will include a map of home health service areas and a report analyzing the home health and hospice service areas.

National Study of Rural-Urban Differences in Use of Home Oxygen for Chronic Obstructive Lung Disease: Are Rural Medicare Beneficiaries Disadvantaged?

WWAMI Rural Health Research Center

Expected completion date: January 2005

*Contact Person: L. Gary Hart, Ph.D., 206-685-0402 or ghart@fammed.washington.edu, along with
Leighton Chan, M.D., from CMS Region X
Funder: Federal Office of Rural Health Policy, HRSA*

Home oxygen has been clinically shown to be beneficial to patients with chronic obstructive pulmonary disease (COPD), who cannot otherwise maintain sufficient levels of oxygen in their body.

To understand disparities in care among rural and urban Medicare beneficiaries, data from Medicare's Durable Medical Equipment (DME) files were used to assess rural/urban variation in the home use of supplemental oxygen.

The project researched the following hypotheses:

- Significant rural/urban variation in the use of home oxygen equipment and supplies occurs within the United States
- Home oxygen use will be directly proportional to population density in the areas where patients live

- Beneficiaries in rural areas will have less access to specialists who prescribe supplemental oxygen.

In addition, the relationships between age, race, and income on the use of supplemental oxygen were explored. A retrospective cohort study was performed, examining Medicare beneficiaries (5% random sample) who were admitted to the hospital with a primary diagnosis of COPD or emphysema in 1999. Rural status was determined by linking the beneficiary zip code to its Rural-Urban Commuting Area Code (RUCA). A working paper and a one-page policy brief will be produced.

Nationwide Analysis of New Entrants into Medicare+Choice Demonstrations

RUPRI Center for Rural Health Policy Analysis

Expected completion date: June 2005

*Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or kmueller@unmc.edu
Funder: Federal Office of Rural Health Policy, HRSA*

This project will examine the effects of recent changes in the Medicare+Choice (M+C) program on enrollment in rural areas and on activities of rural-based health plans. Recognizing that closed-panel and staff-model health maintenance organizations (HMOs) are not practical in much of rural America, and that Provider Sponsored Organizations (PSOs) have by and large not been attractive to provider

networks, the Centers for Medicare & Medicaid Services (CMS) created a demonstration program to test the assumption that Preferred Provider Organizations (PPOs) could gain a foothold in many regions of the country. The 33 new Medicare plans in 23 states were announced in August 2002, with enrollment to begin in January 2003.

This project is designed to explore the decisions of health plans (to enter markets) and beneficiaries (to enroll in plans). Researchers working on this project will continue an earlier RUPRI Center project that reported rural enrollment in M+C plans and will replicate an earlier design of case studies

to explore the reasons plans are active in rural areas and why they may or may not be successful.

A policy paper and two policy briefs will be produced.

Post-Acute Care: A Rural and Urban Comparison

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or sutton-janet@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

One-quarter of Medicare beneficiaries discharged from an acute hospital are discharged with post-acute care services. This multi-phase analysis examined whether discharge patterns for and use of post-acute care services by rural and urban hospitalized Medicare beneficiaries differ and, if they do, what the sources are of these different patterns. Claims data from the 2000-2001 Medicare Standard Analytical Files (SAF) were used to examine rural and urban patterns of post-acute placement in a Skilled Nursing Facility (SNF), medical rehabilitation facility, or home care following discharge from an acute hospital. A limited number of diagnoses (including hip fractures, chronic obstructive pulmonary disease, and stroke) were selected for which post-acute care is typically required and for which care is often rendered in multiple post-acute settings. Using patient level data, episodes of care were constructed for those individuals who were hospitalized in the first three months of

the calendar year. The post-acute records from the corresponding home health, physician, and SNF SAFs for these beneficiaries were extracted. Claims data are supplemented with county-level provider supply measures from the Area Resource File and Medicare's Provider of Services files.

In the first phase of this study, descriptive statistics were used to determine whether there were any statistically significant rural/urban differences in utilization of post-acute services, as measured by the average number of admissions, average lengths of stay or average units of services received, or number of admissions. Separate analyses were conducted for each type of post-acute setting as well as for each diagnostic group. In the second phase of the study, the focus was on substitution of care across different post-acute care settings and the patterns of use of multiple post-acute settings within a specific episode of care.

Urban and Rural Differences in Access to Care and Treatment for Medicare Beneficiaries with Cancer

Rand Corporation

Expected completion date: August 2005

Principal Investigator: Lisa R. Shugarman, Ph.D., 310-393-0411 x 7701 or Lisa_Shugarman@rand.org

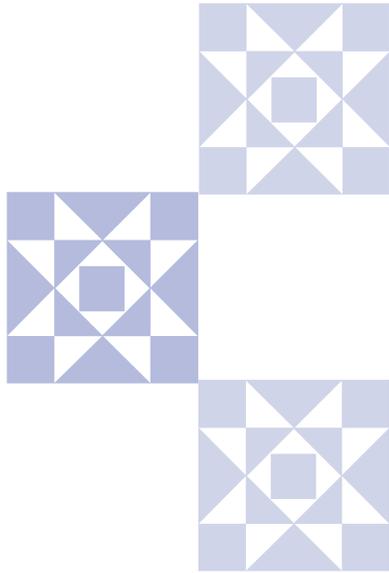
Funder: Federal Office of Rural Health Policy, HRSA

This study builds upon work addressing differences in the quality of cancer care across populations. The literature on the quality of cancer care generally, and the literature exploring differences in the incidence of cancer and outcomes of care provided to cancer patients based on selected socio-demographic characteristics (e.g., gender, age, race, income or socio-economic status) is large; however, little is known about the differences in the diagnosis, treatment and outcomes of care for cancer patients across urban and rural regions of the country.

The overall goals of this project are to:

- Investigate hypothesized relationships between urban and rural residence and a range of outcomes of care for Medicare beneficiaries with cancer
- Explicitly evaluate selected market and provider supply characteristics of selected regions through which geographic variations are hypothesized to affect health outcomes
- Assess differences in personal (e.g., gender, race) and community (e.g., poverty rate) characteristics in observed patterns of association within and across urban and rural regions
- Explore how changes in the supply of providers in urban and rural areas over time may have influenced the outcomes of interest.

Using Surveillance, Epidemiology, and End Results (SEER) data merged with Medicare claims data available from the Centers for Medicare and Medicaid Services (CMS), project staff will examine a series of models testing hypothesized relationships between individual and community characteristics and the outcomes of interest (timing of diagnosis, timing from diagnosis to first treatment, disease-free survival, overall survival). First, urban and rural differences will be estimated in the incidence and prevalence of disease, as well as the treatment, follow-up, and mortality/survival. Second, personal and community characteristics (including provider supply) will be explored in order to explain urban and rural differences in these selected measures. Finally, changes in the supply of providers will be examined to determine the extent these changes have resulted in changes in the outcomes of care over time across urban and rural regions.





Pharmaceutical Data Validity in Estimating Rural Health

Mississippi State University

Expected completion date: August 2005

Principal Investigator: Ronald Cossman, Ph.D., 662-325-4801 or rcossman@ssrc.msstate.edu

Funder: Federal Office of Rural Health Policy, HRSA

Chronic diseases account for more than 60% of total medical expenditures in the U.S., and 70% of all deaths. Yet, morbidity rates for the vast majority of chronic illnesses are not reported, and those reportable diseases (e.g., cancer, tuberculosis, etc.) are not reported at the county level. Thus there is no means for mapping the prevalence rates of chronic diseases in rural areas. This project will use a proprietary data base of drug prescriptions filled in the U.S. as a proxy for prevalence of both the top mortality-causing diseases (e.g., heart attack, stroke,

asthma and diabetes), as well as selected non-fatal illnesses that have disability implications (e.g., sinusitis, arthritis, ADHD and chronic pain). This project will allow for the quantification of variation in morbidity (via prescription use) across rural areas; identify locations that might be at risk for stunted economic development due to high levels of chronic illness in the working population; and potentially lead to the development of a valid and reliable measure of county-level rates of chronic illness using prescription data as a proxy.

Public Health System Performance Measurement: Are Standards Applicable to Rural Communities?

NORC Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Claudia Schur, Ph.D., 301-951-5070 or schur-claudia@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

This project aims to increase understanding of how public health governance affects the structure of public health services, and how this in turn influences the strategies adopted for meeting community public health needs in rural areas.

Since the early 1990s, public health advocates have been concerned about how a national health care plan might incorporate or co-exist with public health care functions.

A list of ten essential services of public health was developed by the CDC. Recently, work has focused on formulating a systematic strategy for measuring public health practice with respect to these services at both the state

and local levels. Many “public health” functions are conducted, at least in part, by hospitals, private practice physicians, and community groups as well as a variety of entities that are not focused strictly on health. The division of responsibilities in a community may result from state regulation, historical practice, local political dynamics, or other factors. With respect to public health practice, public health systems in rural areas differ from those in urban areas in terms of scope of services and functions, in part due to differences in the level of resources available (resulting in lower staffing levels and fewer specialized capabilities) and in part based on

geography (i.e., the size of the area covered and geographic isolation). How these distinctly rural features combine with state public health governance and local features to meet local public health needs is not well understood.

The Walsh Center conducted a series of case studies of several states to address the following policy questions:

- What are the different state-mandated structures for delivery of public health services?
- How do these structures differentially affect rural and urban areas within a state?

- How do different structures influence the type of services provided and the mix of resources available to rural communities?
- How does the structure affect the range of entities providing public health services (e.g., community health centers, hospitals, community groups)?
- What are the differences among rural communities that affect their ability to function effectively over time with respect to public health function?

A report and policy brief will be prepared for distribution to policymakers and persons on the Center mailing list.

Rural Public Health Structure and Infrastructure

Kansas Health Institute

Expected completion date: August 2005

Principal Investigator: Anthony Wellever, M.A., 785-233-5443 or twellever@khi.org

Funder: Federal Office of Rural Health Policy, HRSA

The organizational structure of local health departments (LHDs) is key to their effectiveness. Resource shortages in some rural areas may compromise some components of structure, leading to poor outcomes. Poor performance may be remedied by rural LHD networking, mergers, or regionalization, to compensate for structural deficiencies. Which components of LHD structure make the largest contribution to outcomes is not known. This project is intended to generate hypotheses about the relationship of LHD structure and infrastructure to performance. It is hoped that subsequent researchers will use the structural characteristics identified in this project to more fully describe rural LHDs through survey research and to establish relationships between structure and various measures of local public health department performance.

Investigators will conduct site visits to six states. In each of the six, investigators will visit the office in the state Department of Health or its equivalent responsible for LHD management, coordination, or liaison and interview the

chief administrative officer for LHD affairs. In each of the six states, site visits to two rural LHDs will also be conducted. LHD sites will be selected to reflect differences in governance (i.e. centralized, decentralized, mixed model), primary industries, managed care penetration, and poverty to name a few. Using standard protocols, the administrator of the LHD, a member of the governing board, the medical director, and others will be interviewed. Documents also will be collected from the sites (e.g., budgets, staffing tables, contracts, studies) during the visit. Data collected before, during, and following the site visits will be analyzed and findings reported in individual case studies and a summative report of cross-cutting themes and structural characteristics of LHDs by environmental attributes such as population served, and relationship with state government. A list of characteristics of LHD structure will be produced that are sufficiently common across geography, rurality, and governance to serve as independent variables for future studies of LHD performance.



Assessment of Small Rural Hospital Activities to Report Medication Errors

RUPRI Center for Rural Health Policy Analysis

Expected completion date: August 2005

Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or kmueller@unmc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This research will determine how small rural hospitals (SRHs) have responded to the environmental pressure to improve patient safety and quality by implementing safe medication practices and reporting and monitoring medication errors. SRHs will be surveyed, in two random samples. For both Critical Access Hospitals (CAHs) and SRHs, the estimates of interest are the proportion that employ a full time pharmacist, the proportion that use automation in dispensing and administering medications, and the proportion that use safe medication practices.

This research will be of interest to decision makers at national, state, and local levels. At the national level, a description of the consequences of limited pharmacy support on medication use and medication error reporting in SRHs can provide the rationale for leveraging technological innovations such as telepharmacy to achieve more equitable hospital medication use systems for rural populations. At the state level, an understanding of the consequences of limited pharmacy support for medication error reporting behavior will provide a context for the importance of establishing relationships between network hospitals

and CAHs (and peer groups of non-CAH SRHs with more than 25 beds). At the local level, this research can provide administrators, governing boards, and providers with a rationale to build collaborative relationships with peers, network hospitals, academic medical centers, and national error reporting systems. Aggregate error reporting systems can provide the means to monitor the outcome of patient safety in the nation's smallest hospitals as the structure and process of medication use changes through such practices as bar coding, automated dispensing machines, and telepharmacy.

Products of this research will include a policy brief describing the medication use process in SRHs with emphasis on incorporation of safe medication practices despite limited resources, a policy paper discussing unique characteristics of SRHs that affect how projects to improve patient safety should be approached, a policy brief summarizing the results of hypotheses testing and implications for federal policy initiatives and private sector activities designed to enhance patient safety and quality improvement, and scholarly products for dissemination at professional meetings.

Examining the Applicability of AHRQ's Inpatient Quality Indicators to Rural Hospitals and the Implications of the Relationship Between the Indicators and Financial Measures for Medicare Payment Policies

RUPRI Center for Rural Health Policy Analysis

Expected completion date: August 2005

Principal Investigator: Li-Wu Chen, Ph.D., 402-559-7113 or liwuchen@unmc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Since the populations served by rural hospitals and urban hospitals are quite different, their quality concerns may also be different. As standardized quality measures for hospital reporting are developed, it is critical that differences between rural hospitals and urban hospitals are considered. This study will determine whether the Agency for Healthcare Research and Quality's (AHRQ's) inpatient quality indicators (IQIs), which were developed without consideration of an urban/rural difference, are appropriate for use in rural hospitals.

This study will be divided into two components. The first component will investigate how AHRQ's IQIs can be

applied to rural hospitals. The second component will explore the application of AHRQ's IQIs in answering relevant policy questions. The findings of this study are expected to inform policymakers about how standardized quality measures can be adjusted for rural hospitals and to provide useful information about the relationship between standardized quality measures and financial performance among rural hospitals, information that can be used when policymakers try to incorporate a quality element into Medicare's payment system.

Products of this research will include policy briefs and journal manuscripts.

Improvement in the Quality of Care for Acute Myocardial Infarction (AMI): Have Rural Hospitals Followed National Trends?

WWAMI Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Laura-Mae Baldwin, M.D., M.P.H., 206-685-4799 or lmb@famned.washington.edu

Funder: Federal Office of Rural Health Policy, with computer access time and data donated by CMS

AMI is one of the leading causes of death in the United States and a common cause for admission to U.S. hospitals. AMI requires immediate care in a hospital setting to minimize morbidity and mortality. In rural hospital settings, transport of patients with AMI to urban settings could result in delays in care. Some of the most effective and immediate treatments for AMI require only basic intravenous access and should be equally accessible in rural and urban hospitals.

This project determined whether overall improvements in the quality of care for AMI among Medicare patients have taken place in both rural and urban hospital settings. This study had three primary hypotheses:

- Quality of care for AMI has improved in all types of rural hospital (large, small, and remote small) between 1995 and 2000
- The rate of improvement in the quality of care for AMI in rural hospitals lags behind that in urban hospitals

- The smallest and most remote rural hospitals demonstrated lesser improvements in the quality of care for AMI than larger rural hospitals.

This study included Medicare beneficiaries 65 years and older with an AMI confirmed by specific medical criteria who were directly admitted for the AMI care (rather than transferred).

Rates of AMI guidelines adherence by the three types of rural and urban hospitals were calculated for these hospitals nationally, by region, division, and state in the two time periods. A working paper will be produced, and an article will be submitted for publication to a peer-reviewed journal.

Pay for Performance and Quality Improvement in Rural Hospitals

Upper Midwest Rural Health Research Center

Expected completion date: September 2005

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project has three primary purposes:

- To estimate the impact on rural hospitals in the U.S. of a pay-for-performance (PFP) program similar to the CMS-sponsored Premier, Inc. Hospital Quality Incentive Demonstration
- To complete a synthesis of the major factors that will influence the inclusion of rural hospitals in PFP programs
- To make recommendations for the design of PFP programs that will appropriately reward rural hospitals for improving quality.

This project will empirically assess how rural hospitals in the U.S. would fare financially (i.e. receive bonus payments,

be eligible for reduced DRG payments) if they participated in the CMS-sponsored Premier HQID; identify and thoroughly examine the key factors that facilitate or constrain rural hospital participation in pay for performance programs; and describe options for the design of pay for performance programs that are relevant for rural hospitals that seek quality improvement. This study will use data from several sources, including data on the CMS 7th Scope of Work measures and data from a telephone survey of key representatives from major stakeholders (e.g. CMS, Premier, AHA, rural hospitals, rural relevant physician associations) involved with PFP projects.

Refining and Field Testing a Relevant Set of Quality Measures for Rural Hospitals

University of Minnesota Rural Health Research Center

Expected completion date: June 2005

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

Funder: Centers for Medicare and Medicaid Services

This project has the following objectives:

- To refine the draft set of relevant quality measures for rural hospitals through their review by a national expert panel and leading national quality organizations
- To develop additional measures not included in existing quality measurement systems that are relevant to rural hospitals (e.g., measures related to the triage, referral, and transport of patients)
- To field test the revised set of relevant quality measures for rural hospitals in collaboration with two Quality Improvement

Organizations (QIOs); and to assess strategies for how QIOs, CMS, and rural hospitals can use the above quality measurement data to improve quality for Medicare beneficiaries in rural hospitals.

Key issues to be considered in the field test include ease of data collection; perceived usefulness of the data to the hospital staff; use of the data by the hospital and the QIOs for quality improvement within the hospital; and use of the data by CMS for external reporting needs.

Rural Quality Improvement Focus on Diabetes

RUPRI Center for Rural Health Policy Analysis

Expected completion date: April 2005

Principal Investigator: J. Patrick Hart, Ph.D. 402-559-8964 or jpathart@unmc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will examine the policy implications of current approaches, characteristics, and effectiveness of diabetes care management and quality improvement programs in rural areas. Diabetes is a well-understood disease for which there has been a reasonably large amount of program development in rural areas involving care management, self-management, and prevention, or combinations of these elements. Diabetes programs represent, therefore, a sound starting point for understanding the rural context, process, structure, barriers, and operational and performance results of chronic disease management

and quality improvement programming in rural areas.

This project will focus specifically on diabetes care management and quality improvement programming in rural areas to better understand the adaptability and policy implications of using chronic care coordination and other models in a rural environment. The following hypotheses will be researched:

- Early adoption and success are more likely when there is active leadership, existing collaborative relationships such as alliances and networks, strong links to community-based resources needed for care management, active participation of the Quality

- Improvement Organization, and support from state professional associations
- The greater the distance that diabetes care programs are from urban

counties the less likely the use of certified diabetes education and the less likely the program to be sustained.

Successful Implementation of Medication Safety Initiatives in Rural Hospitals: The Role of Pharmacists and Technology

Upper Midwest Rural Health Research Center

Expected completion date: September 2005

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

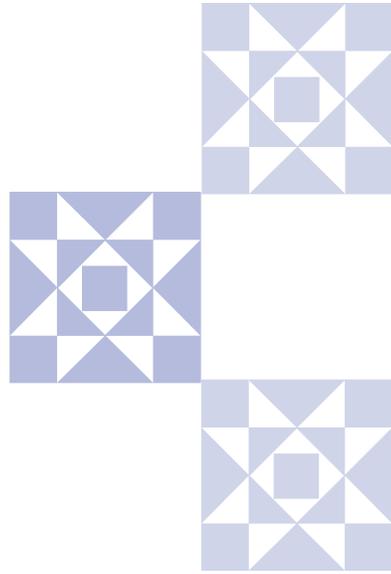
Contact Person: Michelle Casey, M.S., 612-627-4251 or mcasey@umn.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will assess the capacity of rural hospitals to implement medication safety practices that reduce the likelihood of serious adverse drug events, and identify factors that facilitate successful implementation of medication safety practices in rural hospitals. The project will focus on two key aspects of rural hospitals' capacity to implement medication safety initiatives: pharmacist staffing and the availability of technology.

This project is national in scope and will have relevance for policymaking at the federal, state and local levels. The project will include analysis of primary data from a phone survey of a national

sample of rural hospitals and secondary data from the AHA Annual Survey and Area Resource File. The telephone survey will be developed based on a review of the literature on medication safety practices in hospitals and input from a rural hospital pharmacist advisory group. The survey will include questions regarding pharmacy staffing, the use of medication safety technology, and factors that have influenced successful implementation of medication safety practices in the hospital. A report on the project findings will be completed by the end of September 2005.





Diabetes and Hypertension in Rural Hispanics

South Carolina Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Arch Mainous, Ph.D., 843-792-6986 or mainouag@musc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project examined the similarities and differences between rural and urban Hispanic and Caucasian adults diagnosed with diabetes mellitus and hypertension.

Diabetes mellitus and hypertension are common and potentially disabling chronic diseases. Rural and minority populations have historically had problems accessing care and are particularly vulnerable to the consequences of lower access to care. Despite the evidence from the early 1990s that diabetes is more prevalent among Hispanics and that rural populations have barriers to care that may negatively impact health care services for patients with diabetes, it is unclear whether rural Hispanics are disproportionately affected. Further, in comparison to urban residents the extent of decreased services may be a particular issue for timely diagnosis of diabetes in rural Hispanic patients. Language barriers may have particular

implications for providing care in this population. Addressing these issues has significant implications for rural health policy and the distribution of manpower and resources.

The project had two specific objectives:

- To examine the similarities and differences between rural Hispanic and Caucasian adults diagnosed with diabetes mellitus and hypertension as well as urban Hispanic and Caucasian adults in terms of diabetes and blood pressure control and complications using the 1999-2000 National Health and Nutrition Examination Survey (NHANES)
- To examine the prevalence of undetected diabetes mellitus and hypertension among rural Hispanics, rural Caucasians, urban Hispanics and urban Caucasians using the NHANES.

How Rural Hospitals Are Meeting the Needs of Limited English Proficiency Patients

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Deborah Parra-Medina, Ph.D., 803-251-6317 or dpmedina@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

There were 37.4 million Latinos in the United States in 2002, representing 13.3 % of the U.S. population, thus becoming the largest minority in the United States. Latinos and other immigrants who are limited English proficient (LEP) encounter multiple barriers accessing

health care. On August 11, 2000 President Clinton issued the executive order 13166 (See 65 Fed. Reg. 50121), entitled: "Improving Access to Services for Persons With Limited English Proficiency." After a process of public comment and input, the HHS Office of Minority Health issued the

National Standards on Culturally and Linguistically Appropriate Services in Health Care (CLAS Standards) on December 22, 2000 (See 65 Fed. Reg. 80865).

There are few studies that focus on the ability of rural hospitals to comply with CLAS standards. This project will survey rural hospitals in order to:

- Determine the extent to which rural hospitals in areas of high Hispanic population growth have implemented plans for compliance with the DHHS LEP regulations
- Describe the difficulties rural hospitals must overcome in order to provide culturally and linguistically appropriate health care to Hispanic clients
- Ascertain the translation techniques most commonly used by rural hospitals in high Hispanic population growth counties
- Describe the approaches that rural hospitals perceive to be most effective for the provision of culturally competent health care to Hispanic clients.

Products of the survey will include a technical report to be submitted to ORHP. In order to make this document accessible to a practitioner audience, the report will incorporate vignettes illustrating how rural hospitals are successfully addressing the needs of LEP patients. “Key Facts” sheets will be developed for distribution to policymakers and the public. To address the academic and medical communities, findings will be presented at state and national meetings, with an emphasis on organizations serving Hispanic populations. In addition, scholarly papers are anticipated, such as quality implications of oral translation techniques currently used by rural hospitals in high Hispanic growth communities, and the relationship between size of Hispanic community and translation approaches used by rural hospitals.

The Impact of Health Insurance Coverage on Native Elder Health: Implications for Addressing the Health Care Needs of Rural American Indian Elders

Upper Midwest Rural Health Research Center

Expected completion date: September 2005

Principal Investigator: Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu

Contact Person: Alana Knudson, Ph.D., 701-777-4205 or aknudson@medicine.nodak.edu

or Jacque Gray, Ph.D., 701/777-0582 or jgray@medicine.nodak.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will determine what types of health insurance coverage rural Native American elders have and examine how different types of health insurance coverage and lack of health insurance coverage impact access to health care services among Native American elders by geographic location (rural frontier, rural non-frontier and urban).

The study will address the following research questions:

- What is the rate of health insurance coverage among Native American elders living in rural frontier, rural non-frontier and urban counties?
- What types of health insurance coverage do Native American elders living in rural frontier, rural non-frontier and urban counties have?

- Who are the uninsured Native American elders and what is their demographic make-up?
- What is the relationship between health insurance coverage, geographic location, key demographic factors and health status indicators among Native American elders?
- What is the relationship between health insurance coverage and access to health care services among Native American elders?

The study will analyze national data from Identifying Our Needs: A Survey of Elders II, a Native elder social and health needs assessment project conducted by the NRCNAA in collaboration with tribes throughout the country. To allow analyses by rural, frontier, and urban location, the Native Elder II survey data will be linked to Urban Influence Code variables from the Area Resource File and frontier variables from the Census data using county FIPS codes.

National Trends in the Perinatal and Infant Health Care of Rural and Urban American Indians (AIs) and Alaska Natives (ANs)

WWAMI Rural Health Research Center

Expected completion date: January 2005

*Principal Investigator: Laura-Mae Baldwin, M.D., M.P.H., 206-685-0401 or
lmb@fammed.washington.edu*

Funder: Federal Office of Rural Health Policy, HRSA

This project examined and compared trends in prenatal care and mortality rates of rural and urban AI/AN and non-AI/AN populations in order to determine the level of disparity between these populations. While there have been dramatic improvements in AI/AN maternal and child health since these measures were first recorded in the mid-1950s, significant disparities persist between AI/AN and non-AI/AN populations in the U.S. This study examined trends in prenatal care use, low birth weight rate, and the neonatal and post-neonatal mortality rates in rural and urban AI/AN populations nationally between 1985 and 1997, and compared these trends in the white and African-American populations during the same time period. Additionally, trends in causes of death for rural and urban AI/

AN populations nationally between 1985 and 1997 were examined and compared to the non-AI/AN population during the same time period. Trends in our study measures for AI/AN and non-AI/AN populations were analyzed by Census region, division, and Indian Health Service (IHS) Service Areas. The study used the National Linked Birth Death Data Set at three points in time: 1985-1987, 1989-1991, and 1995-1997, and compared rates of inadequate prenatal care, low birth weight, neonatal and post-neonatal death, and causes of death between rural and urban AI/ANs in each of the three time periods, as well as over time. Rates of these same outcome measures are provided for white and African-American populations during the same time periods for reference.

Native Elder Care Needs Assessment: Development of a Long Term Care Planning Tool Kit

University of North Dakota

Expected completion date: January 2005

Principal Investigator: Alan Allery, M.H.A., 701-777-3859 or alan_allery@und.nodak.edu

Contact Person: Francine McDonald, M.P.A., 701-777-4043 or fmcdonald@medicine.nodak.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project developed a tool kit to assist tribes with interpreting long term care data obtained through a national Native Elder Care Needs Assessment conducted by the National Resource Center on Native American Aging at the Center for Rural Health, University of North Dakota, School of Medicine and Health Sciences. A long term care planning tool kit will assist tribes in using the data to develop long term care infrastructure and comprehensive services that respond to

local needs and services. The tool kit will also assist rural health policymakers with identifying the specific needs of their communities or population and translating those needs into action based on data collected by the tribe for their geographic area. The tool kit will be published in both web based and paper format and will be specifically geared towards American Indian and Alaska Native elderly.

Rural Minority Health: A Comprehensive Assessment

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or jprobst@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

The objectives of this comprehensive study are to:

- Profile demographics of rural African Americans by region of the U.S.
- Describe clinical problems prevalent in rural African American populations
- Explore available health care facilities and practitioners in rural areas
- Investigate outpatient treatment provided to rural African American populations, by type of practitioner
- Explore expenditures for health care among rural African Americans, by region of the U.S.

- Determine barriers to care such as insurance, provider availability, and health beliefs/behaviors.

Six reports have been submitted to date as part of the comprehensive assessment of minority health, and a final report is underway summarizing sources of funding for health care among rural minorities based on the Medical Expenditure Panel Survey.

Tribal Long-Term Care: Barriers to Best Practices in Policy and Programming for a National Sample of Rural Tribes

West Virginia University Research Corp.

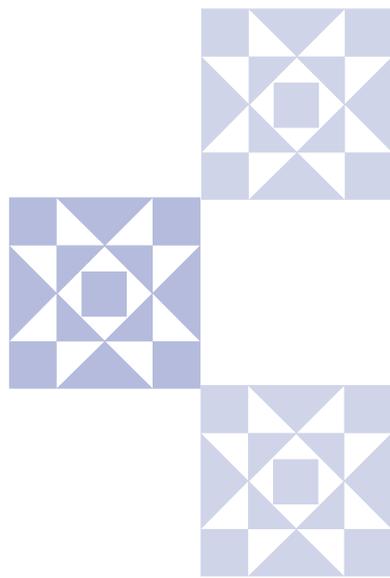
Expected completion date: August 2005

Principal Investigator: R. Turner Goins, Ph.D., 304-293-2081 or rgoins@hsc.wvu.edu

Funder: Federal Office of Rural Health Policy, HRSA

The project will examine barriers experienced by rural American Indian and Alaska Native (AI/AN) reservation tribes in developing long term care policy and service provision, identify tribes which exemplify best practices in the area of long term care policy, and document what other tribes would need to know to develop successful long term care programs (i.e., lessons learned). The research project and resultant information will be national in scope. This project will survey a nationally representative sample of 130 federally recognized rural AI/AN tribes. To generate the list of best practice tribes, the National Coordinator of the IHS Elder Health Care Initiative will be contacted along with members of the project's Advisory Committee. These individuals will be asked to identify tribes

with best practices and/or recommend others who may be able to identify tribes for this purpose. Thus, the second sample will be a purposive sample of tribal health board members recruited to participate in in depth interviews. In an effort to capture all tribes nationwide that exemplify best practices, the purposive sample will be complete when no new tribes are recommended. In a population as beset by health concerns as AI/ANs, the identification of barriers to developing needed long term care policy and programs achieves tremendous importance. This project represents a systematic effort to improve the ability of the health care delivery systems to respond to the needs of disabled AI/ANs.





Database for Rural Health Research in Progress

Maine Rural Health Research Center

Expected completion date: August 2005

Project Director: Karen B. Pearson, M.L.I.S., M.A., 207-780-4553 or karenp@usm.maine.edu

Funder: Federal Office of Rural Health Policy, HRSA

The product of this project is a searchable database of current rural health research and policy analysis which includes all ORHP-funded studies as well as research funded by other federal agencies, major private foundations and other sources. Research dealing with the financing, organization, and/or delivery of health, mental health, and/or substance abuse treatment services in rural areas or to people residing in rural areas is within the scope of this database. Rural health research is also defined to include studies of the prevalence of health, mental health or substance abusing conditions among

rural population groups. Studies of the effects of changes in the rural health care system on the rural economy, rural/urban comparison studies, and studies of the experiences of rural residents in receiving health, mental health or substance abuse treatment services are also included. The web site address for the database is <http://www.rural-health.org/database>. In addition, an annual publication of rural health research in progress in the ORHP-funded centers is produced and disseminated to policymakers.

Evaluating Need for Assistance Criteria and Weighting of Overall Criteria in the Requirements of Funding New Start and Grant Applications for Health Centers

North Carolina Rural Health Research Program

Expected completion date: March 2005

Principal Investigator: Thomas Ricketts, Ph.D., 919-966-5541 or tom_ricketts@unc.edu

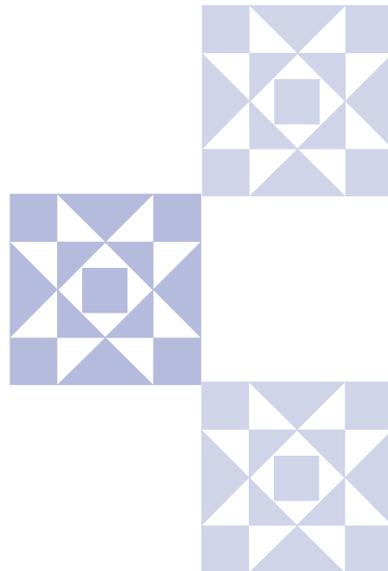
Funder: Bureau of Primary Health Care, HRSA

Providers of services who wish to become part of, or continue to receive funding through, the health centers program must apply through the Bureau of Primary Health Care (the Bureau) as part of a stringent application process. A key component of the application is the completion of a Need for Assistance (NFA) worksheet that represents the first phase of a multi-tiered screening and award process. This project will extend and enhance work done previously for the Bureau by examining the current and proposed changes to the Need for

Assistance (NFA) criteria. Data submitted by applicants for assistance through the Bureau will be examined, and then the effects of optional weighting and scaling of the data for the development of scores that allow for ranking and comparison of applications will be tested. The project will support the review and decision making process the Bureau uses to fund and support community-based programs. The project will answer two key questions: Does the modified methodology for the NFA proposed by the Sheps Center under prior contract

work accurately reflect and improve the assessment of relative need of different applicants? Are the review criteria properly selected and weighted appropriately to help assure that the Health Center program accurately and effectively targets the neediest areas? Statistical evaluation of the NFA data from the entire FY 2004 New Start and Expansion applications (1st Round) will be conducted. These data will be supplemented by data sets developed to

support the development and testing of revised HPSA-MUA, data collected in support of the Data Warehouse project within HRSA, as well as shared data provided by the Primary Care Service Area Project and in house data sets maintained by the Sheps Center. Findings will be presented in a final report to be submitted to the Project Officer.





Access to Cancer Services for Rural Colorectal Cancer Medicare Patients: A Multi-State Study

WWAMI Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Laura-Mae Baldwin, M.D., M.P.H., 206-685-0402 or lmb@famned.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

This study examined a comprehensive database to quantify the distance and access to four types of cancer services in a sample of rural, Medicare-insured, colorectal cancer (CRC) patients of different racial and ethnic groups. CRC is the second most common cause of cancer death in the U.S., and disproportionately impacts racial and ethnic minorities. Cancer care requires a sophisticated set of surgical and medical resources more common in large urban settings. Greater proportions of rural cancer patients are

diagnosed at later stages than urban patients and are less likely than urban patients to receive state-of-the-art cancer treatments. The database links Surveillance Epidemiology and End Results (SEER) cancer registry, Medicare claims, AMA Masterfile, and American Hospital Association data. This study will inform future work designed to understand discrepancies in cancer service use by the rural elderly in different racial and ethnic groups.

Describing Geographic Access to Physicians in Rural America Using Statistical Applications in GIS

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: August 2005

Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky_slifkin@unc.edu

Contact Person: Thomas Ricketts, Ph.D., 919-966-5541 or tom_ricketts@unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This study will use a geographic approach to assess the influence of distance and travel time on the distribution of physicians in rural America. The Medicare Modernization Act contains financial provisions aimed at changing the distribution of physicians, and called for a revision in the determination of areas eligible for Medicare bonus payment support. There continues to be a need to accurately characterize primary care distribution and measure access to care for rural places. The goal of this work is to improve our

measures of access by identifying the extent to which cross border resources can be considered in indices of access.

There are four specific goals for the proposed research:

- To identify more accurately how supply in adjacent areas can be used to adjust ratios or to characterize overall geographic access
- To analyze county boundaries to determine where they are effective proxies for service areas for shortage determination and how to make best use of the Primary Care Service Areas

(PCSAs) developed by the Dartmouth and the Medical College of Virginia team in the assessment of geographic access to care

- To repeat analyses that characterize the distribution of physicians as more adequate using more current data and optional assumptions that capture the range of possible policy options
- To develop summary indices of supply for small areas, regional areas, and guidance for using smoothed supply estimate.

Findings will be presented in a report presenting a more accurate representation of the distribution of physicians across the nation and the access to those physicians for the rural population. An article for a peer-reviewed journal and a findings brief will be produced describing our findings of national physician availability and distribution, considering the urban-rural gradient in particular.

Do Communities Make a Difference in Access? A National Study

RUPRI Center for Rural Health Policy Analysis

Expected completion date: June 2005

Principal Investigator: Timothy D. McBride, Ph.D., 314-977-4094 or mcbriDET@slu.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project will examine the effect of community-level resources on an individual's access to health care, particularly whether urban and rural individuals' access to health care differs, given community differences. If rural residents lack access to appropriate and needed health care services as a function of where they live, they may have lower health care utilization and, therefore, diminished outcomes. Lack of access may lead to a lack of preventive care, delays in seeking needed care, and other inappropriate health care use. Community-level variables may limit health care access for low-income people, especially in rural areas. Community-level resources affect an individual's

ability to use health care resources if the institutions that deliver health care are not accessible.

This project will use empirical research, differentiated at the urban and rural levels, to test the following hypotheses:

- Access to care is affected by enabling, predisposing, and need characteristics of the individual, but also by community demand, community support community structure variables
- Community-level variables will play a more significant role in rural communities.

A policy paper and policy brief will be produced based on the findings.

Rural Access and State Loan Repayment for Dentists

National Conference of State Legislatures

Expected completion date: June 2005

Principal Investigator: Shelly Gehshan, M.P.P., 202-624-3586 or shelly.gehshan@ncsl.org

Funder: Federal Office of Rural Health Policy, HRSA

Over the past five years, a number of states have turned to an idea that has been successful at the national level but little used by states, namely state loan repayment programs for dentists with a service requirement. However, little is known about these programs for dentists, in terms of their structure, size, requirements, and results. Findings from this study could be used by state offices of rural health and oral health to develop programs that are effective in increasing the supply of dentists in rural areas.

This project will identify and evaluate the effectiveness of these programs for dentists on improving access to rural health care. This study will establish baseline information about these programs that can be used by states to design and tailor similar programs for rural access.

This study hypothesizes that state loan repayment programs for dentists are an effective strategy in improving access to dental care in rural areas. A study of all 50 states will determine the following:

- The number of states which have state loan repayment programs for dentists
- The requirements of each program, and what do dentists receive in return

- The number of dentists currently practicing in rural areas with state loan repayment program support and what impact they are having on access
- The long-term results of these programs in terms of retention of program participants in rural areas
- How the costs of these programs compare with other strategies that have a similar target such as mobile vans.

This study will also give states benchmarks for comparison and information about the long-term effects and a questionnaire to use in tracking retention of loan repayment recipients. To guide the study, NCSL will convene periodically by telephone conference a small advisory panel of state rural oral health experts. The panel will include officials from a state office of rural health, oral health, and Medicaid dental program as well as a current or former rural dentist and representative of a state dental association. Panel members will be asked to review telephone interview questions, questions for participating dentists and provide expert commentary on research results.

Rural Safety Net Provision and Hospital Care in 10 States

Georgia Health Policy Center

Principal Investigator: Patricia Ketsche, M.B.A., Ph.D., 404-651-2993 or pketsche@gsu.edu

Expected completion date: September 2005

Funder: Federal Office of Rural Health Policy, HRSA

This project will evaluate whether access to primary care is more effective at improving health and reducing cost in rural than urban markets, and identify the characteristics of communities which

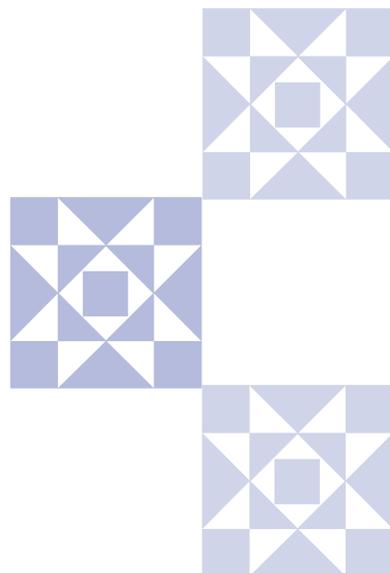
determine the effectiveness of primary care access.

There is substantial evidence that access to primary and preventive services can reduce the necessity for hospital care and

hence indicate improved health. Reductions in unnecessary hospital care for the uninsured are important for rural hospitals concerned about cost containment.

This project will use a cross-sectional analysis of secondary data from multiple sources to compare the effectiveness of rural and urban publicly funded primary care in 10 diverse states. This research will inform policy relating to the best balance of funding between access provision through public clinics and coverage expansion to reduce the burden of

uncompensated care on financially strained rural hospitals. This study will also help identify those community characteristics such as population demographics, income levels, numbers and types of private providers, and the degree of organization of the private market that contribute to greater effectiveness of public primary care access.





Mental Health Risk Factors, Unmet Needs and Provider Availability for Rural Children

South Carolina Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Charity G. Moore, Ph.D., 803-251-6317 or cgmoore@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Accurate measures of childhood vulnerability to mental health problems can help guide public policy that allocates resources for mental health care to specific populations, including funding and human resources allocated to rural community mental health centers. This study will add to the current knowledge of unmet mental health need for rural children, using data from the 2001 National Health Interview Survey (NHIS). The 2001 NHIS included, in addition to questions concerning

diagnosed mental health problems, administration of the Strengths and Difficulties Questionnaire (SDQ). The SDQ detects sub-clinical mental health problems, including emotional problems, conduct problems, hyperactive behavior, peer relationship difficulties, and lack of prosocial behavior. This study examined the prevalence of sub-clinical mental health problems in rural children, assessed risk factors associated with problems in children, and assessed the influence of local provider availability on healthcare provider contact.

Poverty, Parental Stress, and Violent Disagreements in the Home Among Rural Families

South Carolina Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Charity G. Moore, Ph.D., 803-251-6317 or

cgmoore@gwm.sc.edu

Funder: Federal Office of Rural Health Policy, HRSA

Studies suggest that between 3.3 and 10 million children witness some form of domestic violence annually. Children witnessing domestic violence are more likely to have emotional/ behavioral problems and be in abusive relationships in adulthood regardless of co-occurring child maltreatment. A recent ORHP report noted that "... the already significant problems of battered women are likely exacerbated by rural factors." (<http://ruralhealth.hrsa.gov/pub/domviol.html>).

The study will use the National Survey of Children's Health (NSCH), a

nationally representative telephone survey, to address the following hypotheses:

- The prevalence of poverty, parental stress and violent disagreements in the home increase with rurality
- Economic hardships at the individual and community levels are associated with increased parental stress. We hypothesize the effects of economic hardships will be magnified in rural families and decreased for African American, Hispanic, and other race/ethnicity families
- Parental stress will be positively associated with rates of violent

disagreements in the home; this relationship will be consistent across all race/ethnicity groups

- Parental stress and violent disagreements in the home will be positively associated with presence of mental health problems in children.

As with other SCRHRC studies, findings will be disseminated through a technical report to ORHP, “Key Facts” sheets, presentations at state and national conferences, and through publication in the medical and social sciences literature.

Quality of Women’s Care in Rural Health Clinics: A National Analysis

East Tennessee State University

Expected completion date: August 2005

Principal Investigator: Joellen B. Edwards, Ph.D., RN, 423-439-4055 or edwardsj@etsu.edu

Funder: Federal Office of Rural Health Policy, HRSA

Most initiatives to improve the quality of health care are based on services provided in urban, high-volume inpatient centers. Little is known about the quality of health care in rural primary care settings. One type of primary care setting of interest to legislators, regulators, and the Office of Rural Health Policy are certified rural health clinics (RHCs). RHCs receive cost-based reimbursement for care of Medicare and, in most states, Medicaid populations, and are the most numerous safety net providers in rural areas. The Balanced Budget Act of 1997 requires that these sites establish quality assurance and performance improvement programs in the near future. However, a national study of quality of care in RHCs has not been completed. One indicator of quality in primary care is the measurement of the

level of health screening procedures received by patients. Rural women experience higher rates of illness than urban women, yet receive fewer life-saving screening procedures. Rates of screening interventions are important in measuring the quality of women’s health in RHCs and other settings.

This study will analyze the rates at which women patients receive five recommended preventive screening interventions in a national, geographically stratified random sample of RHCs. Results of the analysis will be used to derive implications for rural health policy.



The North Carolina Rural Health Guide

Policy Analysis Center

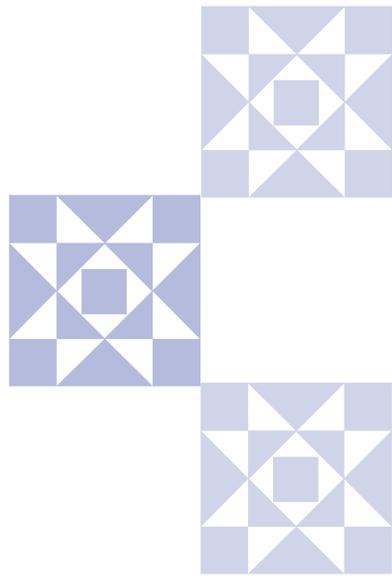
Expected completion date: December 2006

Principal Investigator: Katie Gaul, M.A., 919-966-6529 or gaul@mail.schsr.unc.edu

Funder: The North Carolina Hospital Association (NCHA)

This project will provide assistance in the production of an on-line rural health guide entitled “The North Carolina Rural Health Guide” to be utilized by North Carolinians. The product of this project is an online resource system that can be used by rural hospitals and communities

who wish to better understand the health care needs and current capacity in their local communities and facilities. The online product will be updated annually with current data.





Chartbook of Family Practice Graduate Medical Education Programs in Rural America

*WWAMI Rural Health Research Center
Expected completion date: January 2005*

*Principal Investigator: L. Gary Hart, Ph.D., 206-685-0402 or ghart@fammed.washington.edu
Funder: Federal Office of Rural Health Policy, HRSA*

Shortages of generalist physicians in U.S. rural areas have been an enduring problem for many decades. The supply of rural physicians is, in part, determined by the number of family physicians who receive their residency training within rural areas, along with the appropriateness of the content of their training for rural practices. However, little is known about the volume, location, and types of rural training for family physicians. This project will produce a chartbook that makes previously unreported information about family physician residency directors more fully available to medical educators and other policymakers.

Programs were asked to indicate the extent to which training rural physicians was part of their core mission and to specify where all residency training sponsored by their programs took place. Although over one-third of the urban programs listed rural training as an important part of their mission, only 2.3

percent of the training they supported took place in rural areas.

The chartbook contains graphs and tables, and presents national findings, geographic region, division findings, and state findings. Findings are presented by type of geography (isolated small rural, small rural, large rural, and urban), type of rural training experience (model family practice clinic, block rotations, rural training tracks, and continuity clinics), and other residency characteristics. Some of the monograph diagrams show state-based rates of FTE training not previously reported, using population denominators so that comparisons of rural training per rural person can be compared across the 50 states. A version of the monograph will be published on our Web site, and we will disseminate hard copies of the monograph to residency directors, medical school deans, state health workforce committees, and federal health workforce policymakers.

Development of a New Methodology for Dental Health Professional Shortage Area Designation

*North Carolina Rural Health Research and Policy Analysis Center
Expected completion date: September 2005*

*Principal Investigator: Thomas Ricketts, Ph.D., 919-966-5541 or tom_ricketts@unc.edu
Funder: Health Resources and Services Administration*

This project will develop a methodology for designating dental health professional shortage areas within the United States, through the application of a conceptual model of dental access and use derived

from empirical studies. The model will guide the analysis of national dental utilization data and their relationship to the socio-demographic characteristics of potential dental care service areas in the

United States. The analysis will create a set of factor weights that can be applied to areas to determine those that have shortages of dental professionals.

Findings will be presented in a detailed methodology; a detailed analysis and summary of the effects of the

proposed methodology on designations; and data, summaries, and a detailed description of the application of the proposed methodology.

Is Rural Residency Training of Family Physicians an Endangered Species? An Interim Follow-up to the 1999 National BBA Study

WWAMI Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Roger Rosenblatt, M.D., M.P.H., 206-685-1361 or rosenb@u.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

The shortage of physicians in rural America has persisted as physicians continue to settle preferentially in metropolitan and suburban areas. One of the strategies to ameliorate this situation is the establishment of rural residency training. Since the completion of our earlier survey of family medicine residencies in the United States after the passage of the Balanced Budget Act (BBA) of 1997, there has been a precipitous decline in the proportion of U.S. medical school graduates (USMGs) who have chosen to pursue residency training in family medicine. As a result, match rates of U.S. programs have been declining rapidly, and quite a few programs have closed. The impact of these trends on rural family medicine training capacity is unknown.

This study examined the proportion of rural-based family medicine residencies that have ceased operations since 2000, the residency-match experiences of the surviving programs, the proportion of USMGs and international medical graduates, major issues confronting these rural residencies, and likely impacts of these changes on the preparation of future family physicians for rural America.

It was hypothesized that:

- Family medicine residencies in rural areas have experienced a more rapid decline in match rates than the entire population of family medical residencies
- Rural-based family medicine residencies are beginning to close as a result of falling match rates, and a substantial number are planning to close in subsequent years.

For this national study we used a combination of data collected in the landmark baseline survey of 1999 with primary data collected through a mail survey of the rural-based family medicine residency-training programs. The survey examined the match rates of the rural-based programs over the last five years; which programs have downsized, consolidated, or actually closed since 1999; what the plans are of these programs for the next two years, and to what extent would continuing decline in match rates affect them; and the implications for the rural areas that these programs serve. The final product will be a working paper plus a publication submitted to a refereed journal. We will also present the results of this study at local, regional, and national meetings.

Long Term Trends in Characteristics of the Rural Nurse Workforce: A National Health Workforce Study

WWAMI Rural Health Research Center

Expected completion date: August 2005

Principal Investigator: Eric Larson, PhD., 206-685-0402 or eric_larson@famned.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

This national study will characterize the evolution of the rural/urban and regional geography of the current distribution and shortage of Registered Nurses (RNs), as it emerged between 1980 and 2000. The study will use data from the National Sample Survey of Registered Nurses (NSSRN) collected between 1980 and 2000, supplemented with demographic, professional and health resource information from the Area Resource File

to examine changes in the demographic, professional, and locational profiles of the RN population over two decades. Nurse shortages will be examined through trends in the ratio of the number of nurses working in short-term general hospitals to measures of hospital capacity and utilization. Trends in overall nurse population ratios will also be examined.

National Changes in Physician Supply

WWAMI Rural Health Research Center

Expected completion date: January 2005

Principal Investigator: Eric Larson, Ph.D., 206-685-0401 or eric_larson@famned.washington.edu

Funder: Federal Office of Rural Health Policy, HRSA

National rural health policy development depends on an accurate and up-to-date assessment of physician supply. This project described the supply of generalist physicians and osteopaths in rural areas of the U.S. The study results provide a current picture of rural physician supply and its variation by state and by region. Data from the American Medical Association Physician Masterfile and the Area Resource File were used to

determine the total supply of practicing physicians in metropolitan and nonmetropolitan counties in 1998. Assessment was made of the supply of physicians in the smallest and most isolated areas of the country, and rural physician supply was analyzed on a state-by-state and regional basis.

Rural Health Center Expansion and Recruitment Survey

*WWAMI Rural Health Research Center and
South Carolina Rural Health Research Center
Expected completion date: May 2005*

*Principal Investigators: Roger Rosenblatt, M.D., M.P.H., 206-685-0402 or
rosenb@u.washington.edu or Janice C. Probst, Ph.D., 803-777-7426 or jprobst@gwm.sc.edu
Funder: Federal Office of Rural Health Policy, HRSA*

This collaborative project will examine and describe the current staffing needs of rural health centers (RHCs), ascertain the staffing, recruitment, and retention issues that rural health center CEOs regard as most critical; distinguish how issues differ between CEOs contemplating development of expansion sites versus those who are not; and describe how these findings correlate with the literature and current national supply projections for the categories of health professions needed by the RHCs.

RHCs face major barriers in recruiting and retaining health professionals, yet there are no projections of key health professions' staffing needs for RHCs and proposed new RHCs. While RHCs report on staffing via the Uniform Data System, this does not include critical information

on vacancies, recruitment and retention, and other important issues. The National Association of Community Health Centers administered a mail questionnaire to the CEOs of all RHCs that examines current vacancies, projected staffing needs, recruitment and retention issues, center site expansion plans, and CEO perception of policies that would facilitate recruitment and retention. The WWAMI Rural Health Research Center is involved in the analysis of these data, and a joint report with the South Carolina Rural Health Research Center will be produced. This project is a collaboration between the federal Office of Rural Health Policy, the Bureau of Primary Health Care, and the Bureau of Health Professions.

Rural-Urban Physician Payment Differences Across the Nation: Methodological Changes

*RUPRI Center for Rural Health Policy Analysis
Expected completion date: April 2005*

*Principal Investigator: A. Clinton MacKinney, M.D., M.S., 320-363-8150 or clintmack@cloudnet.com
Funder: Federal Office of Rural Health Policy, HRSA*

This project will simulate the effects of changes to the methodologies used to calculate the three geographic price indices (GPCIs) used to adjust physician payment across the 89 Medicare payment areas in the U.S. and territories. Health services researchers are concerned about the methodology used to determine the GPCIs. In particular, concerns have been raised about the timeliness of updates to the indices, the appropriateness of the

data used to compute the indices, and the methodology in general.

This project is designed to provide a dispassionate explanation of payment differences as a function of payment area, with illustration of specific differences that result from separate GPCIs, and analyze changes to the payment formula to determine potential impact on payment across areas and revenues for rural physician practices.

The following hypotheses will be tested:

- Payment to rural primary care physicians would increase if the work GPCI were calibrated using more recent data and a different mix of occupational categories
- Payment to rural primary care physicians would increase if the practice expense GPCI was calibrated using different input variables
- Overall practice income would increase for rural primary care

physicians a significant amount (5% or more) with changes in Medicare payment that closed the gap between the lowest and highest GPICs (all three components aggregated).

Two policy papers and three policy briefs will be produced.

Southeast Regional Center for Health Workforce Studies

<http://www.healthworkforce.unc.edu>

Expected completion date: September 2006

Director and Principal Investigator: Thomas Ricketts, Ph.D., 919-966-5541 or tom_ricketts@unc.edu

Funder: Bureau of Health Professions, HRSA

The Southeast Regional Center for Health Workforce Studies is supported by a cooperative agreement with the National Center for Health Workforce Analysis in the Bureau of Health Professions, HRSA, and is one of six federally designated regional workforce analysis centers. The Center conducts research and analysis with the goal of improving access to an appropriate and effective health workforce in the Southeast and North Carolina. The Center draws on the resources of the Chapel Hill Campus with its five health professions schools: medicine, pharmacy, dentistry, public health, and nursing, as well as the 16-campus University of North Carolina system to respond to the information and analysis needs of health workforce policy makers in the state, the region, and the nation. The Center also collects and maintains data describing the need for

and supply of health professionals, and makes these data available for research and policy analysis purposes.

The Center's current projects are:

- Developing Productivity Measures for Workforce Programs
- Do NHSC Dentist Alumni Remain in the Oral Health Safety Net
- Population Characteristics of Nursing Employment Patterns
- Service-Requiring Scholarships and Loan Repayment for Nurses in the Southeast
- Technical Assistance Network to Improve Health Workforce Data Collection and Reporting in Southeast States
- Technical Assistance to the Region 4 States.

The State of Rural Health Provider Organizations and Health Professional Shortages

Southwest Rural Health Research Center

Expected completion date: December 2004

Principal Investigator: James Alexander, Ph.D., 979-458-1592 or JLAlexander@srph.tamhsc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This study addresses the convergence of health profession shortages and financial limitations among rural hospitals and rural home health providers. Although some attention has been given to shortages of nurses and/or allied health professionals or to finances of these two providers, there is a gap in knowledge of the linkages between financial and shortage conditions. There are gaps, too, relating to combinations of these conditions to degree of rurality, other local conditions, and to strategies adopted to address these two conditions. In addition to secondary data collection, a survey of rural hospitals and home care providers from the four regions of the United States was conducted to determine the number of health care professionals

employed and the number of unfilled positions. The survey is particularly interested in shortages in nursing and a broad range of other allied health provider professions. In addition, the project identified successful strategies or best practices implemented in rural areas to address the rural health care provider shortage in an environment of decreased revenues. These models will be shared through the Center's website as well as through other dissemination efforts.

In addition to a final report, the research team plans to present findings at the National Rural Health Association Meeting and other professional meetings as well as submit articles to professional journals.

Stay or Leave:

Evidence from a Cohort of Young Rural Physicians

Walsh Center for Rural Health Analysis

Expected completion date: December 2004

Principal Investigator: Curt D. Mueller, Ph.D., 301-951-5070 or mueller-curt@norc.org

Funder: Federal Office of Rural Health Policy, HRSA

The purpose of this project is to improve our understanding of the dynamics of physician practice location decision-making. The inability of rural areas to attract and retain physicians has been of concern to health services researchers and policy makers for many years. Workforce supply constraints may adversely affect access to care and outcomes in these areas. Much of the evidence on how physicians make practice location decisions is static which tends to overestimate behavior of those who serve

rural areas for longer periods of time. A better understanding of the dynamics of behavior is needed, e.g., studies of observed changes in practice locations over time by a cohort of providers.

This project tracked practice locations of a cohort of physicians using information on physicians who were identified during the early stages of their medical careers as part of the National Survey of Rural Physicians (NSRP), conducted in 1993-1994 with funding from the Robert Wood Johnson

Foundation. We supplemented these data with data obtained from the American Medical Association when the NSRP sampling frames were constructed, with information on the current practice locations of physicians in the cohort, and with data from a follow-up survey. We examined changes in practice locations for all physicians in the sampling frame. For the

subset of sampled physicians who responded to the NSRP, we identified factors correlated with the decision to maintain a rural practice. Contingency tables were used to test a variety of hypotheses concerning factors affecting the physician's decision to continue practice in a rural community, along with statistical analyses to examine relationships between these factors.

University of Washington Center for Health Workforce Studies

<http://www.fammed.washington.edu/CHWS/>

Director and Principal Investigator: L Gary Hart, Ph.D., 206-685-0401 or ghart@fammed.washington.edu

Funder: Bureau of Health Professions, HRSA

The University of Washington Center for Health Workforce Studies (CHWS) was established at the University of Washington in 1998 with funding from the Bureau of Health Profession's National Center for Health Workforce Analysis. It is based in the Research Section of the Department of Family Medicine, University of Washington School of Medicine, and is directed by L. Gary Hart who also directs the WWAMI Rural Health Research Center.

The Workforce Center's major goals are to:

- Conduct relevant health workforce research and policy analysis in collaboration with federal and state agencies
- Provide consultation to local, state, regional, and national policymakers on health workforce issues
- Contribute to the understanding of health workforce issues and findings
- Disseminates study results to a wide audience for application by policymakers.

The Center's current projects are:

- An Analysis of Factors that Affect the Acceptance of American Indians/Alaska Natives into Medical School Training Programs
- Dental Hygienists in Washington: 2004 Survey of Demographics, Education and Work Characteristics
- Effects of the Increasing Number of International Medical Graduates in Primary Care Residencies
- International Medical Graduates and Their Role in U.S. Physician Supply
- International Nurse Graduates in the U.S. - Geographic Trends
- Longitudinal Analysis of International Medical Graduates
- Student Debt and the Decline in Primary Care: Can Medical School Graduates Still Afford to Become Primary Care Doctors?
- Survey of Registered Nurses Who Have Not Renewed Their Washington Licenses
- Washington's Obstetrics Provider Survey: Practice Characteristics and Effects of Changes in Liability Insurance
- Washington State Hospitals: Results of 2003-4 Workforce Survey.

Which Training Programs Produce Rural Physicians? A National Health Workforce Study

WWAMI Rural Health Research Center

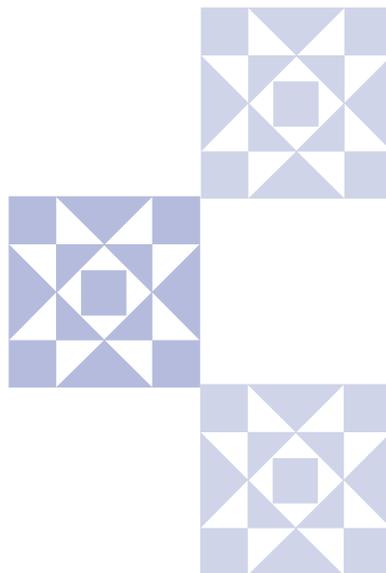
Expected completion date: August 2005

Principal Investigator: L. Gary Hart, Ph.D., 206-685-0402 or ghart@fammed.washington.edu

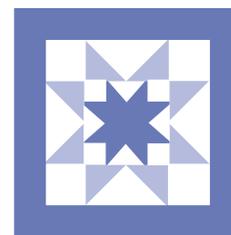
Funder: Federal Office of Rural Health Policy, HRSA

This national study is using comprehensive, longitudinal data on medical school specialty and practice location choice to determine the extent to which the nation's medical schools and residency programs vary in their production of rural physicians. This information will be used to identify the medical school and residency training characteristics that result in the highest yield of rural physicians. This project updates and builds on previous WWAMI RHRC studies by including elements not previously available: the type and location of residency training, a more sophisticated method for defining

rurality, and a new approach to determining physician supply at the level of the Primary Care Service Area. The project will show variation by medical schools in the number and proportion of their graduates who practice in rural areas, identify how this production varies by residency type, compare the production of rural physicians between osteopathic and allopathic schools, examine the comparative production of male and female physicians within and across medical schools, and compare these findings with those from our 1992 project.



Part 2: Rural Health Research Centers Descriptions and Publications



Fiscal Years 2005-2008:

Analytic Centers:

- NORC Walsh Center for Rural Health Analysis
- North Carolina Rural Health Research and Policy Analysis Center
- RUPRI Center for Rural Health Policy Analysis

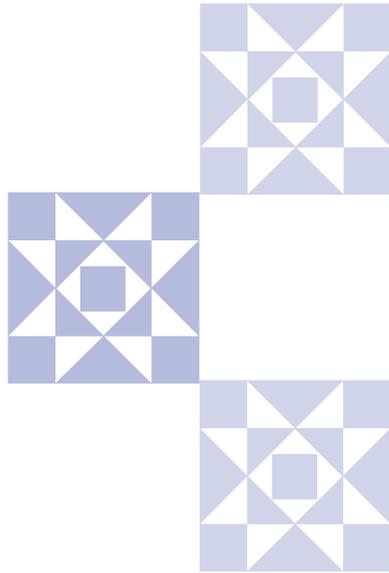
General Centers:

- Maine Rural Health Research Center
- South Carolina Rural Health Research Center
- Upper Midwest Rural Health Research Center
- WICHE Rural Mental Health Research Center
- WWAMI Rural Health Research Center

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* Funded by the Federal Office of Rural Health Policy FYs 2001-2004

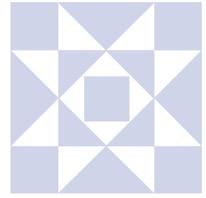




Maine Rural Health Research Center

Director: David Hartley, Ph.D.

Deputy Director: Andrew F. Coburn, Ph.D.



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Established in 1992, the Maine Rural Health Research Center draws on the multidisciplinary faculty, research resources and capacity of the Institute for Health Policy within the Edmund S. Muskie School of Public Service, University of Southern Maine. Rural health is one of the primary areas of research and policy analysis within the Institute for Health Policy, and builds on the Institute's strong record of research, policy analysis, and policy development in the following focus areas:

- Chronic Illness, Disability, and Aging
- Health Care Access and Finance
- Mental Health
- Public Health
- Health Care Quality Management and Improvement
- Children's Health and Welfare

The mission of the Maine Rural Health Research Center is to inform health care policymaking and the delivery of rural health services through high quality, policy relevant research, policy analysis and technical assistance on rural health issues of regional and national significance. The Center is committed to enhancing policymaking and improving the delivery and financing of rural health services by effectively linking its research to the policy development process through appropriate dissemination strategies. The Center's portfolio of rural health services research addresses critical, policy relevant issues in health care access and financing, rural hospitals, primary care and behavioral health. The Center's core funding from the federal Office of Rural Health Policy is targeted to behavioral health.

Current Publications

For publications prior to 2004, please visit the Center's website at <http://muskie.usm.maine.edu/ihp/ruralhealth/>

Working Papers

31. Hartley D, Hart V, Hanrahan N & Loux S. (2004). *Are advanced practice psychiatric nurses a solution to rural mental health workforce shortages?*
<http://www.muskie.usm.maine.edu/Publications/rural/wp31.pdf>

Other Publications

Forthcoming

Coburn AF, McBride T, Ziller E & Andrews C. (forthcoming). Rural and urban patterns of individual health insurance coverage. *Medical Care Research and Review*.

Loux SL, Payne SMC & Knott A. (forthcoming). Comparing patient safety in rural hospitals by bed count. In *Advances in Patient Safety: From research to implementation*. Rockville, MD: Agency for Healthcare Research and Quality.

2004

Coburn AF, Wakefield M, Casey M, Moscovice I, Payne SMC & Loux S. (2004). Assuring rural hospital patient safety: What should be the priorities? *Journal of Rural Health*, 20(4), 314-326. Special issue on Pursuing Healthcare Quality and Safety in the Rural Environment.

Hartley D. (2004). Rural health disparities, population health, and rural culture. *American Journal of Public Health*, 94(10), 1675-1678.

Pearson KB. (Ed.). (2004). *Rural health research in progress in the Rural Health Research Centers Program* (8th ed.). Portland, ME: University of Southern Maine, Edmund S. Muskie School of Public Service, Institute for Health Policy, Maine Rural Health Research Center.

Ziller EC, Coburn AF, McBride TD & Andrews C. (2004). Patterns of individual health insurance coverage, 1996-2000. *Health Affairs*, 23(6), 210-221.



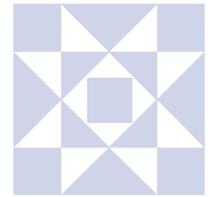
NORC Walsh Center for Rural Health Analysis

Director: Curt D. Mueller, Ph.D.

Associate Director: Julie A. Schoenman, Ph.D.

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The NORC Walsh Center for Rural Health Analysis was established in 1996 to study policy issues affecting health care in rural America. The Center's current focus is on the impact of Medicare policies on rural communities. Center products have addressed implications of Medicare payment policies, access to care, home health issues, emergency medical services issues, and location and practice decisions of rural physicians and other providers. Center researchers have conducted simulations on changes in provider payment methodologies and conduct research and analysis using data collected by the Center and data from other sources, including Medicare claims, the Medicare Cost Reports, the National Health Interview Survey (NHIS), the National Medical Expenditure Survey (NMES), and the Medicare Current Beneficiary Survey (MCBS). NORC Walsh Center researchers have presented study findings to Congressional commissions and contributed to Department of Health and Human Services reports to Congress.



NORC Walsh Center for Rural Health Analysis

Current Publications

For publications prior to 2004, please contact the Walsh Center at 301-951-5070.

Policy Papers

Mueller CD. (2004). *Trends in hospital outpatient revenue: Baselines for study of impacts of the outpatient payment system.*

Mueller CD, Mueller KJ & Sutton J. (2004). *A rural perspective regarding regulations implementing Titles I and II of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA).* Joint Publication of the NORC Walsh Center and RUPRI Center for Rural Health Policy.

Schoenman JA & Mueller CD. (2004). *Rural implications of Medicare's post-acute care transfer payment policy.*

Schur CL. (2004). *Understanding the role of the rural hospital emergency department in responding to bioterrorist attacks and other emergencies: A review of the literature and guide to the issues.*

Sutton J. (2004). *Access to primary care and quality of care in rural America.*

Policy Analysis Briefs

No.1. Franco S. (2004). *Medicare home health care in rural America.*

No.2. Blanchfield B, Franco S, Stensland J & Sutton J. (2004). *Financially distressed rural hospitals in four states.*

No.3. Sutton J & Dunn T. (2004). *Rural hospitals' strategies for achieving compliance with HIPAA privacy requirements.*

No.4. Schur C, Berk M & Mueller C. (2004). *Perspectives of rural hospitals on bioterrorism preparedness planning.*

No.5. Schoenman JA. (2004). *Exploring the impact of Medicare's post-acute care transfer policy on rural hospitals.*

Other Publications

Mueller CD & Schur CL. (2004). Insurance coverage of prescription drugs and the rural elderly. *The Journal of Rural Health, 20(1), 17-25.*



North Carolina Rural Health Research and Policy Analysis Center

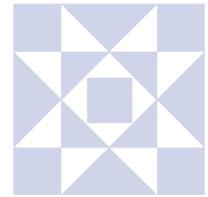
Director: Rebecca T. Slifkin, Ph.D.

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The North Carolina Rural Health Research and Policy Analysis Center is one of three federally designated Rural Health Policy Analysis Centers funded by the Federal Office of Rural Health Policy. The Center is built on the 30-year history of rural health services research at the University of North Carolina's Cecil G. Sheps Center for Health Services Research, and is able, through that relationship, to draw on the experience of a wide variety of scholars, researchers, analysts, managers and health service providers. The Center also has an ongoing partnership with the Foundation for Alternative Health Programs of the Office of Rural Health and Resource Development in the North Carolina Department of Human Resources.

The Center seeks to address problems in the rural health arena through policy-relevant analyses, the geographic and graphical presentation of data, and the dissemination of information to organizations and individuals in the health care field who can use this material for policy or administrative purposes. The Center's research involves primary data collection, analysis of large secondary data sets, and in-depth policy analysis. The Center brings together a diverse, multidisciplinary team including clinicians in medicine, nursing, pharmacy, allied health, mental health and other professions and disciplines along with experts in biostatistics, geography, epidemiology, sociology, anthropology and political science to address complex social issues affecting rural populations.

The Center's present agenda focuses on federal insurance programs (Medicare and Medicaid) and their effect on rural populations. Current projects include the examinations of premium assistance programs, and trends in swing bed and skilled nursing facility use in rural hospitals (1996-2003), and a description of geographic access to physicians in rural America using statistical applications in GIS.



Current Publications

For publications prior to 2004, please visit the Center's website at:

http://www.schsr.unc.edu/research_programs/rural_program/papers.html

Working Papers, Reports, and Findings Briefs

WP80. Greene S, Holmes G, Slifkin R, Freeman V & Howard A. (2004). *Caesarean section patterns in rural hospitals.*

http://www.shepscenter.unc.edu/research_programs/rural_program/WP80.pdf

WP79. Mueller K, Slifkin R, Shambaugh-Miller M & Randolph R. (2004). *Definition of rural in the context of MMA access standards for prescription drug plans.* A joint publication of the RUPRI Center for Health Policy Analysis and the North Carolina Rural Health Research and Policy Analysis Center.

http://www.shepscenter.unc.edu/research_programs/rural_program/wp79.pdf

FB78. Dalton K & Slifkin RT. (2004). *Rural-urban issues in the wage index adjustment for prospective payment in skilled nursing facilities.*

http://www.shepscenter.unc.edu/research_programs/rural_program/FB78.pdf

Dalton K & Slifkin, R. (2004). *Adjusting for occupation mix differences in the Medicare hospital wage index.*

http://www.shepscenter.unc.edu/research_programs/rural_program/OccMix.pdf

Dalton K & Slifkin RT. (2004). *Core based statistical areas and the Medicare wage index.*

http://www.shepscenter.unc.edu/research_programs/rural_program/cbsa.pdf

Other Publications

Forthcoming

Dalton K, Slifkin R, Poley S & Fruhbais M. (in press). A profile of facilities choosing to participate in the Rural Hospital Flexibility Program. *Health Care Financing Review.*

Fraher EP, Slifkin RT, Smith L, Randolph R, Rudolf M & Holmes GM. (forthcoming). Implications of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 for the financial viability of rural pharmacies. *Journal of Rural Health.*

Holmes GM. (in press). Does the National Health Service Corps improve physician supply in underserved locations? *Eastern Economic Journal.*

Holmes GM. (in press). Increasing physician supply in medically underserved areas. *Labor Economics.*

Mayer ML, Slifkin RT & Skinner AC. (forthcoming). The effect of rural residence and other social vulnerabilities on subjective measures of unmet need. *Medical Care Research and Review*.

Skinner AC, Slifkin RT & Mayer M. (forthcoming). The effect of rural residence on dental unmet need for children with special health care needs. *Journal of Rural Health*.

2005

Ricketts TC. (2005). Workforce issues in rural areas: A focus on policy equity. *American Journal of Public Health, 95*(1), 42-48.

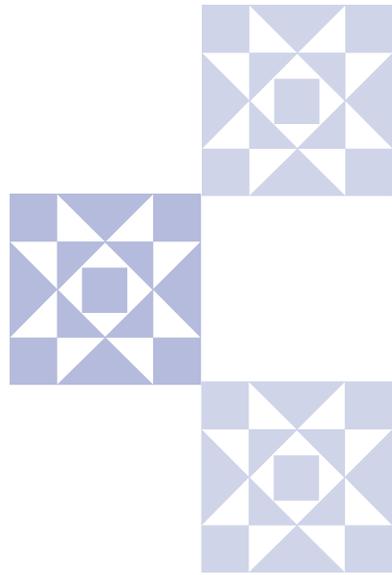
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Pathman DE, Konrad TR, Dann R & Koch G. (2004). Retention of primary care physicians in rural health professional shortage areas. *American Journal of Public Health, 94*(10), 1723-1729.

Pink GH, Slifkin RT, Coburn AF & Gale J. (2004). Comparative performance data for critical access hospitals. *Journal of Rural Health, 20*(4), 374-382.

Ricketts TC. (2004). Arguing for rural health: Toward a progressive rhetoric for America. *Journal of Rural Health, 20*(1), 43-51.

Slifkin R, Randolph RT & Ricketts TC. (2004). The changing metropolitan designation process and rural America. *Journal of Rural Health, 20*(1), 1-6.





Rural Policy Research Institute Center for Rural Health Policy Analysis

Director: Keith J. Mueller, Ph.D.

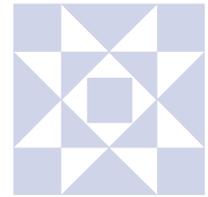
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The mission of the Rural Policy Research Institute (RUPRI) Center for Rural Health Policy Analysis is to provide timely analysis to federal and state health policymakers based on the best available research.

The research of the RUPRI Center focuses on rural health care financing/system reform, rural systems building, and meeting the health care needs of special rural populations. Specific objectives include:

- Conducting original research and independent policy analysis that provides policymakers and others with a more complete understanding of the implications of health policy initiatives
- Disseminating policy analysis that assures policymakers will consider the needs of rural health care delivery systems in the design and implementation of health policy.

The RUPRI Center for Rural Health Policy Analysis is based at the University of Nebraska Medical Center, in the Department of Preventive and Societal Medicine, Section on Health Services Research and Rural Health Policy.



Current Publications

For publications prior to 2004, please visit the RUPRI website at <http://www.rupri.org/>

Reports and Policy Papers

P2004-7. Mueller KJ, Slifkin RT, Shambaugh-Miller MD & Randolph RK. (September 2004).

Definition of rural in the context of MMA access standards for prescription drug plans. A joint publication of the RUPRI Center for Health Policy Analysis and the North Carolina Rural Health Research and Policy Analysis Center.

<http://www.rupri.org/ruralPolicy/publications/p2004-7.pdf>

P2004-6. Mueller C, Mueller K & Sutton J. (August 2004). *A rural perspective regarding regulations implementing Titles 1 and II of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003.* A joint publication of the NORC Walsh Center for Rural Health Analysis and the RUPRI Center for Health Policy Analysis.

<http://www.rupri.org/ruralPolicy/publications/P2004-6.pdf>

P2004-3. Mueller KJ, Shay B, Hart JP, Harrop D & Rasmussen, D. (April 2004). *Information technology and rural health networks: An overview of network practices.* <http://www.rupri.org/ruralHealth/publications/p2004-3.pdf>

P2004-1. Mueller KJ. (January 2004). *The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108-173). A summary of provisions important to rural health care delivery.*

<http://www.rupri.org/ruralHealth/publications/MedicareLegislationPolicyPaperupdated.pdf>

Policy Briefs

PB2004-5. Mueller K, MacKinney AC, McBride TD, Mesa JL & Xu L. (August 2004). *Rural physicians' acceptance of new Medicare patients.*

<http://www.rupri.org/ruralPolicy/publications/PB2004-5.pdf>

PB2004-4. Chen L, Stoner J, Makhanu C, Minikus K & Mueller KJ. (May 2004). *An analysis of the agreement between financial data from the Medicare Cost Report and the audited hospital financial statement.*

<http://www.rupri.org/ruralPolicy/publications/PB2004-4.pdf>

Other Publications

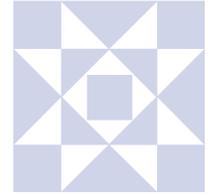
Jones KJ, Cochran G, Hicks RW & Mueller KJ. (2004). Translating research into practice: Voluntary reporting of medication errors in critical access hospitals. *Journal of Rural Health*, 20(4), 335-343.



South Carolina Rural Health Research Center

Director: Janice C. Probst, Ph.D.

Deputy Director: Charity Moore, Ph.D.



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The mission of the South Carolina Rural Health Research Center is to shed light on persistent inequities in health status among the population of the rural US with an emphasis on factors related to socioeconomic status, race and ethnicity, and access to healthcare services. Through the attainment of this mission, the Center also hopes to achieve the following:

- Develop and conduct the research necessary to provide a clear picture of health status, health care needs, health service use, and health outcomes among rural, minority groups
- Investigate the effectiveness of policies aimed at improving health and reducing the barriers to health care for rural poor and minority individuals
- Promote the development of minority researchers and clinical providers interested in addressing the problems of rural poor and minority populations
- Stimulate health services research, demonstration, clinical trial, and services capacity in the rural minority communities
- Provide expert advice to national, state, and local governments as well as to rural and minority constituency groups to empower policy development and advocacy
- Develop a repository of knowledge and information on poor and minority health issues.

The Center is based in the Department of Health Services Management and Policy, Arnold School of Public Health, University of South Carolina. Our research partners include: Office of Research, South Carolina Budget and Control Board, Department of Family and Preventive Medicine, University of South Carolina School of Medicine, College of Nursing and Department of Family Medicine, Medical University of South Carolina.

Current Publications

For publications prior to 2004, please visit the Center's website at <http://rhr.sph.sc.edu>

Working Papers and Reports

Forthcoming

Laditka SB, Laditka JN, Probst JC, Bennett KJ, Johnson A & Mink M. (forthcoming). *Impact of Medicaid managed care, race/ethnicity, and rural/urban residence on access to prenatal care: A multi-level multi-state analysis.*

Mainous AG, Koopman R & Geesey ME. (forthcoming). *Diabetes and hypertension in rural Hispanics.*

Mink M, Moore CG, Johnson A & Probst JC. (forthcoming). *Violence and rural teens: A national study of exposure to violence, mental health services, and violence prevention programs.*

Moore CG, Mink M, Probst JC, Johnson A & Hughley S. (forthcoming). *Mental health risk factors, unmet needs and provider availability for rural children.*

Powell MP, Glover SH, Probst JC & Laditka SB. (forthcoming). *Assessment of barriers to the delivery of Medicare reimbursed diabetes self-management education in rural areas.*

2004

Patterson PD, Probst JC & Moore CG. (2004, August) *Investigating rural Emergency Medical Service (EMS) infrastructure: A developmental methodology for measuring the availability of EMS resources.*

Erkel EA, Moore CG & Michel Y. (2004, February). *Resource mothers: The effect of a rural lay home visitation program on maternal-infant preventive services and health outcomes.*

Other Publications

Forthcoming

Laditka SB, Laditka JN, Bennett KJ & Probst JC. (forthcoming). *Rural/urban differences in outcomes associated with prenatal care access among Medicaid-insured mothers and infants. Journal of Rural Health.*

Mainous AG, King DE, Garr DR & Pearson WS. (forthcoming). *The influence of race and rural residence on disparities in diagnoses and control of diabetes and hypertension. American Journal of Public Health.*

Patterson PD, Probst JC, Leith K, Corwin S & Powell MP. (forthcoming). Recruitment and retention of EMTs: A qualitative study. *Journal of Allied Health*.

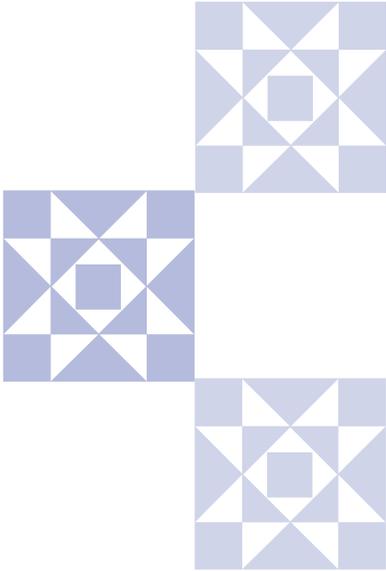
Probst JC, Moore CG & Baxley EG. (forthcoming). Update: Health insurance and utilization of care among rural adolescents. *Journal of Rural Health*.

2004

Glover S, Moore CG, Samuels ME & Probst JC. (2004). Disparities in access to care among rural working-age adults. *Journal of Rural Health, 20*(3), 193-205.

Patterson DP, Moore CG, Shinogle JA & Probst JC. (2004). Obesity and physical inactivity spread to rural America. *Journal of Rural Health, 20*(2), 151-9

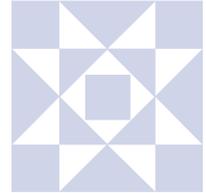
Moore CG, Glover SH & Samuels ME. (2004). Person and place: The compounding effects of race/ethnicity and rurality on health. *American Journal of Public Health, 94*(10), 1695-1703.





Southwest Rural Health Research Center

Director: Catherine Hawes, Ph.D.
Associate Director: Larry Gamm, Ph.D.



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The Southwest Rural Health Research Center (SRHRC) at the Texas A&M University System Health Science Center School of Rural Public Health is one of six rural health research centers funded by the federal Office of Rural Health Policy. The SRHRC is an integral part of the only school of public health with a specific focus on rural issues, the School of Rural Public Health in the Texas A&M University System Health Science Center. The SRHRC was founded in 2000 and serves as a focal point for uniting other parts of the Texas A&M System to conduct and disseminate policy-relevant research on critical rural health issues. Texas A&M, however, has a long history of conducting research, education, and service in rural areas. Thus, the SRHRC draws its senior investigators from across the University and the Health Science Center, including the School of Rural Public Health, the College of Medicine, the Center for Health Services Research, the Center for Housing and Urban Development, the Department of Rural Sociology and the Public Policy Research Institute.

The Center and its investigators conduct policy-relevant research in a number of areas. However, SRHRC has selected three main areas of focus as part of its work for the federal Office of Rural Health Policy.

- Meeting the needs of special rural populations, particularly those with chronic diseases and disabilities
- Understanding and addressing the special health needs of minority populations and eliminating or reducing health disparities
- Maintaining and building the capacity of rural health systems.

In addition, the SRHRC has several long-term objectives that are an outgrowth of both the mission of the Texas A&M School of Rural Public Health and the interests and long-term commitments of core and affiliated faculty of the SRHRC. In particular, the SRHRC collaborates with other Texas A&M entities on policy analyses and program evaluations for state and federal agencies on projects and studies that have a specific focus on issues related to rural health or health care for vulnerable or disadvantaged populations. Finally, SRHRC is part of a long-standing tradition at Texas A&M in implementing and evaluating community health interventions in rural and border areas.

Current Publications

For publications prior to 2004, please visit the Center's website at:
<http://www.srph.tamhsc.edu/centers/srhrc>

Working Papers, Reports, and Policy Briefs

- Alexander J & Gamm L. (forthcoming). *The state of health provider organizations and health professional shortages.*
- Bolin JN. (2004, February). *Newsletter: Chronic disease management in rural areas: A research update.*
- Bolin JN & Gamm L. (2004). *Chronic disease management in rural areas: Examination of Medicare and Medicaid managed care programs.*
- Gamm L & Castillo G. (2004). Educational and community-based programs in rural areas: A literature review. In L. Gamm & L. Hutchison (Eds.). *Rural Healthy People 2010: A companion document to Healthy People 2010.* Volume 3. Accessible at <http://www.srph.tamhsc.edu/centers/rhp2010>
- Gamm L & Hutchison L. (2004). Mental health and substance abuse services: Prospects for rural communities. (White Paper Report to the Institute of Medicine's Workshop on the Future of Rural Health, Washington, DC, March 2004.)
- Hutchison L & Hawes C. (2004). Access to long term care in rural America. In G L. Gamm & L. Hutchison (Eds.). *Rural Healthy People 2010: A companion document to Healthy People 2010.* Volume 3. Accessible at <http://www.srph.tamhsc.edu/centers/rhp2010>
- May M & Contreras R. (2004). *Mujer y corazon: Community health workers and their organizations in Colonias on the US-Mexico Border. An exploratory study.*
- May M, Contreras R & Kash B. (2004). *The community health worker certification (CHW) process: A national survey and a state of Texas case study with the focus on implications for practice and policy.*
- Phillips CD, Hawes C, Sherman M & Leyk Williams M. (2004). *Nursing home residents in rural and urban areas, 2001 (A chartbook).*
- Quiram B, Meit M, Carpender K. et al. (2004). Public health infrastructure in rural areas: A literature review. In L. Gamm & L. Hutchison (Eds.). *Rural Healthy People 2010: A companion document to Healthy People 2010.* Volume 3. Accessible at <http://www.srph.tamhsc.edu/rhp2010>
- Zuniga MA. (forthcoming). *Medication use among residents of rural assisted living facilities.*

Policy Briefs

Bolin JN. (2004, May). *Policy Brief: Chronic disease management in rural areas.*

Hawes C. (2004, Spring). *Policy Brief: Assisted living: Is it an option for rural areas?*

Hawes C. (2004, Spring). *Policy Brief: Expanding residential care and assisted living in rural areas.*

Hawes C. (2004, October). *Policy Brief: Mujer y corazon. Community health workers and their organizations in Colonias on the US-Mexico border.*

Other Publications

Forthcoming

Bolin JN, Gaubeca V & Zazworsky D. (Eds.). (forthcoming). *Handbook of diabetes and disease management.* Kluwer Press.

Bolin JN, Phillips CD & Hawes C. (forthcoming). Nursing home admissions in rural and non-rural areas: Resident characteristics and care needs in a national admission sample. *Gerontologist.*

Bolin JN, Phillips CD & Hawes C. (forthcoming). Urban/rural differences in end-of-life patient in nursing facilities: Their characteristics and treatment differences. *Journal of Rural Health.*

Hawes C, Phillips CD, Holan S et al. (forthcoming). Assisting living in rural America: Results of a national study. *Journal of Rural Health.*

Phillips CD, Holan S, Sherman M, Hawes C & Spector W. (in press). Medicare expenditures by individuals residing in assisted living facilities. *Health Services Research.*

Phillips CD & Hawes C. (forthcoming). Care provision in housing with supportive services: The importance of care type, individual characteristics and care site. *Journal of Applied Gerontology.*

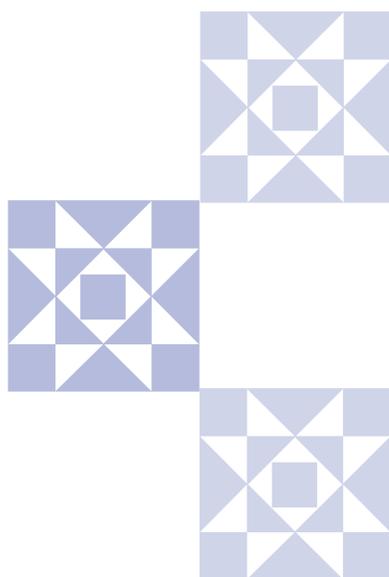
2004

Buchanan RJ, Bolin JN, Wang S, Zhu L, & Kim MS. (2004). Urban/rural differences in decision making and the use of advance directives among nursing home residents at admission. *Journal of Rural Health, 20(2), 131-135.*

Gamm L & Hutchison L. (2004). Rural Healthy People 2010—Evolving interactive practice. *American Journal of Public Health, 94(10), 1711.*

Phillips CD, Holan S, Leyk Williams M, Sherman M & Hawes C. (2004). Rurality and nursing home quality: Results from a national sample of admissions. *American Journal of Public Health*, 94(10), 1717-1722.

Phillips CD & McLeroy KL. (2004). Health in rural America: Remembering the importance of place. *American Journal of Public Health*, 94(10), 1661-1663.

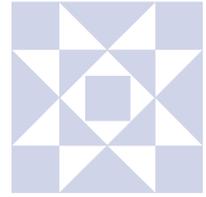




Upper Midwest Rural Health Research Center

Director: Ira Moscovice, Ph.D.

Deputy Director: Mary Wakefield, Ph.D., R.N.



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The Upper Midwest Rural Health Research Center is a partnership that brings together the resources and expertise of two research centers with extensive experience conducting policy-relevant rural health research and disseminating research findings to federal and state policymakers. The lead organization for the collaborative effort, the University of Minnesota Rural Health Research Center, is located in the Division of Health Services Research, School of Public Health, University of Minnesota. The second partner, the University of North Dakota Center for Rural Health, is located in the University of North Dakota School of Medicine and Health Sciences.

The Center's mission is to conduct high quality, empirically driven, policy-relevant research that can be disseminated in an effective and timely manner to help shape the delivery and financing of rural health services. The specific aims of the Center are:

- To conduct quantitative and qualitative health services research and policy analysis in a conceptually sound and methodologically rigorous manner on rural health issues that are important to both short- and long-term rural health policy formulation
- To disseminate the results of original research to local, state, and federal policymakers who play key roles in the development of legislation and the administration of rural health care programs
- To provide technical assistance to health care policymakers, helping them to understand the unique characteristics of rural health care systems and to implement programs and interventions that address rural health care needs
- To train and develop future rural health services researchers by providing opportunities for doctoral student research assistant positions on our research projects.

The Center's area of concentration is quality of care in rural areas. The Center's projects address key forces that are shaping quality of care and quality improvement in rural areas, including: 1) use of technology and health professional staffing to improve quality of care and patient safety; 2) quality measurement and public reporting as tools for improving quality; and 3) provision of financial incentives for improving care.

University of Minnesota Rural Health Research Center

Current Publications

For publications prior to 2004, please visit the Center's website at:

<http://www.hsr.umn.edu/rhrc/>

Working Papers

55. Gregg WR, Knott A & Moscovice I. (2004). *Sustaining community health services over time: Models from the Rural Health Outreach Grant Programs.*
54. Casey M, Davidson G & Moscovice I. (2004). *Access to dental care for rural low income and minority populations.*
53. Moscovice I, Wholey D, Klingner J & Knott A. (2004). *Measuring rural hospital quality.*
52. Casey M & Moscovice I. (2004). *Quality improvement strategies and best practices in critical access hospitals.*
51. Stensland J, Davidson G & Moscovice I. (2004). *The financial benefits of critical access hospital conversion for FY 1999 and FY 2000 converters.*

Other Publications

Forthcoming

- Casey M, Moscovice I, Virnig B & Durham S. (forthcoming). Providing hospice care in rural areas: Challenges and strategies to address them. *American Journal of Hospice and Palliative Medicine.*
- Casey M & Moscovice I. (forthcoming). Quality improvement strategies and best practices in critical access hospitals. *Journal of Rural Health.*
- Moscovice I, Wholey D, Klingner J & Knott A. (forthcoming). Measuring rural hospital quality. *Journal of Rural Health.*
- Wholey D, Moscovice I, Hietpas T & Holtzman J. (forthcoming). The environmental context of patient safety and medical errors. *Journal of Rural Health.*

2004

- Blewett L, Casey M & Call K. (2004). Improving access to primary care for a growing Latino population: The role of safety net providers in the rural Midwest. *Journal of Rural Health, 20(3), 237-245.*

Casey M, Blewett L & Call K. (2004). Providing health care to Latino immigrants: Community-based efforts in the rural Midwest. *American Journal of Public Health*, 94(10), 1709-1711.

Coburn AF, Wakefield M, Casey M, Moscovice I, Payne SMC & Loux S. (2004). Assuring rural hospital patient safety: What should be the priorities? *Journal of Rural Health*, 20(4), 314-326.

Virnig B, Moscovice I, Kind S & Casey M. (2004). Do rural beneficiaries have limited access to the Medicare hospice benefit? *Journal of the American Geriatric Society*, 52(5), 731-5.

University of North Dakota Center for Rural Health

Current Publications

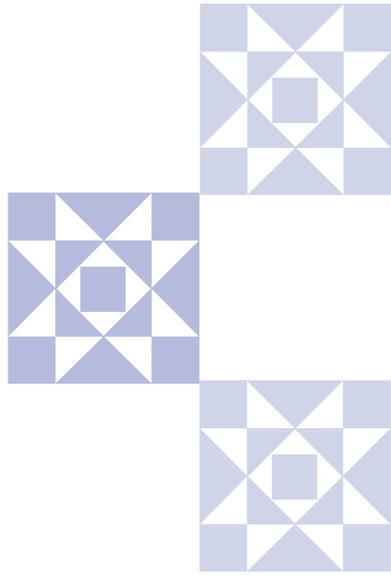
For publications prior to 2004, please visit the Center's website at:
<http://medicine.nodak.edu/crh>

2004

Coburn AF, Wakefield M, Casey M, Moscovice I, Payne SMC & Loux S. (2004). Assuring rural hospital patient safety: What should be the priorities? *Journal of Rural Health*, 20(4), 314-326.

Penland JG, Gray JS, Lambert P, Gonzalez J, Wilson EL & Lukaski H.C. (2004). Depression in Northern Plains Indians is associated with physical health and fitness, dietary intakes, food insecurity and cultural identification. *The FASEB Journal*, 18(4), A516.

Wakefield, M. (2004). Government response: Legislation. In J. Milstead (Ed.), *Health policy and politics: A nurse's guide*. (2nd ed.), (pp. 67-88). Sudbury, MA: Jones and Bartlett Publishers.





WICHE Rural Mental Health Research Center

Co-Directors: Kathryn R. Rost, Ph.D. and Dennis Mohatt



Western Interstate Commission for Higher Education

Mental Health Program

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The purpose of the WICHE Rural Mental Health Research Center is to develop and evaluate implementation strategies to promote the adaptation and adoption of evidence-based mental health care in rural settings. Implementation strategies will focus on improving care for affective disorders and serious mental illness. Implementation strategies will target primary care settings, and the integration of primary care with available specialty mental health services.

The closely coordinated set of quantitative research projects for 2004-2005 include:

- Identifying at-risk areas within rural America to target for depression care model adoption
- Determining whether and why existing care models differentially improve depression treatment in rural and urban populations
- Exploring promising hospitalization prevention strategies which have the potential to provide more funding for outpatient specialty care.

Current Publications

For publications prior to 2004, please visit the Center's website at:

<http://www.wiche.edu/mentalhealth/ResearchCenter.asp>

Working Papers

Fortney J, Pyne J, Edlund M, Robinson D, Mittal D & Henderson K. *Design and implementation of the Telemedicine Enhanced Antidepressant Management (TEAM) study.*

Fortney J, Steffick D, Burgess J, Maciejewsk M & Petersen L. *Are primary care services a substitute or complement for specialty and inpatient services?*

Rost K, Dickinson LM, Fortney J & Coyne J. *The relationship of depression treatment quality indicators to employee absenteeism, mental health services research.*

Other Publications

Forthcoming

Fortney J, Maciejewski M, Warren J & Burgess J. (forthcoming). Does improving geographic access to VA primary care services impact patients' patterns of utilization and costs? *Inquiry.*

Pyne JM, Rost KM, Farahati F, Tripathi S, Smith J, Williams DK, Fortney J & Coyne JC. (forthcoming). One size fits some: The impact of patient treatment attitudes on the cost-effectiveness of a depression primary care intervention. *Psychological Medicine.*

Fortney J, Mukherjee S, Curran G, Fortney S, Han X & Booth B. (forthcoming). Factors associated with perceived stigma for alcohol use and treatment among at-risk drinkers. *Journal of Behavioral Health Services & Research.*

Pyne JM, Kuc EJ, Schroeder P, Fortney J, Edlund M & Sullivan G. (forthcoming). Relationship between perceived stigma and depression. *Journal of Nervous and Mental Disease.*

2004

Chumbler N, Fortney J, Cody M & Beck C. (2004). Sense of coherence and mental health service utilization: The case of family caregivers of community-dwelling cognitively-impaired seniors. In J. Jacobs Kronenfeld (Ed.), *Chronic care, health care systems and services integration. Vol. 22: Research in the sociology of health care* (pp. 161-175). Bristol, England: Elsevier, Ltd.



WWAMI Rural Health Research Center

Director: L. Gary Hart, Ph.D.

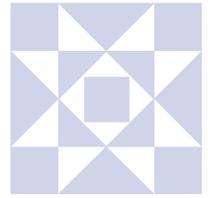
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The Washington, Wyoming, Alaska, Montana, Idaho (WWAMI) Rural Health Research Center (RHRC) is one of eight rural health research centers funded by the Federal Office of Rural Health Policy to perform policy-oriented research on issues related to rural health care. The WWAMI RHRC, established in 1988, is based in the Department of Family Medicine at the University of Washington School of Medicine and works closely with the University of Washington Center for Health Workforce Studies, other departments and schools, the Washington State Department of Health, and Area Education Centers in the five WWAMI states (Washington, Wyoming, Alaska, Montana, and Idaho).

Major areas of inquiry at the WWAMI RHRC are:

- Training and supply of rural health care providers and the content and outcomes of the care they provide
- Availability and quality of care for rural women and children, including obstetric and perinatal care
- Access to high-quality care for vulnerable and minority rural populations.

The WWAMI Rural Health Research Center conducts its studies in the context of the changing health care environment.



WWAMI Rural Health Research Center

Current Publications

For publications prior to 2004, please visit the Center's website at:
<http://www.fammed.washington.edu/wwamirhrc>

Working Papers

94. Patterson DG & Skillman SM (2004). *Health professions education in Washington State: 1996-2004 program completion statistics*. WWAMI Center for Health Workforce Studies.
93. Skillman SM, Andrilla CHA, Hutson T, Deacon H & Praseuth T. (2004). *Washington State hospitals: results of 2003/04 workforce survey*. WWAMI Center for Health Workforce Studies.
92. Patterson DG, Skillman SM & Hart LG. (forthcoming). *Washington State's dental hygienist workforce through 2020: Influential factors and available data*. WWAMI Center for Health Workforce Studies.
91. Skillman SM, Palazzo L, Keepnews D & Hart LG. (forthcoming). *Characteristics of registered nurses in rural vs. urban areas: Implications for strategies to alleviate nursing shortages in the United States*. WWAMI Center for Health Workforce Studies.
90. Patterson DG, Skillman SM & Hart LG. (forthcoming). *Washington State's pharmacist workforce through 2020: Influential factors and available data*. WWAMI Center for Health Workforce Studies.
89. Patterson DG, Skillman SM & Hart LG. (2004). *Washington State's radiographer workforce through 2020: Influential factors and available data*. WWAMI Center for Health Workforce Studies.
88. Dobie SA, Hagopian A, Kirilin BA & Hart LG. (forthcoming). *Wyoming physicians offer significant amounts of safety net care in their communities*.
87. Jackson JE, Doescher MP & Hart LG. (2004). *Obesity prevalence in rural counties: A national study*.
86. Hollow WB, Patterson DG, Olsen PM & Baldwin LM. (2004). *American Indians and Alaska Natives: How do they find their path to medical school?* WWAMI Center for Health Workforce Studies.
78. Baldwin LM, et al. (forthcoming). *Access to specialty health care for rural American Indians in two states*.
77. Thompson MJ, Lyng D, Larson EH & Tachawachira P. (2004). *Characterizing the general surgery workforce in rural America*.

Other Publications

Forthcoming

Hart LG, Larson EH & Lishner DM. (in press). Rural definitions for health policy and research. *American Journal of Public Health*.

Thompson MJ, Lynge D, Larson EH & Tachawachira P. (in press). Characterizing the general surgery workforce in rural America. *Archives of General Surgery*.

Monographs

Hart LG, Norris TE, Larson EH, Lishner DM, Schneeweiss R & Rosenblatt RA. (forthcoming). Pathways to rural practice: A chartbook of family medicine residency training locations and characteristics.

2004

Baldwin LM, MacLehose RF, Hart LG, Beaver SK, Every N & Chan L. (2004). Quality of care for acute myocardial infarction in rural and urban U.S. hospitals. *Journal of Rural Health*, 20(2), 99-108.

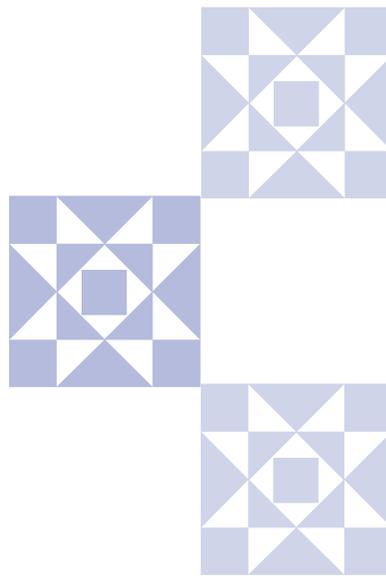
Benedetti TJ, Baldwin LM, Andrilla CHA & Hart LG. (2004). The productivity of Washington State's obstetrician-gynecologist workforce: Does gender make a difference? *Obstetrics and Gynecology*, 103(3), 499-505.

Chan L, Hart LG, Ricketts TC & Beaver SK. (2004). An analysis of Medicare's incentive payment program for physicians in health professional shortage areas. *Journal of Rural Health* 20(2), 109-117.

Hagopian A, Thompson MJ, Kaltenbach E & Hart LG. (2004). The role of international medical graduates in America's small rural critical access hospitals. *Journal of Rural Health*, 20(1), 52-58.

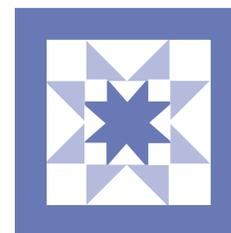
Rosenblatt RA. (2004). A view from the periphery- health care in rural America. *New England Journal of Medicine*, 2(2), 1049-1051.

Sulzbacher S, Mas J, Larson EH & Shurtleff DB. (2004). Pediatric telehealth consultation to rural schools and clinics in the Pacific Northwest. *Journal of Special Education Technology*. 19(1), 35-41.



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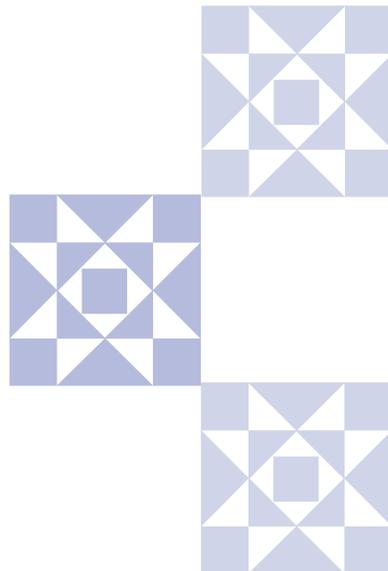
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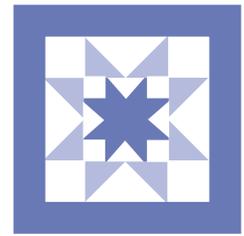
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Project List by Center

Maine Rural Health Research Center

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Topic of Concentration: Rural Behavioral Health

- Database for Rural Health Research in Progress
- Evaluation of New Hampshire's Rural Hospital Flexibility Program
- Health Insurance Dynamics of Uninsured Rural Families
- The Impact of Mental and Emotional Stress on Rural Employment Patterns
- Maine Mental Health Evidence-Based Practice Planning Initiative
- Mental Health Encounters in Critical Access Hospital Emergency Rooms: A National Survey
- National Study of Substance Abuse Prevalence and Treatment Services in Rural Areas

Flex Monitoring Team Projects:

- Analysis of 2004-2005 State Flex Grant Plans
- Special Study of EMS Issues
- Using Program Logic Models to Monitor the Performance of State Flex Programs

NORC Walsh Center for Rural Health Analysis

Director: Curt D. Mueller, Ph.D.

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Topic of Concentration: Impact of Medicare Policies on Rural Communities

- Advantages and Disadvantages of Hospital-based Emergency Medical Services in Rural Areas
- Attention from the Top? Roles of State Offices of Rural Health Policy in Preparing for Bioterrorism and Other Health System Emergencies
- The Impact of Declining Access to Obstetric Services
- Impact of the Home Health PPS on Access in Rural America
- Investments in Health Information Technology by Rural Hospitals
- Medicare Beneficiary Outcomes in Rural and Urban Home Health Agencies
- Monitoring Medicare Hospital Outpatient Payments: Trends and Evidence on Impacts of Payment Policy
- Options for Structuring Disproportionate Share (DSH) Payments to Account for Uncompensated Care: Impact on Rural Hospitals
- Post-Acute Care: A Rural and Urban Comparison
- Public Health System Performance Measurement: Are Standards Applicable to Rural Communities?
- Stay or Leave: Evidence from a Cohort of Young Rural Physicians

North Carolina Rural Health Research and Policy Analysis Center

Director: Rebecca T. Slifkin, Ph.D.

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Topic of Concentration: Federal Insurance Programs (Medicare and Medicaid) and Their Effect on Rural Populations and Providers

- Access to Health Care for Young Rural Medicaid Beneficiaries
- Describing Geographic Access to Physicians in Rural America Using Statistical Applications in GIS
- Development of a New Methodology for Dental Health Professional Shortage Area Designation
- Evaluating Need for Assistance Criteria and Weighting of Overall Criteria in the Requirements of Funding New Start and Grant Applications for Health Centers
- Impact of the Medicaid Budget Crisis on Rural Communities: A 50-State Survey
- The North Carolina Rural Health Guide
- Premium Assistance Programs: Exploring Public-Private Partnerships as a Vehicle of Expanding Health Insurance to Rural Uninsured. (Qualitative Project)
- The Role of Intensive Care Units in Critical Access Hospitals
- Southeast Regional Center for Health Workforce Studies
- Trends in Swing Bed and Skilled Nursing Facility Use in Rural Hospitals, 1996 -2003

Flex Monitoring Team Projects:

- Community Impact Assessment
- Critical Access Hospital Conversion Tracking and Quarterly E-mail Surveys
- Financial Performance Measures of Critical Access Hospitals

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Topic of Concentration: Medicare: Impact of Payment and Quality Policy on the Delivery of Health Care in Rural Areas

- Assessing the Community Impact of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA)
- Assessment of Small Rural Hospital Activities to Report Medication Errors
- Do Communities Make a Difference in Access? A National Study
- Establishing a Fair Payment for Rural Physicians
- Examining the Applicability of AHRQ's Inpatient Quality Indicators to Rural Hospitals and the Implications of the Relationship Between the Indicators and Financial Measures for Medicare Payment Policies
- Is Medicare Beneficiary Access to Primary Care Physicians at Risk?
- Nationwide Analysis of New Entrants into Medicare+Choice Demonstrations
- Rural Quality Improvement Focus on Diabetes
- Rural-Urban Physician Payment Differences Across the Nation: Methodological Changes
- Uninsurance and Welfare Reform in Rural America
- Why Are Health Care Costs Increasing and Is There a Rural Differential in National Data?

South Carolina Rural Health Research Center

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Topic of Concentration: Health Disparities

- Diabetes and Hypertension in Rural Hispanics
- Disability Burdens among Rural and Urban Older Americans
- Effects of Alcohol Use on Educational Attainment and Employment in Rural Youth
- Effects of Uninsurance During the Preceding 10 Years on Health Status of Rural Working Age Adults
- Estimated Mental Health Care Utilizations in Rural Areas
- How Rural Hospitals Are Meeting the Needs of Limited-English Proficiency Patients
- Mental Health Risk Factors, Unmet Needs and Provider Availability for Rural Children
- Poverty, Parental Stress, and Violent Disagreements in the Home among Rural Families
- Rural Health Center Expansion and Recruitment Survey (with WWAMI)
- Rural Minority Health
- Trends in Uninsurance Among Rural Minority Children

Southwest Rural Health Research Center

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FYs 2001-2004

- Chronic Disease Management in Rural Areas: Examination of Medicare and Medicaid Managed Care Programs
- Evaluation of the RWJ/HRSA Demonstration Project “Creating an Integrated Outreach System to Isolated Colonia Residents in Hidalgo County, Texas”
- Medicaid Budget Cuts: Effects on Rural Nursing Homes and Rural Elderly and Disabled
- Medicaid Budget Cuts and Long-Term Care Supplement
- Mental Health Services: The Effect of Variations in State Policies
- Rural Healthy People 2010 Expansion: Access to Long-Term Care and Rehabilitation Services, Educational and Community-Based Programs, and Public Health Infrastructure
- S-CHIP and Access to Medical Transportation Program Services
- The State of Rural Health Provider Organizations and Health Professional Shortages

Upper Midwest Rural Health Research Center

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Topic of Concentration: Quality of Care in Rural Areas

- The Impact of Health Insurance Coverage on Native Elder Health: Implications for Addressing the Health Care Needs of Rural American Indian Elders
- Pay for Performance and Quality of Care in Rural Hospitals
- Successful Implementation of Medication Safety Initiatives in Rural Hospitals: The Role of Pharmacists, and Technology

Minnesota Rural Health Research Center:

- Access to State of the Art Hospice Care for Rural and Minority Hospice Users
- Assessing Demand and Capacity for Behavioral Health Services in Northern Minnesota
- Refining and Field Testing a Relevant Set of Quality Measures for Rural Hospitals

Flex Monitoring Team Projects:

- Analyzing the Relationships among Critical Access Hospital Financial Status, Organizational Linkages, and Scope of Services
- Developing a Quality Performance Measurement System for Critical Access Hospitals

WICHE Rural Mental Health Research Center

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Co-Director: Dennis Mohatt, M.A.

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Topic of Concentration: Mental Health

- Differential Effectiveness of Enhanced Depression Treatment for Rural and Urban Primary Care Patients
- Identifying At-Risk Areas Within Rural America to Target for Enhanced Depression Treatment
- Preventing Hospitalization in Depressed Rural Patients

WWAMI Rural Health Research Center

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Topic of Concentration: National Rural Health Workforce Research

- Access to Cancer Services for Rural Colorectal Cancer (CRC) Medicare Patients: A Multi-State Study
- Access to Physician Care for the Rural Medicare Elderly
- Breast, Cervical, Colorectal, and Prostate Cancer Screening in Rural America: Does Proximity to a Metropolitan Area Matter?
- The Burden of Chronic Illness among Rural Residents: A National Study
- Chartbook of Family Practice Graduate Medical Education Programs in Rural America
- Colorectal Cancer Care Variation in Vulnerable Elderly
- Improvement in the Quality of Care for Acute Myocardial Infarction (AMI): Have Rural Hospitals Followed National Trends?
- Is Rural Residency Training of Family Physicians an Endangered Species? An Interim Follow-up to the 1999 National BBA Study
- Long-Term Trends in Characteristics of the Rural Nurse Workforce 1980 - 2000: A National Health Workforce Study
- National Changes in Physician Supply
- National Study of Rural-Urban Differences in Use of Home Oxygen for Chronic Obstructive Lung Disease: Are Rural Medicare Beneficiaries Disadvantaged?
- National Trends in the Perinatal and Infant Health Care of Rural and Urban American Indians and Alaska Natives
- Rural Health Center Expansion and Recruitment Survey (with South Carolina Rural Health Research Center)
- Rural-Urban Commuting Area (RUCA) Development Project: Demographic Description and Frontier Enhancement
- University of Washington Center for Health Workforce Studies
- Which Training Programs Produce Rural Physicians? A National Health Workforce Study

Individual Grantees:

Allery, Alan, MHA

University of North Dakota

- ❑ Native Elder Care Needs Assessment: Development of a Long Term Care Planning Tool Kit

Cossman, Ronald, Ph.D.

Mississippi State University

- ❑ Pharmaceutical Data Validity in Estimating Rural Health

Edwards, Joellen B., Ph.D., RN,

East Tennessee State University

- ❑ Quality of Women's Care in Rural Health Clinics: A National Analysis

Gehshan, Shelly

National Conference of State Legislatures

- ❑ Rural Access and State Loan Repayment for Dentists

Goins, R. Turner, Ph.D.

West Virginia University

- ❑ Tribal Long-Term Care: Barriers to Best Practices in Policy and Programming for a National Sample of Rural Tribes

Ketsche, Patricia, Ph.D.

Georgia State University Research Foundation

- ❑ Rural Safety Net Provision and Hospital Care in 10 States

Liu, Jiexin (Jason), Ph.D.

West Virginia Research Corporation

- ❑ Patient Bypass Behavior and Critical Access Hospitals: Implications for Patient Retention

Matthews, Trudi L., M.A.,

The Council of State Governments

- ❑ National Study of Rural Medicaid Disease Management

McAuley, William J., Ph.D.,

Agency for Healthcare Research and Quality

- ❑ Rural and Urban Differences in Utilization of Formal Home Care

Shugarman, Lisa, Ph.D.,

Rand Corporation

- ❑ Urban and Rural Differences in Access to Care and Treatment for Medicare Beneficiaries with Cancer

Tsao, Jennie C. L., Ph.D.,

University of California, Los Angeles

- ❑ Impact of Bioterrorism on Rural Mental Health Needs

Virnig, Beth Anne, Ph.D.

University of Minnesota

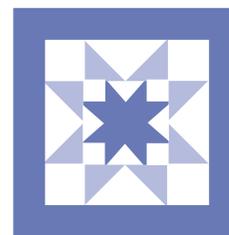
- ❑ National Study of Home Health Access in Rural America

Wellever, Anthony, M.A.,

Kansas Health Institute

- ❑ Rural Public Health Structure and Infrastructure

List of Projects by Funding Source



■ **American Cancer Society**

- ❑ Access to State-of-the-Art Hospice Care for Rural and Minority Hospice Users

■ **Bureau of Health Professions, Health Resources and Services Administration**

- ❑ Southeast Regional Center for Health Workforce Studies
- ❑ University of Washington Center for Health Workforce Studies

■ **Bureau of Rural Health and Primary Care, Department of Health and Human Services**

- ❑ Evaluation of New Hampshire's Rural Hospital Flexibility Program

■ **Centers for Medicare and Medicaid Services**

- ❑ Refining and Field Testing a Relevant Set of Quality Measures for Rural Hospitals

■ **Federal Office of Rural Health Policy, HRSA**

- ❑ Access to Cancer Services for Rural Colorectal Cancer (CRC) Medicare Patients: A Multi-State Study
- ❑ Access to Health Care for Young Rural Medicaid Beneficiaries
- ❑ Access to Physician Care for the Rural Medicare Elderly
- ❑ Advantages and Disadvantages of Hospital-Based Emergency Medical Services in Rural Areas
- ❑ Analysis of 2004-2005 State Flex Grant Plans
- ❑ Analyzing the Relationships among Critical Access Hospital Financial Status, Organizational Linkages, and Scope of Services
- ❑ Assessing the Community Impact of the MMA
- ❑ Assessment of Small Rural Hospital Activities to Report Medication Errors
- ❑ Attention from the Top? Roles of State Offices of Rural Health Policy in Preparing for Bioterrorism and Other Health System Emergencies
- ❑ Breast, Cervical, Colorectal, and Prostate Cancer Screening in Rural America: Does Proximity to Metropolitan Area Matter?

- ❑ Burden of Chronic Illness Among Rural Residents: A National Study
- ❑ Chartbook of Family Practice Graduate Medical Education Programs in Rural America
- ❑ Chronic Disease Management in Rural Areas: Examination of Medicare and Medicaid Managed Care Programs
- ❑ Community Impact Assessment
- ❑ Critical Access Hospital Conversion Tracking and Quarterly E-mail Surveys
- ❑ Database for Rural Health Research in Progress
- ❑ Describing Geographic Access to Physicians in Rural America Using Statistical Applications GIS
- ❑ Developing a Quality Performance Measurement System for Critical Access Hospitals
- ❑ Diabetes and Hypertension in Rural Hispanics
- ❑ Differential Effectiveness of Enhanced Depression Treatment for Rural and Urban Primary Care Patients
- ❑ Disability Burdens Among Rural and Urban Older Americans
- ❑ Do Communities Make a Difference in Access? A National Study
- ❑ Effects of Alcohol Use on Educational Attainment and Employment in Rural Youth
- ❑ Effects of Uninsurance During the Preceding 10 Years on Health Status of Rural Working Age Adults
- ❑ Estimated Mental Health Care Utilizations in Rural Areas
- ❑ Evaluating Need for Assistance Criteria and Weighting of Overall Criteria in the Requirements of Funding New Start and Grant Applications for Health Centers
- ❑ Examining the Applicability of the AHRQ's Inpatient Quality Indicators to Rural Hospitals and the Implications of the Relationship Between the Indicators and Financial Measures for Medicare Payment Policies
- ❑ Financial Performance Measures of Critical Access Hospitals
- ❑ Health Insurance Dynamics of Uninsured Rural Families
- ❑ How Rural Hospitals Are Meeting the Needs of Limited English Proficiency Patients
- ❑ Identifying At-Risk Rural Areas for Targeting Enhanced Depression Treatment
- ❑ Impact of Bioterrorism on Rural Mental Health Needs
- ❑ Impact of Declining Access to Obstetric Services
- ❑ Impact of Health Insurance Coverage on Native Elder Health: Implications for Addressing the Health Care Needs of Rural American Indian Elders
- ❑ Impact of Mental and Emotional Stress on Rural Employment Patterns
- ❑ Impact of the Home Health PPS on Access in Rural America
- ❑ Impact of The Medicaid Budget Crisis on Rural Communities: A 50-State Survey

- ❑ Improvement in the Quality of Care for Acute Myocardial Infarction (AMI): Have Rural Hospitals Followed National Trends?
- ❑ Investments in Health Information Technology by Rural Hospitals
- ❑ Is Medicare Beneficiary Access to Primary Care Physicians at Risk?
- ❑ Is Rural Residency Training of Family Physicians an Endangered Species? An Interim Follow-up to the 1999 National BBA Study
- ❑ Long Term Trends in Characteristics of the Rural Nurse Workforce: A National Health Workforce Study
- ❑ Medicaid Budget Cuts and Long-Term Care Supplement
- ❑ Medicaid Budget Cuts: Effects on Rural Nursing Homes and Rural Elderly and Disabled
- ❑ Medicare Beneficiary Outcomes in Rural and Urban Home Health Agencies
- ❑ Mental Health Encounters in Critical Access Hospital Emergency Rooms: A National Survey
- ❑ Mental Health Risk Factors, Unmet Needs and Provider Availability for Rural Children
- ❑ Mental Health Services: The Effect of Variations in State Policies
- ❑ Monitoring Medicare Hospital Outpatient Payments: Trends and Evidence of Impacts of Payment Policy
- ❑ National Changes in Physician Supply
- ❑ National Study of Home Health Care Access in Rural America
- ❑ National Study of Rural Medicaid Disease Management
- ❑ National Study of Rural-Urban Differences in Use of Home Oxygen for Chronic Obstructive Lung Disease: Are Rural Medicare Beneficiaries Disadvantaged?
- ❑ National Study of Substance Abuse Prevalence & Treatment Services in Rural Areas
- ❑ National Trends in the Perinatal and Infant Health Care of Rural and Urban American Indians (AIs) and Alaska Natives (ANs)
- ❑ Nationwide Analysis of New Entrants into Medicare+Choice Demonstration
- ❑ Native Elder Care Needs Assessment: Development of a Long Term Care Planning Tool Kit
- ❑ Options for Structuring Disproportionate Share (DSH) Payments to Account for Uncompensated Care: Impact on Rural Hospitals
- ❑ Patient Bypass Behavior and Critical Access Hospitals: Implications for Patient Retention
- ❑ Pay for Performance and Quality Improvement in Rural Hospitals
- ❑ Pharmaceutical Data Validity in Estimating Rural Population Health
- ❑ Post-Acute Care: A Rural and Urban Comparison
- ❑ Poverty, Parental Stress, and Violent Disagreements in the Home Among Rural Families

- ❑ Premium Assistance Programs: Exploring Public-Private Partnerships as a Vehicle for Expanding Health Insurance to Rural Uninsured
- ❑ Preventing Hospitalization in Depressed Rural Patients
- ❑ Public Health System Performance Measurement: Are Standards Applicable to Rural Communities
- ❑ Quality of Women's Care in Rural Health Clinics: A National Analysis
- ❑ Role of Intensive Care Units in Critical Access Hospitals
- ❑ Rural Access and State Loan Repayment for Dentists
- ❑ Rural and Urban Differences in Utilization of Formal Home Care
- ❑ Rural Health Center Expansion and Recruitment Survey
- ❑ Rural Healthy People 2010 Expansion: Access to Long-Term Care and Rehabilitation Services, Educational and Community-Based Programs, and Public Health Infrastructure
- ❑ Rural Hospital Flexibility Performance Monitoring Project
- ❑ Rural Minority Health: A Comprehensive Assessment
- ❑ Rural Public Health Structure and Infrastructure
- ❑ Rural Quality Improvement Focus on Diabetes
- ❑ Rural Safety Net Provision and Hospital Care in 10 States
- ❑ Rural-Urban Commuting Area (RUCA) Development Project: Demographic Description and Frontier Enhancement
- ❑ Rural-Urban Physician Payment Differences Across the Nation: Methodological Changes
- ❑ Special Study of EMS Issues Federal Office of Rural Health Policy, HRSA
- ❑ State Child Health Insurance Program (S-CHIP) and Access to Medical Transportation Program Services
- ❑ State of Rural Health Provider Organizations and Health Professional Shortages
- ❑ Stay or Leave: Evidence from a Cohort of Young Rural Physicians
- ❑ Successful Implementation of Medication Safety Initiatives in Rural Hospitals: The Role of Pharmacists and Technology
- ❑ Trends in Swing Bed and Skilled Nursing Facility Use in Rural Hospitals, 1996-2003
- ❑ Trends in Uninsurance Among Rural Minority Children
- ❑ Tribal Long-Term Care: Barriers to Best Practices in Policy and Programming for a National Sample of Rural Tribes
- ❑ Uninsurance and Welfare Reform in Rural America
- ❑ Urban and Rural Differences in Access to Care and Treatment for Medicare Beneficiaries with Cancer
- ❑ Using Program Logic Models to Monitor the Performance of State Flex Programs

- ❑ Which Training Programs Produce Rural Physicians? A National Health Workforce Study
- ❑ Why Are Health Care Costs Increasing and Is There a Rural Differential in National Data?

■ **Generation Health Care Initiatives**

- ❑ Assessing Demand and Capacity for Behavioral Health Services in Northern Minnesota

■ **Health Resources and Services Administration**

- ❑ Development of a New Methodology for Dental Health Professional Shortage Area Designation

■ **National Cancer Institute**

- ❑ Colorectal Cancer Care Variation in Vulnerable Elderly

■ **National Institutes of Mental Health**

- ❑ Maine Mental Health Evidence-Based Practice Planning Initiative

■ **North Carolina Hospital Association (NCHA)**

- ❑ North Carolina Rural Health Guide

■ **Robert Wood Johnson Foundation**

- ❑ Evaluation of the RWJ/HRSA Demonstration Project
“Creating an Integrated Outreach System to Isolated Colonia Residents in Hidalgo County, Texas”