

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

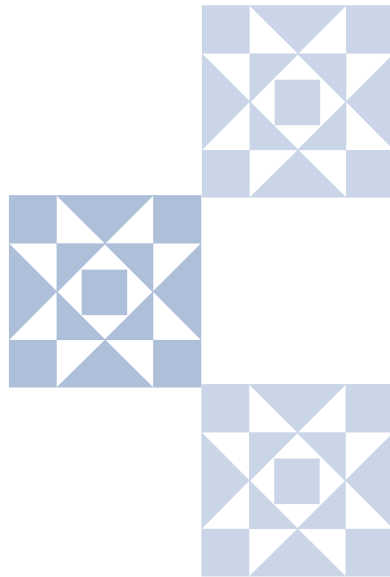
*Eighth Edition*

February 2004



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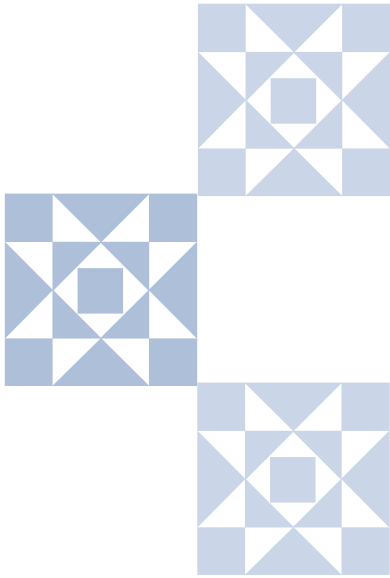


# Rural Health Research In Progress

*in the Rural Health Research Centers Program*

*Eighth Edition*

February 2004



## 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**

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.

The URL for the Database for Rural Health Research in Progress is:  
<http://www.rural-health.org>

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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.

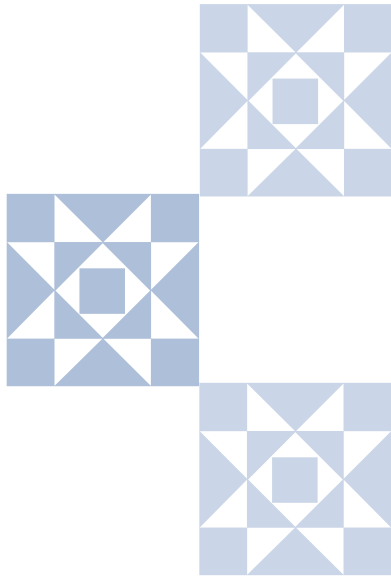
The individual grantees and the eight research and policy analysis centers currently funded in part or in whole by the Federal Office of Rural Health Policy are addressing a wide range of problems in the financing, organization and delivery of rural health care, including:

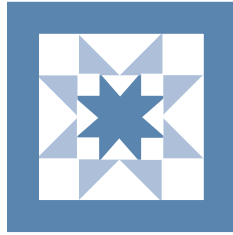
- Behavioral Health
- Bioterrorism Preparedness
- Defining Rural
- Emergency Medical Services (EMS)
- Health Insurance and the Uninsured
- Health Promotion
- Hospitals
- Hospitals: Rural Hospital Flexibility Program
- Long Term Care
- Medicaid and S-CHIP
- Medicare
- Public Health
- Quality
- Racial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

This eighth 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>

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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.

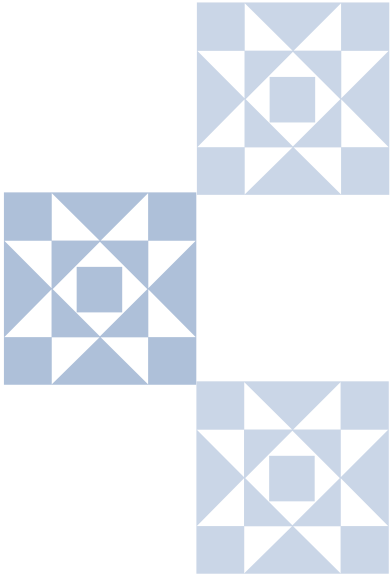
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# Part 1: Current Projects

## Behavioral Health



### **Assessing Demand and Capacity for Behavioral Health Services in Northern Minnesota**

*University of Minnesota Rural Health Research Center*

*Expected completion date: September 2004*

*Principal Investigator: Dona 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 will gather 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 will include 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.

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

*South Carolina Rural Health Research Center*

*Expected completion date: April 2004*

*Principal Investigator: M. Paige Powell, Ph.D., 803-251-6317 or ppowell@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.

## **Maine Mental Health Evidence-Based Practice Planning Initiative**

*University of Southern Maine, Muskie School of Public Service, Institute for Health Policy, Maine Rural Health Research Center*

*Expected completion date: August 2004*

*Contact Person: David Lambert, Ph.D., 207-780-4502 or davidl@usm.maine.edu, or Ruth Ralph, Ph.D., 207-780-4525 or ruthr@usm.maine.edu*

*Funder: National Institutes of Mental Health*

This project is 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 is 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**

*University of Southern Maine, Muskie School of Public Service, Institute for Health Policy, Maine Rural Health Research Center*

*Expected completion date: August 2004*

*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: August 2004*

*Principal Investigator: Catherine Hawes, Ph.D., 979-458-0081 or hawes@srph.tamushsc.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 will identify variations in state licensure and payment or

coverage policies and examine 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.

## **The Role of Advanced Practice Registered Nurses in Addressing Rural Mental Health Workforce Shortages**

*Maine Rural Health Research Center*

*Expected completion date: January 2004*

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

*Funder: Federal Office of Rural Health Policy, HRSA*

This project investigated the current state of training, licensure, and practice location choices of Advanced Practice Registered Nurses (APRNs). Six states were identified in which mental health APRNs are now practicing. Interviews were held with key informants at training programs, state nursing associations, and state licensing authorities in each state. Based on the interviews and from existing

databases, project staff were able to determine the number of APRNs currently delivering mental health services in the state, the number being trained each year, and where they are choosing to practice. Findings from this study will help federal policy makers design incentives aimed at increasing access to community-based outpatient mental health services in rural areas.

## Teen Violence

South Carolina Rural Health Research Center

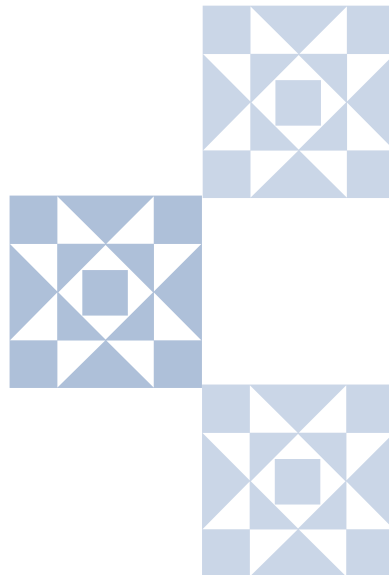
Expected completion date: August 2004

Principal Investigator: Charity G. Moore, Ph.D., 803-251-6317 or [cgmoores@gwm.sc.edu](mailto:cgmoores@gwm.sc.edu)

Funder: Federal Office of Rural Health Policy, HRSA

This study will use national data to assess the prevalence of violence among rural youth, define risk factors for violence exposure among rural youth, and assess the current ability of rural school systems to provide appropriate mental health care and/or referrals for youth exposed to violence. Violence is both a primary indicator of and a pre-cursor to child mental health problems, as well as a significant cause of mortality. Youth exposed to violence report more psychiatric symptoms, such as anger and dissociation, as well as lower life satisfaction. However, youth exposed to violence rarely receive mental health

interventions. Delivery of mental health services to youth, in both rural and urban areas, is hindered by the limited number of child and adolescent psychiatrists and the reluctance of children or their families to use mental health services not provided within a school setting. A national assessment of the prevalence of violence among rural youth, and of resources available to combat the causes and sequelae of violence, has not been performed. Comparisons of urban/rural areas, and of particular problems faced by rural minority youth, could be used to help community mental health centers plan effective interventions.





## **Attention from the Top?**

### **Roles of State Offices of Rural Health Policy in Preparing for Bioterrorism and Other Health System Emergencies**

*Walsh Center for Rural Health Analysis*

*Expected Completion Date: August 2004*

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

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will follow-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 will re-survey rural offices of the states and re-visit issues that were raised in the earlier ORHP survey. Roles of the offices will be identified and information on the extent of office resources devoted to bioterrorism preparedness will be collected. Activities and roles of the most- and least-involved state offices will be 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 Florida*

*Expected Completion Date: August 2004*

*Principal Investigator: Jennie C. I. Tsao, Ph.D., 352-273-5119 or jtsao@ufl.edu*

*Contact Person: Denise Kirby, dkirby@hp.ufl.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 infectious disease outbreaks.

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

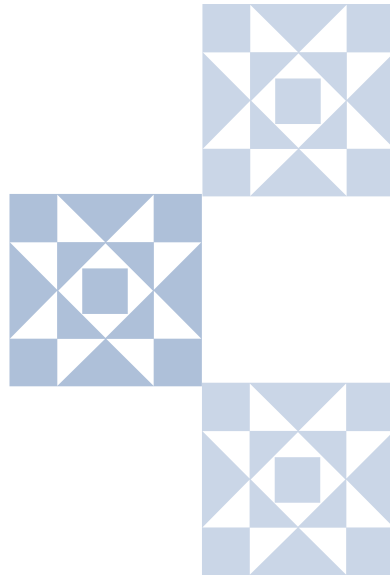
responders typically focus on immediate medical trauma or injury, leaving rural communities to struggle with the burden of unmet mental health needs both in the immediate aftermath and over the longer term.

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) and acute stress disorder (ASD), since these disorders have high post-event prevalence rates and yet have 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 infectious disease outbreaks.

Anticipated products from this project include written educational materials about PTSD and ASD for rural primary care providers and an educational in-service about these mental health conditions to be delivered at rural primary care practices. Anticipated publications from this project include white papers describing the inter-organizational network of care for mental health needs, analysis of organizational effects/network relations on patient outcomes, and analysis of the educational intervention.





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

*WWAMI Rural Health Research Center*

*Expected completion date: January 2004*

*Principal Investigator: Gary Hart, Ph.D., 206-685-0401 or [ghart@fammed.washington.edu](mailto:ghart@fammed.washington.edu)*

*Funder: Federal Office of Rural Health Policy, HRSA*

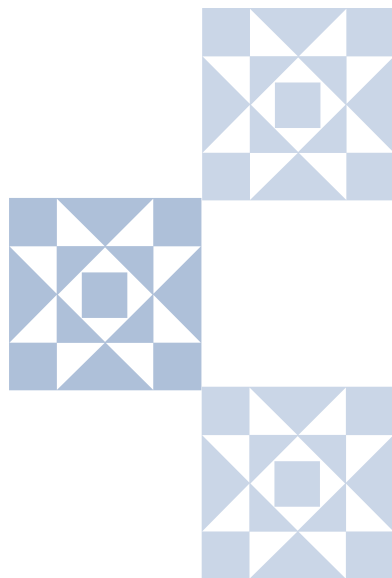
There is considerable current debate and political lobbying about how to define frontier areas. Rural-Urban Commuting Areas (RUCAs) are a new census tract-based classification scheme that utilizes the standard Bureau of Census Urbanized Area (UA) and Urban Place (UP) definitions in combination with commuting 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

*Walsh Center for Rural Health Analysis*

*Expected completion date: February 2004*

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

*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 is 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?

# Survey and Analysis of EMS Scope of Practice and Practice Settings Impacting EMS Services in Rural America

North Carolina Rural Health Research and Policy Analysis Center

Expected completion date: February 2004

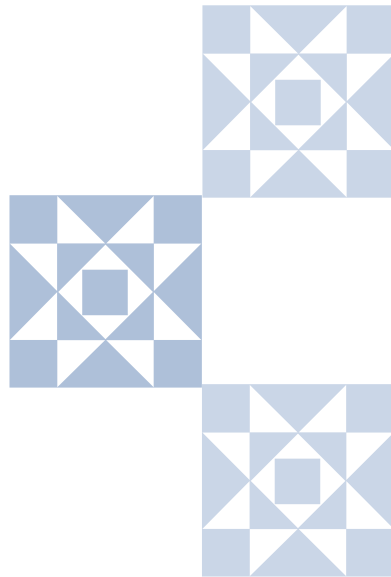
Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu

Contact Person: Greg Mears, M.D., 919-843-0201 or gdm@med.unc.edu

Funder: Federal Office of Rural Health Policy, HRSA

This project analyzes the current state of EMS services across the country, with emphasis on EMS system delivery, educational requirements, scope of practice and practice setting standards. EMS regulatory and educational documents were collected from every state through initial communication and cooperation with each state's Office of Emergency Medical Services. Data were collected using a survey tool combined with each state's existing regulatory documents regarding system and personnel credentialing, educational credentialing, skill and medication formularies, and demographic system

and personnel numbers maintained at the state level. Each state's documents were evaluated with an objective tabulation of key EMS system and personnel regulatory components. Formal data aggregation and analysis were conducted, with results reported in a monograph describing the current state of EMS across the country with respect to EMS system delivery, educational requirements, scope of practice and practice setting standards. The monograph also describes and documents the diversity of EMS services, personnel, training, education and resources in rural areas.





## **Health Care for the Uninsured: How Do the Uninsured Use the Rural Safety Net?**

*WWAMI Rural Health Research Center*

*Expected completion date: February 2004*

*Principal Investigator: Sharon Dobie, M.D., M.C.P., 206-685-0401 or [dob@u.washington.edu](mailto:dob@u.washington.edu)*

*Funder: Federal Office of Rural Health Policy, HRSA*

“Safety net” refers to the local arrangement of providers and institutions that provide care for the uninsured and those otherwise outside the traditional system of insurance, whether private or government-based. The number of uninsured and under-insured is growing at an alarming rate while the capacity of traditional safety net providers to meet growing needs is severely constrained. In many rural areas where there are few federally-funded safety net providers, the

situation is worse in terms of unmet need and/or local provider fiscal burden.

The safety net was examined from the community perspective in two small rural towns in Alaska and Wyoming to describe how, where, and if the rural uninsured obtain health care and to characterize the process and difficulties involved in obtaining care. Surveys were administered to generalist physicians in Alaska and Wyoming.

## **Trends in Uninsurance Among Rural Minority Children**

*South Carolina Rural Health Research Center*

*Expected completion date: August 2004*

*Principal Investigator: Janice C. Probst, Ph.D., 803-251-6317 or [jprobst@gwm.sc.edu](mailto: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 will be analyzed. Data will be drawn from the National Health Interview Survey, 1980 through 2001.

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

RUPRI Center for Rural Health Policy Analysis

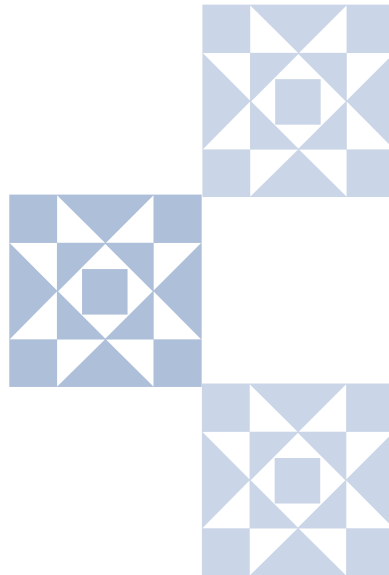
Expected completion date: August 2004

Principal Investigator: Timothy D. McBride, Ph.D., 314-977-4094 or [mcbriDET@slu.edu](mailto: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: August 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 one-year study, non-

public use data from the Behavioral Risk Factor Surveillance System (BRFSS) will be used to explore the prevalence and trends of screening for four types of cancer (colorectal, breast, cervical, and prostate). The study will compare 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: 2005*

*Principal Investigator: Craig Blakely, Ph.D., 979-862-2419 or blakely@srph.tamushsc.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: August 2004*

*Principal Investigator: Larry Gamm, Ph.D., 979-458-2244 or [gamm@srph.tamushsc.edu](mailto:gamm@srph.tamushsc.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. For the 2003-2004 project year, the project researchers plan to expand the document by adding three additional chapters and associated models for practice in the following topic areas: Access to Long Term Care and Rehabilitation Services; Education and Community-Based Programs, and Public Health Infrastructure. These three new focus areas and associated models will be added to the Rural Healthy People 2010 website at <http://www.srph.tamushsc.edu/rhp2010>.



## **Analysis of the Cesarean Section Rates in Rural Hospitals**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: April 2004*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

*Contact Person: Sandra Greene, DrPH, 919-966-0993 or sgreene@mail.schsr.unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

The purpose of this study is to examine practice patterns for deliveries in rural hospitals, with a focus on cesarean section (C-section) rates, which are rising nationally. The diffusion of best practices may be slower to reach rural communities, and consequently, patterns of delivery may be different.

Additionally, there may be non-medical issues that affect rates in rural areas, such as lack of surgical coverage on weekends. Since C-sections are more costly than vaginal births, the number of c-sections in financially challenged rural hospitals, where obstetric departments

are not typically revenue generators, becomes a cost concern.

The 2000 Nationwide Inpatient Sample will be used to identify the number of deliveries performed in the sample hospitals. The proportion of deliveries that are C-section for each hospital will be calculated as well as an aggregate rate for all rural hospitals and all urban hospitals. C-section rates for rural hospitals of varying sizes will also be compared to urban hospitals of varying sizes and teaching status. Findings will be presented in a working paper and a findings brief.

## **An Evaluation of New Hampshire's Rural Hospital Flexibility Program**

*Maine Rural Health Research Center*

*Expected completion date: June 2004*

*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) will focus 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,

to 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**

*Walsh Center for Rural Health Analysis*

*Expected completion date: August 2004*

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

*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 will investigate 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 will address 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 will be 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 will be used to estimate changes in sites of delivery and relationships with birth outcomes. Experiences in counties experiencing a loss in obstetric resources will be compared with experiences elsewhere. Interviews with members of communities experiencing a loss of resources will 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.

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

*Walsh Center for Rural Health Analysis*

*Expected completion date: August 2004*

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

*Funder: Federal Office of Rural Health Policy, HRSA*

This study will identify options for development of an equitable Disproportionate Share (DSH) payment adjustment that accounts for hospital uncompensated care costs, and determine 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) made substantial advances toward achieving equity in the DSH formula. However, small and rural hospitals continue to be disadvantaged by the DSH because the distribution formula caps the payment to rural hospitals. Research suggests that beyond equalizing the rural

and urban payment amount, 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 will review the health services literature to identify alternative models or recommendations for revising the DSH payment adjustment and prepare a matrix that compares proposals in terms of the incentives that they promote. Staff will present results of simulations based on data from four states - Washington, West Virginia, Texas, and Iowa - to determine the financial impact of incorporating measures of uncompensated care into the DSH payment system. 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.

## **The Role of Intensive Care Units in Critical Access Hospitals**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: August 2004*

*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 Closures, 1990-2000: Community Profiles and Economic Indicators Before and After the Event**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: February 2004*

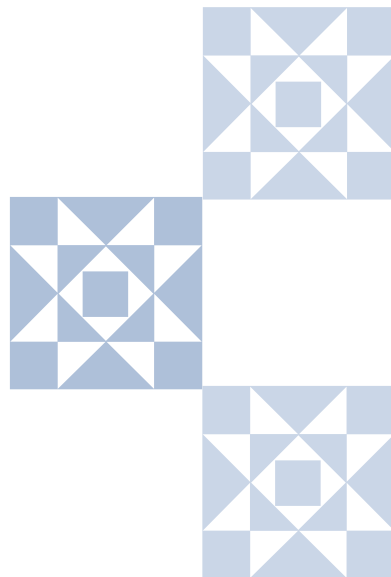
*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or [becky\\_slifkin@unc.edu](mailto:becky_slifkin@unc.edu)*

*Funder: Federal Office of Rural Health Policy, HRSA*

This study investigated the economic impact of hospital closures in non-metropolitan counties, taking into account the economic characteristics and employment trends that may have preceded the event. Between 1990 and 2000 there were 460 community hospital closures in the U.S. that did not result from merger or acquisition. Over one third of these were in rural counties. Some hospital closures occur in economically “at-risk” communities, but others may fail even though they are located in economically healthy areas. In both instances, the loss of the facility is

likely to have an impact on the economic health of the surrounding communities.

The study included the counties of location for 129 non-metropolitan facilities identified as having stopped operations between 1990 and 1997. Using data from the Bureau of the Census, the Bureau of Economic Analysis, the Bureau of Labor Statistics, AHA surveys, Medicare Public Use Files and the Area Resource Files, the populations and the commercial base of these communities were studied for a period of up to five years before and three years following each closure.





## **Rural Hospital Flexibility Performance Monitoring Project**

*University of Minnesota Rural Health Research Center,*

*Ira Mocovice, Ph.D., Director*

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

*Rebecca Slifkin, Ph.D., Director*

*University of Southern Maine Rural Health Research Center,*

*Andrew F. Coburn, Ph.D., Director*

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 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 dissemination activities will be conducted in collaboration with the Technical Assistance and Services Center (TASC) for the Flex Program, located at the National Rural Health Resource Center in Duluth, Minnesota.

***See the specific projects on the following pages.***

## **Analyzing Critical Access Hospital (CAH) Scope of Services and Organizational Linkages**

*University of Minnesota Rural Health Research Center*

*Expected completion date: August 2008*

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

*Contact Person: Walter Gregg, M.A., M.P.H., 612-627-4411 or gregg006@umn.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will monitor the post-conversion changes in CAH scope of services and the building of inter-organizational relationships with a special focus on their implications for strengthening organized systems of care and more efficient use of local resources. Project staff will identify the relationships that are developing among CAHs, their support hospitals, other network partners, and independent community providers that are most influential for improving the operational and financial

performance of CAHs. The project will provide insight into what types of inter-organizational relationships work best in what types of market environments. Data for this project will be collected through contacts with the State Offices of Rural Health, review of State Flex grant applications, and two national telephone surveys of CAH administrators in Years 1 and 3 of this project. Reports on project findings will be completed in August 2004 and 2006.

## **Community Impact Assessment**

*Expected completion date: August 2008*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

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 measurable effect, as well as the ways in which Flex program coordinators intended to affect community health.

By using information obtained through the state logic modeling process and a telephone survey of CAH administrators, a set of measurable, relevant indicators of community impact will be constructed, gathered and analyzed.

## **Critical Access Hospital Access To and Use of Capital**

*University of Minnesota Rural Health Research Center*

*Expected completion date: August 2004*

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

*Contact Person: Walter Gregg, M.A., M.P.H., 612-627-4411 or gregg006@umn.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will identify the capital needs of CAHs, their experiences in accessing local capital resources that add to facility flexibility in dealing with daily financial needs, and the role of inter-organizational relationships in accessing capital and improving fiscal flexibility. State and municipal efforts to meet capital needs and the role of key state stakeholders will also be identified. Additionally, this project will assess facility-specific trends related to the management of existing debt and acquisition of new debt as indicators of post-conversion performance.

Data on state-level capital activities will be collected through a quarterly e-mail survey of State Flex Coordinators, the TASC list serv, and telephone contacts with Flex Coordinators in key states. Medicare Cost Report data will be analyzed to examine changes in hospital financial condition and related capital behavior. Through the survey of CAH administrators, project staff will identify CAH capital needs and catalogue CAH community experiences in obtaining or maintaining non-revenue support that leads to greater financial flexibility in managing day-to-day operational costs.

## **Critical Access Hospital Conversion Tracking and Quarterly E-mail Surveys**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: August 2008*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

*Contact Person: Mari-Wells Hedgpeth, 919-966-5541 or mhedgpeth@schsr.unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

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.



## Developing a Quality Performance Measurement System for Critical Access Hospitals

University of Minnesota Rural Health Research Center

Expected completion date: August 2008

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

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

Funder: Federal Office of Rural Health Policy, HRSA

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 an ongoing basis on a core set of CAH quality measures. In Years 1 and 2, project staff will identify a core set of CAH quality measures, and assess the feasibility of using state hospital discharge data and other data sources to evaluate the quality of care provided to CAH patients. As part of this assessment,

the willingness of CAHs to collect data as part of a CAH-specific quality performance system will be assessed, and strategies will be explored for adapting existing data collection and analysis systems to include data on CAH quality indicators. By the end of Year 2, a report will be produced, synthesizing the results of the feasibility analysis and recommending an approach for developing, testing and implementing a prototype of a CAH quality performance measurement system in Years 3 to 5 of the project.

## Evaluating the Financial Impact of Critical Access Hospital Conversion Over Time

University of Minnesota Rural Health Research Center

Expected completion date: August 2008

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

Contact Person: Astrid Knott, Ph.D., 612-624-3566 or knott008@umn.edu or Gestur Davidson, Ph.D., 612-625-1582 or david064@umn.edu

Funder: Federal Office of Rural Health Policy, HRSA

Using Medicare cost report data, this project will analyze changes in several key financial and organizational indicators that may be affected by CAH conversion, including:

- hospital discharges
- revenue: Medicare outpatient revenue, Medicare inpatient revenue, Medicare inpatient revenue per adjusted discharge, and total facility revenue
- expenditures: annual salary per FTE, number of employees, capital expenditures, interest expense, depreciation expense, and Medicare inpatient costs per adjusted discharge
- financial structure: debt to asset ratio, donor and government support

- profitability: total profit and profit margin
- service offerings: swing beds, Skilled Nursing Facility beds, and home health services

CAHs' values on these measures prior to their conversion will be compared to their levels after conversion, and trends in these measures for hospitals that converted to CAH status will be compared with those of the comparison group of small rural hospitals that had not converted to CAH status at a specific point in time. Annual reports will be produced describing the financial status of CAHs and the results of our financial analyses.

## **Financial Performance Measures of Critical Access Hospitals**

*North Carolina Rural Health Research and 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*

*Funder: Federal Office of Rural Health Policy, HRSA*

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.

## **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*

*Funding Source: Federal Office of Rural Health Policy, HRSA*

This project will use 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. 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/

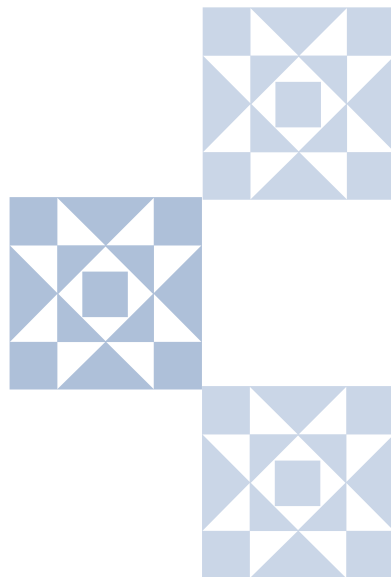
processes and resources of the state program.

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, and four state Flex Programs during the first year of the project to develop a generic national Flex Program logic model. The demonstration states will also receive help from project staff to customize and implement the model for their programs. Refinements to the model will be made based on feedback from the four states. 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 will be

implemented by all state Flex Programs for purposes of managing their programs and providing data to the Flex Monitoring Team.





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

*Southwest Rural Health Research Center*

*Expected completion date: August 2004*

*Principal Investigator: Charles D. Phillips, Ph.D., MPH, 979-458-0080 or  
phillipsd@srph.tamushsc.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: Winter 2004*

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

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

*University of North Dakota*

*Expected completion date: August 2004*

*Principal Investigator: Alan Allery, MHA, 701-777-3859 or alan\_allery@und.nodak.edu*

*Contact Person: Francine McDonald, MPA, 701-777-4043 or fmcdonald@medicine.nodak.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will develop 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.

## **A Rural Analysis of “A Randomized Controlled Trial of Primary and Consumer-Directed Care for People with Chronic Illnesses”**

*Monroe County Long Term Care Program, Inc.*

*Expected completion date: June 2004*

*Principal Investigator: Dianne Liebel, RN, MSED, 585-248-8770 or dliebel@mcltcp.org*

*Contact Person: Gerald M. Eggert, Ph.D., 585-248-8770 or gmeggert@aol.com*

*Funder: Federal Office of Rural Health Policy, HRSA*

The demonstration, titled “A Randomized Controlled Trial of Primary and Consumer Directed Care for People with Chronic Illnesses,” paid for the delivery of care by a health promotion nurse and a voucher (\$200.00 per month) to spend on in-home needs. This demonstration included 1,600 participants who were medically vulnerable, chronically ill Medicare beneficiaries in both urban and rural settings in New York, West Virginia, and Ohio. More than one quarter of the participants lived in rural areas. Services

and vouchers were paid for by the Medicare trust fund. A rural analysis of data from the demonstration project will examine how chronic disease self-management models for Medicare beneficiaries work in rural areas compared to urban areas. In addition, a risk-adjusted capitation rate will be developed for managed care in rural areas.

It is important to ensure that these models will work well in rural areas because of the greater demand there for care for people with chronic diseases.

## **Rural and Urban Differences in Utilization of Formal Home Care**

*Agency for Healthcare Research and Quality (AHRQ)*

*Expected completion date: August 2005*

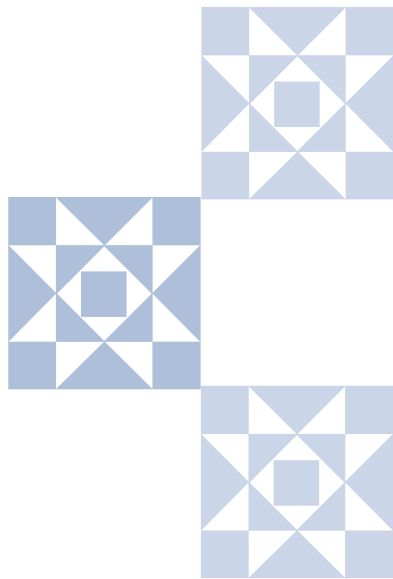
*Principal Investigator: William J. McAuley, Ph.D., 301-427-1412 or [mcauley@ahrq.gov](mailto:mcauley@ahrq.gov)*

*Alternate contact information: 704-687-4658 or [wjmcaule@email.uncc.edu](mailto:wjmcaule@email.uncc.edu);*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will use 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. An initial paper, based upon the 1998 MEPS-HC data, will examine the factors that predict use of formal home care, including rurality. A second paper,

examining rural and urban differences in the cost of formal home care, will be completed by April 2004. Following these initial 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.





## **Access to Health Care for Young Rural Medicaid Beneficiaries**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: August 2004*

*Principal Investigator: Victoria Freeman, DrPH, RN, 919-966-6168 or victoria\_freeman@unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This study will examine access to health care among rural children ages 0-17 who are enrolled in some type of Medicaid managed care program, and will compare this access across types of programs and, within program type, to that of urban beneficiaries. Access to care will be assessed by means of a mailed survey sent to the parents of Medicaid children in four states chosen for their geographic

diversity. Questions focus 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: August 2004*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

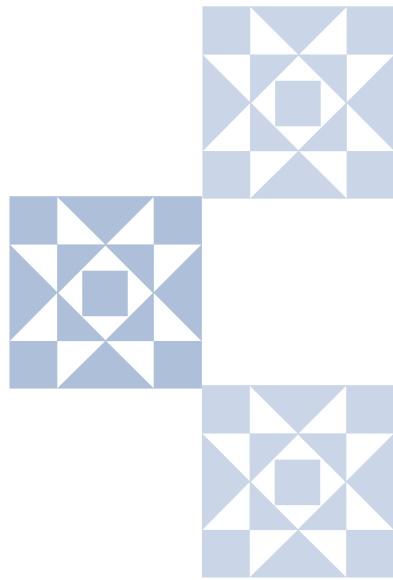
*Contact Person: Pam Silberman, JD, DrPH., 919-966-2670 or silber@mail.schsr.unc.edu*

*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 will conduct a 50-state survey of state Medicaid agencies,

offices of rural health and rural health associations. The organizations will be 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.





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

*University of Minnesota Rural Health Research Center*

*Expected completion date: September 2004*

*Principal Investigator: Beth Virnig, Ph.D., 612-624-4426 or virni001@umn.edu*

*Funder: American Cancer Society*

This project will develop hospice 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 and for underserved minority populations. 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.

## **Colorectal Cancer Care Variation in Vulnerable Elderly**

*WWAMI Rural Health Research Center*

*Expected completion date: January 2004*

*Principal Investigator: Laura-Mae Baldwin, M.D., M.P.H., 206-685-0401 or*

*lmb@fammed.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.



## **Impact of the Home Health PPS on Access in Rural America**

*Walsh Center for Rural Health Analysis*

*Expected completion date: August 2004*

*Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or [sutton-janet@norc.net](mailto:sutton-janet@norc.net)*

*Funder: Federal Office of Rural Health Policy, HRSA*

This study is designed to help policy-makers understand whether patterns of home care use in rural communities have been affected by the prospective payment system (PPS). Analyses will provide information on the characteristics of the patients served, the number and mix of services rendered, and quality of care. The home health PPS was implemented in October 2000 to reduce growth in Medicare home health expenditures. Recent evidence on the impact of the PPS indicates that while the number of visits per episode has declined, the mix of services has also changed. Specifically, the proportion of visits that are therapy-related, including visits for physical, occupational and speech therapy, has increased. It is unclear whether the PPS has affected access to home care in rural areas in the same manner as it has in urban areas. Analyses conducted by Walsh Center staff prior to implementation of the PPS indicated that home care services provided to rural Medicare

beneficiaries were not comparable in scope to that provided to urban beneficiaries.

Walsh Center staff will use data from CMS's Standard Analytical Files to compare demographic and clinical characteristics of rural and urban Medicare beneficiaries who received home care prior to and following implementation of the PPS. Staff will examine whether there are clinical subgroups of rural and urban beneficiaries for whom access to home care is more limited or more available following implementation of the PPS. Finally, analysis will address to what extent the PPS has affected patterns of home care utilization, including the proportion using home care to meet post-acute and long-term care needs, the number of home care visits, and charges. A report and policy brief will be prepared for distribution to policymakers and persons on the Center mailing list.

## **Is Medicare Beneficiary Access to Primary Care Physicians at Risk?**

*RUPRI Center for Rural Health Policy Analysis*

*Expected completion date: February 2004*

*Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or [kmueller@unmc.edu](mailto:kmueller@unmc.edu)*

*Funder: Office of Rural Health Policy, HRSA*

This project examined 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 researched 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 were used to address these issues, with multiple regression analysis as the principal methodology used to analyze those data. In addition, a telephone survey was 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 were 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.

## **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: August 2004*

*Principal Investigator: 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 will be used to assess rural/urban variation in the home use of supplemental oxygen.

The project is researching 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 will be explored. A

retrospective cohort study will be 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 will be 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: August 2004*

*Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or [kmueller@unmc.edu](mailto: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**

*Walsh Center for Rural Health Analysis*

*Expected completion date: February 2004*

*Principal Investigator: Janet P. Sutton, Ph.D., 301-951-5070 or [sutton-janet@norc.net](mailto:sutton-janet@norc.net)*

*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.

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

*Southwest Rural Health Research Center*

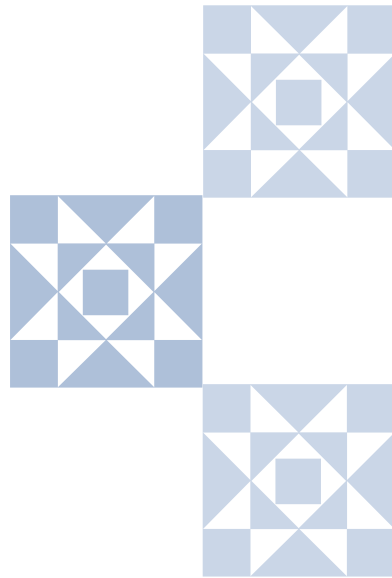
*Expected completion date: August 2004*

*Principal Investigator: Jane Bolin, Ph.D., JD, RN, 979-862-4238 or jbolin@srph.tamushsc.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 will identify issues of public policy and service management that can advance effective DM for rural populations.





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

Walsh Center for Rural Health Analysis

Expected completion date: August 2004

Principal Investigator: Claudia Schur, Ph.D., 301-951-5070 or [Schur-claudia@norc.net](mailto:Schur-claudia@norc.net)

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.

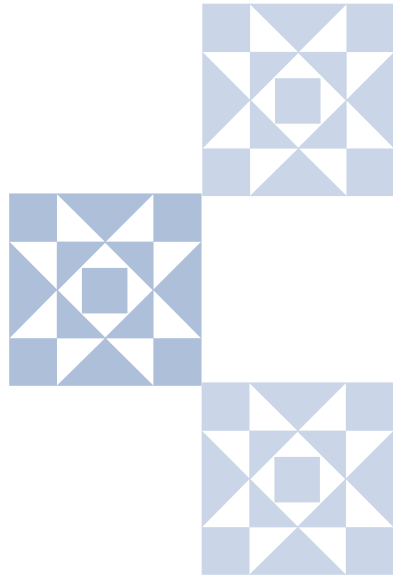
A list of ten essential services of public health was developed by the CDC. Recently, work has focused on formulating a systematic strategy for measuring public health practice with respect to these services at both the state and local levels. Many “public health” functions are conducted, at least in 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 is conducting 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.







## **Establishing Evidenced-Based Safety Standards for Rural Hospitals – Phase I**

*University of Minnesota Rural Health Research Center with the University of North Dakota and the  
University of Southern Maine Rural Health Research Center  
Expected completion date: March 2004 (Phase I)*

*Contact Person: Mary Wakefield, Ph.D., RN, 701-777-3848 or mwake@medicine.nodak.edu  
or Ira Moscovice, Ph.D., 612-624-8618 or mosco001@umn.edu  
or Andy Coburn, Ph.D., 207-780-4435 or andyc@usm.maine.edu*

*Funder: Federal Office of Rural Health Policy, HRSA and Agency for Healthcare Research and Quality*

The purpose of this project is to develop and test evidence-based safety improvement interventions in rural hospitals. The project has two phases. The objective of Phase One is to identify key patient safety areas and interventions of particular relevance to rural hospitals that have the potential to reduce medical errors and improve patient safety. The objectives of Phase Two are to implement and evaluate the interventions and disseminate the results to purchasers, policymakers, rural hospitals, and regulators. This will be accomplished by field testing rural relevant interventions in a sample of rural hospitals in different regions and evaluating whether there are improvements in patient safety.

Phase One activities will include:

- a review of the relevant published literature on quality of care and

medical errors in rural hospitals

- an analysis of a national sample of hospital discharges from the Healthcare Cost and Utilization Project (HCUP)
- a survey of purchaser groups to identify their current initiatives related to patient safety in rural hospitals
- the establishment and convening of two expert advisory panel meetings
- a telephone survey of a stratified sample of rural hospitals to assess the relevance and feasibility of the interventions identified by the advisory panel

This project is being conducted by a collaborative research team that includes senior researchers from the University of North Dakota, the University of Minnesota, and the University of Southern Maine.

## **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: August 2004*

*Contact Person: Laura-Mae Baldwin, M.D., M.P.H., 206-685-4799 or lmb@fammed.washington.edu*

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

This project will determine whether overall improvements in the quality of care for acute myocardial infarction (AMI) among Medicare patients have taken

place in both rural and urban hospital settings. 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 will determine 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 has 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 will include Medicare beneficiaries 65 years and older with an AMI confirmed by specific medical criteria who are directly admitted for the AMI care (rather than transferred). Rates of AMI guidelines adherence by the three types of rural and urban hospitals will be calculated for these hospitals nationally, by region, division, and state in the two time periods. A working paper and a one-page policy brief will be produced, and a manuscript submitted for publication to a peer-reviewed journal.

## **Nursing Home Quality: A Comparison Between Rural and Non-Rural Nursing Homes**

*Southwest Rural Health Research Center*

*Expected completion date: August 2004*

*Contact Person: Charles D. Phillips, Ph.D., 979-458-0080 or [phillipsd@srph.tamushsc.edu](mailto:phillipsd@srph.tamushsc.edu)*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project examines the effect of location (rural/non-rural) on the characteristics of nursing homes and residents, and on various indicators of quality of care, using two national data sets. The Online Survey and Certification Reporting System (OSCAR) contains data on all nursing homes that participate in the Medicare and Medicaid programs, and the Minimum Data Set includes data on the health, physical and cognitive

functioning, and aspects of process quality for all residents in these facilities. The project team produced a chartbook (February 2003) comparing nursing homes in rural and urban areas at the national level as well as for each of the ten federal regions and 50 states. A second chartbook comparing resident characteristics in urban and rural areas at the national, regional, and state level is planned for completion in August 2004.

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

University of Minnesota Rural Health Research Center

Expected completion date: April 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: February 2004

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

Funder: Office of Rural Health Policy, HRSA

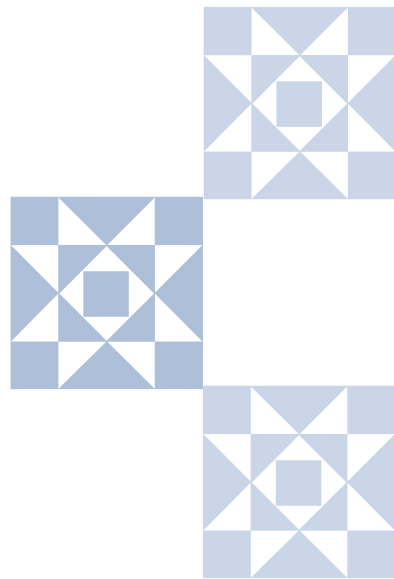
This project examined the policy implications of current approaches, characteristics, and effectiveness of diabetes care management and quality improvement programs in rural areas. Diabetes is a well-understood disease for which there has been a reasonably large amount of program development in rural 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 focused 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 were 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.





## **Diabetes and Hypertension in Rural Hispanics**

*South Carolina Rural Health Research Center*

*Expected completion date: August 2004*

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

*Funder: Federal Office of Rural Health Policy, HRSA*

The project will examine 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 has 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

## **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 2004*

*Contact Person: Laura-Mae Baldwin, M.D., M.P.H., 206-685-0401 or lmb@famned.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.

## **Prevalence of Chronic Disease and the Degree of Rurality of American Indian Elders in a Nationally Representative Sample of 100 Tribes**

*University of North Dakota*

*Expected completion date: August 2004*

*Principal Investigator: Patricia L. Moulton, Ph.D., 701-777-6781 or pmoulton@medicine.nodak.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

There is a paucity of information about prevalence of chronic disease in American Indians (male and female), and no information about rural/urban differences in older American Indians. Furthermore, limited research is available on the association between chronic disease and availability of health services among American Indian elders. The specific aim of this study is to determine if there are differences in prevalence of chronic disease in American Indian elders across age groups (55-64, 65-74, 75-84 and 85+) in urban vs. rural vs. frontier counties. In addition, several factors that may moderate potential differences will be explored in relation to urban, rural and frontier county status and prevalence of chronic disease. These factors include health damaging behaviors, access to health care services and providers, and

degree of functional limitation. The proposed study attempts to fill this gap through the analyses of linked data from an ongoing national Native Elder Social and Health Needs Assessment Project funded by the US DHHS Administration on Aging and a data subset from the Area Resource File. Study findings and related policy implications will be disseminated to key research and policy stakeholders including Native American Tribal Health/Elder Councils, other tribal policymakers, and the U.S. Committee on Indian Affairs. The study findings will serve as a foundation for long term research efforts focused on informing and aligning programs for evidence-based public policies to meet the health care needs of American Indian elders.



## **Analytic Capacity to Respond to Changes in Medicare and Medicaid, Data Assistance to Policy Staff at the Federal Office of Rural Health Policy, and Production of Short Policy Briefs**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: August 2004*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

Medicare payment rates to a variety of providers are constantly evolving, both through new legislation proposed in the Congress and regulatory changes proposed by the Centers for Medicare and Medicaid Services (CMS). This project revolves around educating congressional staff and other key individuals about the mechanics of Medicare payment policy, and evaluating the effect of such policy on rural providers. To have the ability to

respond rapidly to policy changes in Medicare reimbursement methodology, key data sets will be maintained and ongoing longitudinal files constructed that allow tracking providers over time. Topics of analysis will be chosen as the result of direct requests from the federal Office of Rural Health Policy staff and short policy briefs will be produced as needed.

## **Database for Rural Health Research in Progress**

*Maine Rural Health Research Center*

*Expected completion date: August 2005*

*Contact Person: Karen B. Pearson, M.L.I.S., M.A., 207-780-455, 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>. In addition, an annual publication of rural health research in progress in the ORHP-funded centers is produced and disseminated to policymakers.

## **Developing and Using a Classification Schema to Identify Sentinel Communities in the U.S.**

*RUPRI Center for Rural Health Policy Analysis*

*Expected completion date: March 2004*

*Principal Investigator: Keith J. Mueller, Ph.D., 402-559-4318 or [kmueller@unmc.edu](mailto:kmueller@unmc.edu)*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will develop a template for identifying communities in the U.S. that would be eligible for inclusion in the Sentinel Communities Project in order to study the impact of multi-sector policies at the local level. The Sentinel Communities Project will enable rural researchers to track the effect of current policies on rural communities, anticipate the effect of proposed policies, and demonstrate policy effects that link one sector to another.

Health policy will be a cornerstone of the project. The goal is to apply the best techniques of research to developing approaches to improve policies in multiple sectors (e.g., health, human

services, transportation, economic development, etc.) for the purpose of creating sustainable rural communities offering optimal quality of life for the residents of those communities.

This project has two levels of analysis. First, communities are defined, using the language of rural place, in a manner parallel to how vulnerable places have been defined in the Center's work. The second level of analysis describes each place using a set of variables as determined by the analysts who met in the fall of 2003. A detailed project report, a policy paper, and a policy brief will be produced.





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

*WWAMI Rural Health Research Center*

*Expected completion date: April 2004*

*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 is examining 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.

## **Do Communities Make a Difference in Access? A National Study**

*RUPRI Center for Rural Health Policy Analysis*

*Expected completion date: August 2004*

*Principal Investigator: Timothy D. McBride, Ph.D., 314-977-4094 or mcbriedet@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, and 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: August 2004*

*Principal Investigator: Tim M. Henderson, M.S.P.H., M.A.M.C., 202-624-3573 or tim.henderson@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:

- How many states have state loan repayment programs for dentists?
- What are the requirements of each program, and what do dentists receive in return?

- How many dentists are currently practicing in rural areas with state loan repayment program support and what impact are they having on access?
- What are the long-term results of these programs in terms of retention of program participants in rural areas?
- How do 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.



## **Impact of Medicaid Managed Care, Race/Ethnicity, and Rural/Urban Residence on Avoidable Maternity Complications: A Five-State Multi-level Analysis**

*South Carolina Rural Health Research Center*

*Expected completion date: August 2004*

*Principal Investigator: Sarah Laditka, Ph.D., 803-251-6317 or sladitka@gwm.sc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

In the mid-1980s, Medicaid expanded pregnancy-related health care coverage. Substantially expanded coverage requirements were implemented in 1991; by 1992, nearly half of all women in the U.S. were eligible for Medicaid coverage for pregnancy-related expenses. Over the past decade, Medicaid managed care (MMC) has grown to be the primary form of service delivery within Medicaid: 57% of Medicaid recipients were enrolled in MMC in 2001, up from 10% in 1991. Effects of the introduction of MMC on pregnancy outcomes are unclear. Managed care may enhance care coordination, improving access and quality, particularly for minorities,

however, managed care potentially provides incentives for under-provision of services.

This project will examine differences in access to care for pregnant women enrolled in MMC and Medicaid fee-for-service, and examine differences in the impact of MMC on access among rural and minority persons. To assess differences, we will use an indicator of access to primary and prenatal care. This indicator, the Potentially Avoidable Maternity Complications, uses hospital discharge data to identify pregnancy-related complications that may often be prevented through routine prenatal and primary care.

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

*South Carolina Rural Health Research Center*

*Expected completion date: August 2004*

*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 will examine the prevalence of sub-clinical mental health problems in rural children,

assess risk factors associated with problems in children, and assess the influence of local provider availability on healthcare provider contact.

## **Quality of Women's Care in Rural Health Clinics: A National Analysis**

*East Tennessee State University*

*Expected completion date: August 2004*

*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.

# **Unmet Needs for Health Care Services: An Analysis of Children with Special Health Care Needs in Rural Areas**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: August 2004*

*Principal Investigator: Rebecca Slifkin, Ph.D., 919-966-5541 or becky\_slifkin@unc.edu*

*Contact Person: Michelle Mayer, Ph.D., 919-966-7666, or mayer@mail.schsr.unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

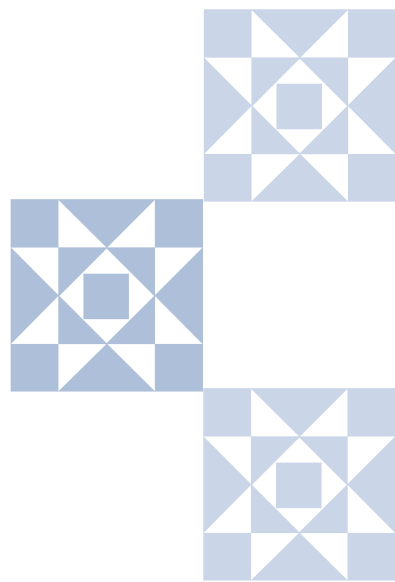
Parental report of having an unmet need for care is frequently used as a measure of poor access to medical services; however, this unvalidated measure is usually dependent on parental perceptions of need for care. This project will assess the extent to which children with special health care needs (CSHCN) who live in rural areas and/or are covered by Medicaid are less likely to perceive a need for routine and specialty physician care than their metropolitan and privately insured counterparts, respectively.

With the current state budget crises and the threats to state Medicaid and SCHIP programs, it is essential to understand how CSHCNs, especially those with reduced access due to geographic or financial barriers, fare with regard to meeting their needs for health care. This project will focus especially on dental services and mental health care. The National Survey of CSHCNs will be used to perform analyses of perceived need for routine and specialty care among

this population. The following topics will be explored:

- Are CSHCNs residing in rural areas significantly less likely to perceive the need for routine and specialty medical care than those living in metropolitan areas?
- Are CSHCNs who receive Medicaid less likely to perceive the need for these services than those with private insurance?
- Are CSHCNs without insurance less likely to perceive the need for health care than children with insurance?

The same data source will be used to assess the extent to which CSHCN who live in rural areas and/or are covered by Medicaid face greater risks of having unmet needs for specific types of health care services than their metropolitan and privately insured counterparts, respectively. Findings will be presented in two research papers.





### **The North Carolina Rural Health Guide**

*North Carolina Rural Health Research and Policy Analysis Center*

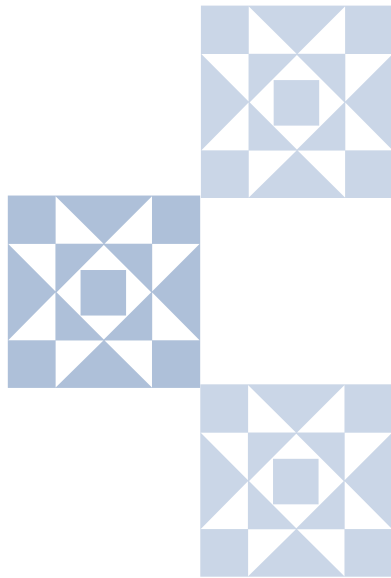
*Expected completion date: December 2006*

*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 for the next two years with current data.





## **Changes in the Supply, Distribution, Workload and Reimbursement Patterns of Pharmacists in Rural Areas**

*North Carolina Rural Health Research and Policy Analysis Center*

*Expected completion date: February 2004*

*Principal Investigator: Erin Fraher, M.P.P., 919-966-5012 or erin\_fraher@unc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This study examined the supply, distribution, workload, and reimbursement patterns of pharmacists in rural areas. Pharmacist licensure data from five geographically diverse states with high rural populations were analyzed to determine demographic characteristics, employment patterns, and educational preparation of practicing

pharmacists in rural vs. urban areas. The study also examined pharmacy licensure data in rural vs. urban areas to study trends in pharmacy ownership patterns. The study will provide much needed information to state and national decision makers as they craft policies on pharmacist education, reimbursement, and regulation.

## **Chartbook of Family Practice Graduate Medical Education Programs in Rural America**

*WWAMI Rural Health Research Center*

*Expected completion date: January 2004*

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

*Funder: Federal Office of Rural Health Policy*

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: National Center for Health Workforce Analysis, HRSA*

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.

## **Establishing a Fair Payment for Rural Physicians**

*RUPRI Center for Rural Health Policy Analysis*

*Expected completion date: June 2004*

*Contact Person: Keith J. Mueller, Ph.D. 402-559-4318 or kmueller@unmc.edu*

*Funder: Federal Office of Rural Health Policy, HRSA*

This project will analyze differences in physician payment as a function of practice location and simulate policy choices that change the current payment formula.

Section 1848 (e) of the Social Security Act creates geographic indices, including “an index which reflects 1/4 of the difference between the relative value of physicians’ work effort in each of the different fee schedule areas and the national average of such work effort.” Two other Geographic Practice Cost

Indices (GPCIs) are also used to calculate the Geographic Adjustment Factors (GAFs). These are practice costs including office rent and hourly wages of staff and professional liability insurance (PLI) to reflect differences in premiums for malpractice insurance. Most physicians and those who employ them argue payment for physician work should not differ significantly by geography because the value of the work is not a function of area-specific costs, as distinguished from the costs of the practice and prices for

liability insurance. The work index established by federal regulation uses the salaries for each of the 89 Medicare payment areas as reported in the 1990 census for six occupational categories. Of these six categories, one covers registered nurses and pharmacists.

This project will research the following hypotheses:

- Modest changes (e.g., a floor in the work index) in the calculation of GPCIs will yield significant increases in payment for rural physicians.
- Physician practices affected favorably by increasing the work index used in the GAFs will locate in rural areas that

include a disproportionate share of shortage areas and serve a disproportionate percentage of elderly persons.

This project will include three discrete activities:

- An explanation of the physician payment formula with an easy-to-follow schematic
- Development of a database of payments in the 89 Medicare payment areas
- An analysis of the effects of payment change in specific physician practices

## **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: August 2004*

*Contact Person: 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 will examine 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 is 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 one-year national study we will use 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 will examine the match rates of the rural-based programs over the last five years; which programs have downsized, consolidated, or actually closed since 1999; what are the plans 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.

## **National Changes in Physician Supply**

*WWAMI Rural Health Research Center*

*Expected completion date: January 2004*

*Contact Person: Eric Larson, Ph.D., 206-685-0401 or [eric\\_larson@fammed.washington.edu](mailto:eric_larson@fammed.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: August 2004*

*Contact Person: Roger Rosenblatt, M.D., M.P.H., 206-685-0402 or*

*[rosenb@u.washington.edu](mailto:rosenb@u.washington.edu) or Janice C. Probst, Ph.D., 803-777-7426 or [jprobst@gwm.sc.edu](mailto: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 will administer 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 will be 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 collaborative one 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: August 2004*

*Principal Investigator: A. Clinton MacKinney, M.D., M.S., 320-363-8150 or [clintmack@cloudnet.com](mailto: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 GPCIs (all three components aggregated).

Two policy papers and three policy briefs will be produced.

## **The State of Rural Health Provider Organizations and Health Professional Shortages**

*Southwest Rural Health Research Center*

*Expected completion date: August 2004*

*Contact Person: James Alexander, Ph.D., 979-458-1592 or JLAlexander@srph.tamu.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 will be 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 will identify 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: February 2004*

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

*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.

## **WWAMI Center for Health Workforce Studies**

*WWAMI Center for Health Workforce Studies*

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

*Contact Person: Gary Hart, Ph.D., 206-685-0401 or [ghart@fammed.washington.edu](mailto:ghart@fammed.washington.edu)*

*Funder: Bureau of Health Professions, HRSA*

The WWAMI Center for Health Workforce Studies is one of five regional health workforce centers funded by the Bureau of Health Professions' National Center for Health Workforce Information and Analysis (NCHWIA). The Workforce Center's major goals are to:

- Conduct high-quality and policy-relevant health workforce research in collaboration with the NCHWIA and state agencies from Washington, Wyoming, Alaska, Montana, and Idaho
- Provide consultation to local, state, regional, and national policy makers and analysts
- Develop appropriate state health workforce methods and determine the data necessary for their use
- Widely disseminate study results in easily understood and practical form to facilitate appropriate state and federal workforce policies

The Workforce Center brings together researchers from medicine, nursing, dentistry, public health, and the allied health professions to perform applied research on the distribution, supply, and requirements of health care providers, with emphasis on state workforce issues in underserved rural and urban areas of

the WWAMI region. The Workforce Center emphasizes issues related to provider and patient diversity, provider clinical care and competence, and the cost and effectiveness of practice in the rapidly changing managed care environment.

### ***Projects currently underway are:***

#### **Dental Hygienists in Washington: 2003 Survey.**

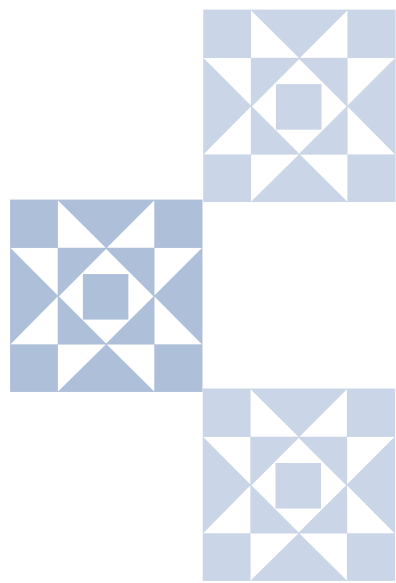
The project PI is Gary Hart, Ph.D. Scheduled completion date is July 2004.

**Workforce Survey of Washington State Pharmacies.** The project PI is Gary Hart Ph.D. Scheduled completion date is July 2004.

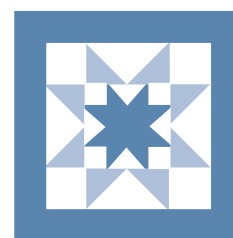
**Survey of Hospital Business Offices in Washington: Staffing Issues and Barriers to Efficient Operations.** The project PI is Amy Hagopian, M.H.A. Scheduled completion date is July 2004.

#### **Identification of Factors that Promote the Recruitment/Acceptance of American Indians and Alaska Natives into the Health Professions.**

The project PI is Laura-Mae Baldwin, M.D., M.P.H. Scheduled completion date is Spring 2004.



## Part 2: Rural Health Research Centers

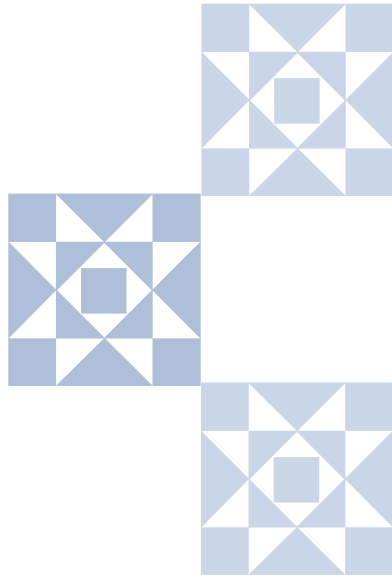


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\* Partially funded by the Federal Office of Rural Health Policy

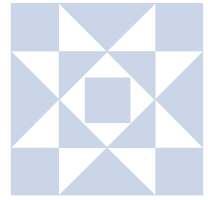






## Maine Rural Health Research Center

Director: Andrew F. Coburn, Ph.D.



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Established in 1992, the Maine Rural Health Research Center (MRHRC) is part of the Institute for Health Policy at the Muskie School of Public Service, University of Southern Maine. The Center's mission is to inform health care policymaking and the delivery of rural health services through high quality research, policy analysis, and technical assistance on rural health issues of regional and national significance. The MRHRC 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 has three areas of special interest in its research agenda:

- The availability, organization, and financing of rural behavioral health services
- Institutional and community-based services for rural elders
- Changes in the organization and financing of rural health services

## Current Publications

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

## Working Papers

30. Hartley D, Bird DC, Lambert D & Coffin J. (2002). *The role of community mental health centers as rural safety net providers*. <http://muskie.usm.maine.edu/Publications/rural/wp30.pdf>
29. Hartley D, Ziller EC, Lambert D, Loux SL & Bird D. (2002). *State licensure laws and the mental health professions: Implications for the rural mental health workforce*. <http://www.usm.maine.edu/Publications/rural/wp29.pdf>
28. Hartley D, Ziller EC & Macdonald C. (2002). *Diabetes and the rural safety net*. <http://www.muskie.usm.maine.edu/Publications/rural/WP28.pdf>
27. Ziller EC & Coburn AF. (2003). *Health insurance coverage of the rural and urban near elderly*. <http://muskie.usm.maine.edu/Publications/rural/wp27.pdf>
26. Coburn AF, McBride TD & Ziller, EC. (2001). *Patterns of health insurance coverage among rural and urban children*. <http://www.muskie.usm.maine.edu/Publications/rural/wp26.pdf>
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## Other Publications

### 2003

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## 2002

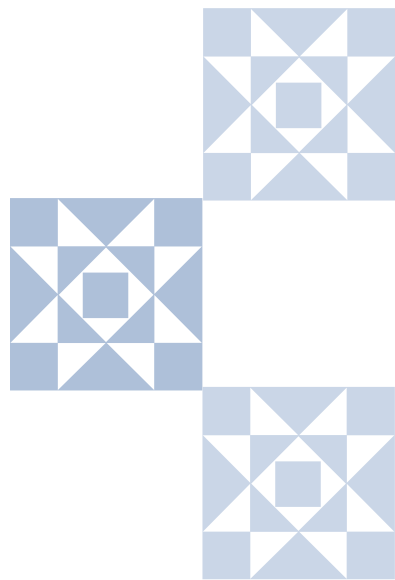
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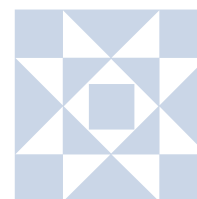




## North Carolina Rural Health Research and Policy Analysis Center

Director: Rebecca T. Slifkin, Ph.D.

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North Carolina Rural Health Research and Policy Analysis Center

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 access to health care, Medicare reimbursement policy, and rural hospitals and health care delivery organizations. Current projects include the examination of access to healthcare for young rural Medicaid beneficiaries, the impact of the Medicaid budget crisis on rural communities, the role of intensive care units in Critical Access Hospitals, and an analysis of unmet health care services for children with special health care needs in rural areas.



## Current Publications

For previous Center publications, please visit the Center's website at:  
[http://www.schsr.unc.edu/research\\_programs/rural\\_program/papers.html](http://www.schsr.unc.edu/research_programs/rural_program/papers.html)

## Working Papers

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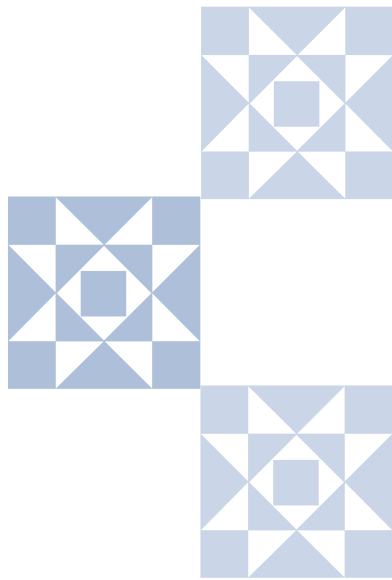
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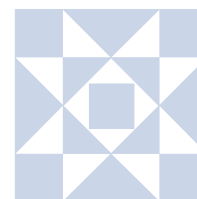




## **Rural Policy Research Institute Center for Rural Health Policy Analysis**

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RUPRI Center for Rural Health Policy Analysis

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 previous Center publications, please visit the RUPRI website at <http://www.rupri.org/>

## Reports and Policy Papers

- P2003-10. Mueller KJ & MacKinney AC. (2003). Care across the continuum: Access to health care services in rural America. <http://www.rupri.org/healthpolicy/>
- McBride TD, Andrews C & Mueller KJ. (2003). Enrollment in the Federal Employees Health Benefit Program (FEHBP): State and county level enrollment analysis. <http://www.rupri.org/healthpolicy/FEHBP/index.html>
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- PB2001-6. RUPRI Rural Health Panel. (2001). *Redesigning Medicare: Considerations for rural beneficiaries and health systems*. <http://www.rupri.org/pubs/archive/pbriefs/PB2001-6/pb2001-6/pdf>
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### 2003

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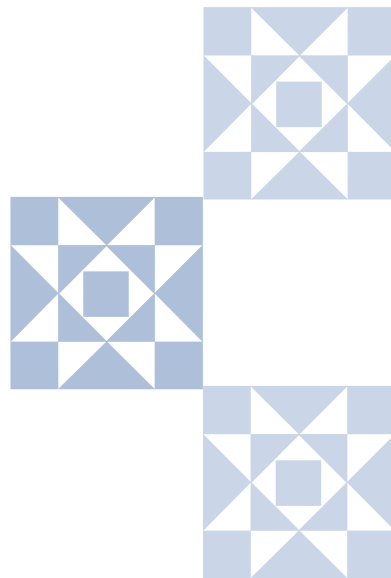
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## South Carolina Rural Health Research Center

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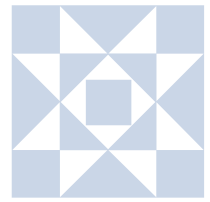
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South Carolina Rural Health Research Center

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

## Working Papers/Reports

### 2003

Bennet K, Probst JC, Moore CG & Shinogle JA. (2003). *Emergency department use by medically indigent rural residents.*

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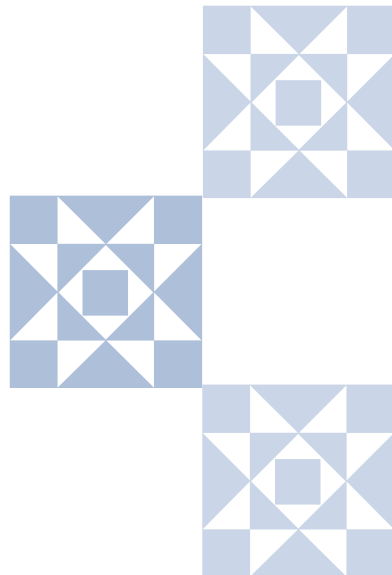
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Kim Y, Stoskopf C & Glover SH. (2001). Factors affecting total hospital charges and utilization for South Carolina inpatients with HIV/AIDS in 1994-1996. *AIDS Patient Care and STDs*, 13(5), 277-287.

Kim Y, Stoskopf C & Glover SH. (2001). Dual diagnosis: HIV and mental illness, a population-based study. *Community Mental Health Journal*, 37(6), 469-479.





## Southwest Rural Health Research Center

Director: Catherine Hawes, Ph.D.

Associate Director: Larry Gamm, Ph.D.

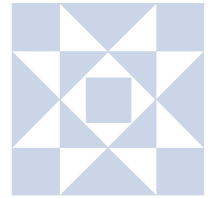
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The Southwest Rural Health Research Center (SRHRC) at the Texas A&M University System Health Science Center School of Rural Public Health is an integral part of the only school of public health with a specific focus on rural issues, the School of Rural Public Health. 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. These areas are:

- 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 previous Center publications, please visit the Center's website at <http://www.srph.tamushsc.edu/srhc>

## **Working Papers and Reports**

### ***Forthcoming***

Blakely C & Borders S. (forthcoming). *The state child health insurance program and access to medical transportation services.*

Bolin JN. (forthcoming). *Disabled and poor in rural America: Ethnic and minority populations most vulnerable.*

May M, Contreras R & Kash B. (forthcoming). *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. (forthcoming). *Chartbook: Nursing home residents in rural and urban areas.*

Phillips CD, Leyk Williams M, Hawes C & Sherman M. (forthcoming). *Nursing home staffing in rural and urban areas.*

Zuniga MA. (forthcoming). *Medication use among residents of rural assisted living facilities.*

Zuniga MA, Phillips CD, Hawes C, Cooper C & Wilson J. (forthcoming). *Inappropriate prescribing of medications for elderly assisted living residents: Results from a national sample.*

Zuniga MA, Phillips CD, Hawes C, Cooper C & Wilson, J. (forthcoming). *Drug-to-drug interactions in a national sample of elderly assisted living residents.*

## **2003**

Alexander J & Castillo G. (2003). *Injury and violence prevention in rural America.* In Gamm, LD and Hutchison, LL (Eds.). *Rural Healthy People 2010: A Companion document to Healthy People 2010.* Volume 3. <http://www.srph.tamushsc.edu/rhp2010>.

Bolin JN, Gamm LD, Zuniga MA, Berger E & Kash B. (2003). *Chronic disease management in rural areas: Patient responses and outcomes.*

Carozza S. (2003). *Breast and cervical cancer screening: Is it reaching rural and minority women?*

Gamm LD & Hutchison LL. (Eds.). (2003). *Rural Healthy People 2010: A companion document to Healthy People 2010.* Volumes 1 and 2.

Hawes C, Phillips CD, Sherman M & Munoz Y. (2003). *Assisted living in rural America*.

Hawes C. et al. (2003). *Medicaid budget cut projects: Impact on rural elderly*. Policy Paper.

Hutchison LL & Peck J. (2003). Immunizations and infectious diseases in rural areas. In LD Gamm & LL Hutchison, (Eds.), *Rural Healthy People 2010: A companion document to Healthy People 2010*. Volume 3.  
<http://www.srph.tamushsc.edu/rhp2010>

May M, Contreras R, et al. (2003). *Mujer Y Corazon: Community health workers and their organizations on the U.S. Mexico Border: An exploratory study*.

Phillips CD, Hawes C, Sherman M & Leyk Williams M. (2003). *Nursing homes in rural and urban areas, 2000*.

Zuniga MA, Bolin JN & Gamm LD. (2003). *Chronic disease management in rural areas*.

## **2002**

Gamm LD, Tai-Seale M & Stone S. (2002). *White paper: Models for meeting the mental health needs of people living in rural areas*.

Hawes C & Rushing M. (2002). *Program for all-inclusive care for the elderly (PACE): Can it serve rural areas?* PACE Policy Paper #1.

Hawes C & Rushing M. (2002). *Program for all-inclusive care for the elderly (PACE): Integrated, comprehensive, and case managed programs serving the elderly in rural areas: Are there lessons for PACE?* PACE Policy Paper #2.

## **2001**

Gamm LD, Alexander J & Petter B. (2001). *Tools and templates for rural health network development*. Report submitted to the Center for Rural Health Initiatives, Austin, Texas.

## **Other Publications**

### ***Forthcoming***

Hawes C, Phillips CD, Rose M, Holan S & Sherman M. (in press). A national survey of assisted living facilities. *The Gerontologist*.

Phillips CD & McLeroy KR. (Eds.). (in press). Rural health. *American Journal of Public Health*

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



## 2003

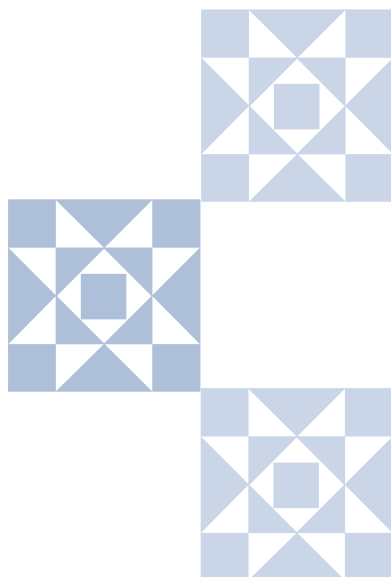
Gamm LD & Hutchison LL. (2003). Rural health priorities in America: Where you stand depends on where you sit. *Journal of Rural Health, 19*(3), 209-212.

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Gamm LD, Hutchison LL, Bellamy G & Dabney BJ. (2002). Rural Healthy People 2010: Rural health priorities and models for practice. *Journal of Rural Health, 18*(1), 9-14.

## 2001

Bellamy G. (2001). Connecting the dots: Policy, partnerships and public health. Proceedings from Bridging Rural Women's Health into the New Millennium. *Women's Health Issues, 11*(1), 30-34.





## University of Minnesota Rural Health Research Center

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The University of Minnesota Rural Health Research Center was founded in 1992 as a separate entity within the Division of Health Services Research and Policy, School of Public Health, University of Minnesota. 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 program 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

Primary areas of research include: rural health care financing (e.g., issues related to managed care, Medicare, Medicaid, and private insurance); rural systems building (e.g., issues related to networks, managed care organizations, alternative models for small rural hospitals, and health personnel); and outcomes and delivery of care in rural areas (e.g., issues related to quality of care and implications of technology diffusion).

## Current Publications

For previous Center publications, please visit the Center's website at <http://www.hsr.umn.edu/rhrc/>

## Working Papers

49. Radcliff TA, Davidson G, Theide, Call KT & Dobalian A. (2003). *Are there geographic disparities in out-of-pocket spending by Medicare beneficiaries?* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 049.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20049.pdf)
48. Casey M, Blewett L & Call KT. (2003). *The response of local health care systems in the rural midwest to a growing Latino population.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 048.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20048.pdf)
47. Wholey D, Moscovice I, Hietpas T & Holtzman J. (2003). *The environmental context of patient safety and medical errors.*
46. Casey M, Moscovice I, Virnig B & Kind S. (2003). *Models for providing hospice care in rural areas: Successes and challenges.*
45. Stensland J, Knott A, Moscovice I & Davidson G. (2003). *Rate of return on capital investments at small rural hospitals.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 045.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20045.pdf)
44. Stensland J, Davidson G & Moscovice I. (2003). *The financial effects of critical access hospital conversion.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 044.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20044.pdf)
43. Virnig B, Moscovice I, Kind S & Casey M. (2003). *Use of the hospice benefit by rural Medicare beneficiaries.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 043.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20043.pdf)
42. Knott A & Travers K. (2002). *Implementing quality assessment and performance improvement systems in rural health clinics: Clinic and state agency responses.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 042.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20042.pdf)
41. Gregg W, Knott A & Moscovice I. (2002). *Rural hospital access to capital: Issues and recommendations.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 041.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20041.pdf)
40. Stensland J, Brasure M, Moscovice I & Radcliff T. (2002). *The financial incentives for rural hospitals to expand the scope of their services.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 040.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20040.pdf)
39. Radcliff T, Brasure M, Moscovice I & Stensland J. (2002). *Understanding rural hospital bypass behavior.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 039.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20039.pdf)
38. Knott A. (2002). *Access to emergency medical services in rural areas: The supporting role of state EMS agencies.* [http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 038.pdf](http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working%20paper%20038.pdf)

37. Stensland J & Moscovice I. (2001). *Rural hospital's ability to finance inpatient, skilled nursing and home health care.*  
<http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 037.pdf>
36. Casey M, Klingner J & Moscovice I. (2001). *Access to rural pharmacy services in Minnesota, North Dakota, and South Dakota.*  
<http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 036.pdf>
35. Knott A & Christianson J. (2001). *A rural government role in Medicaid Managed Care: The development of county-based purchasing in Minnesota.*  
<http://www.hsr.umn.edu/rhrc/pdfs/wpaper/working paper 035.pdf>

## **Other Publications**

### **Monographs/Chartbooks**

19. Gregg W, Moscovice I & Lewerenz E. (2003). *Rural health networks: Evolving organizational forms and functions.*  
<http://www.hsr.umn.edu/rhrc/pdfs/monographs/Forms and Functions 2.pdf>
18. Davidson G & Moscovice I. (2003). *Rural hospitals: New millennium and new challenges.* <http://www.hsr.umn.edu/rhrc/pdfs/monographs/Rural Hospitals Chart Book Monograph 18.pdf>
17. Casey M, Moscovice I & Klingner J. (2002). *Rural managed care: Expansion or evolution?*
16. Casey M, Knott A & Moscovice I. (2001). *Medicare minus choice: How HMO withdrawals affect rural beneficiaries.*  
<http://www.hsr.umn.edu/rhrc/pdfs/monographs/Medicare Minus Choice.pdf>
15. Gregg W & Moscovice I. (2001). *Rural Health Network Development Grant Program - Monitoring report, fiscal year 2000.*

### **Articles and Book Chapters**

#### ***Forthcoming***

- Casey M, Blewett L & Call K. (in press). Providing health care to Latino immigrants: Community-based efforts in the rural Midwest. *American Journal of Public Health.*
- Virnig B, Moscovice I, Kind S & Casey M. (in press). Do rural beneficiaries have limited access to the Medicare hospice benefit? *Journal of the American Geriatric Society.*

#### **2003**

- Atherly A, Kralewski J, Johnson C & Brasure M. (2003). Developing rural primary health care service areas: An analysis of patient migration patterns. *Health Care Management Review, 28(2), 189-197.*

- Calico F, Dillard C, Moscovice I & Wakefield M. (2003). A framework and action agenda for quality improvement in rural health care. *Journal of Rural Health, 19(3)*, 226-232.
- Gregg W & Moscovice I. (2003). The evolution of rural health networks: Implications for health care managers. *Health Care Management Review, 28(2)*, 161-177.
- Moscovice I & Gregg W. (2003). Quality assurance and quality improvement strategies in rural hospitals: The initial experience of critical access hospitals. In J Kyriopoulos, (Ed.), *Improving the Performance of Health Systems*. Athens, Greece: Exandas.
- Radcliff T, Brasure M, Moscovice I & Stensland J. (2003). Understanding rural hospital bypass behavior. *Journal of Rural Health, 19(2)*, 252-259.
- Taylor P, Blewett L, Brasure M, Call KT, Larson E, Gale JA, Hagopian A, Hart LG, Hartley D, House P, James MK & Ricketts TC III. (2003). Small town health care safety nets: Report on a pilot study. *Journal of Rural Health 1(2)*, 125-134.
- 2002**
- Casey M, Klingner J & Moscovice I. (2002). Access to rural pharmacy services: Is the problem geographic access or financial access? *Journal of Rural Health, 18(3)*, 467-476.
- Casey M, Knott A & Moscovice I. (2002). Medicare minus choice: The impact of HMO withdrawals on rural Medicare beneficiaries. *Health Affairs, 21(3)*, 192-199.
- Moscovice I & Stensland J. (2002). Rural hospitals: Trends, challenges and a future research and policy analysis agenda. *Journal of Rural Health, 18(supplement)*, 197-210.
- Stensland J, Brasure M & Moscovice I. (2002). Why do rural primary care physicians sell their practices? *Journal of Rural Health, 18(1)*, 93-108.
- Stensland J & Moscovice I. (2002). Future financial viability of rural hospitals. *Health Care Financing Review, 23(4)*, 175-188.
- 2001**
- Casey M. (2001). State HMO accreditation and external quality review requirements: Implications for HMOs serving rural areas. *Journal of Rural Health, 17(1)*, 40-52.
- Casey M, Call KT & Klingner J. (2001). Are rural residents less likely to obtain recommended preventive healthcare services? *American Journal of Preventive Medicine, 21(3)*, 182-188.
- Rural Hospital Flexibility Program National Tracking Team. (2001). Rural hospital flexibility program: The tracking project reports first-year findings. *Journal of Rural Health, 17(2)*, 82-86.
- Yawn B, Mainous A, Love M & Hueston W. (2001). Do rural and urban children have comparable asthma care utilization? *Journal of Rural Health, 17(1)*, 40-52.

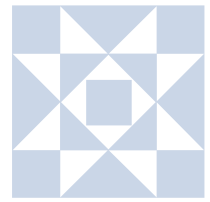


## **Walsh Center for Rural Health Analysis**

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The Walsh Center for Rural Health Analysis was established in 1996, with funding from the Federal Office of Rural Health Policy (ORHP), to conduct timely research on issues affecting health care in rural America. The Walsh Center focuses on issues such as changes in Medicare payments to rural providers, access to care for rural residents, and rural public health infrastructure. Specific projects have included analysis of the impact of DSH payment structure options on rural hospitals and an assessment of public health infrastructure in rural areas. Center staff have conducted simulations on changes in provider payment methodologies and have analyzed Medicare claims data as well as data from the National Health Interview Survey (NHIS), the National Medical Expenditure Survey (NMES), and the Medicare Current Beneficiary Survey (MCBS). Center products have addressed implications of Medicare payment policies, access to care in rural areas, emergency medical services issues, and location and practice decisions of rural physicians and other providers. Walsh Center staff have presented study findings to Congressional commissions and contributed to Department of Health and Human Services reports to Congress.



Walsh Center for Rural Health Analysis

## **Current Publications**

### **Working Papers**

#### **2003**

Franco S. (2003). *Home care in rural America.*

Hogan C. (2003). *Rural beneficiaries' projected drug coverage under three Medicare prescription drug proposals.*

Mohr PE. (2003). *The implementation of Medicare's Outpatient Prospective Payment System and specific concerns for rural hospitals.*

Mohr PE. (2003). *Survey of CAH-affiliated EMS providers.*

O'Grady M. (2003). *Designing a Medicare drug benefit: Balancing government-based and market-based approaches and implications for rural beneficiaries.*

Sutton J & Dunn T. (2003). *Strategies for achieving compliance with HIPAA privacy regulations: Case studies of rural hospitals.*

Sutton J, Franco S, Mueller CD, et al. (2003). *Rural dimensions of Medicare reimbursement for inpatient and outpatient institutional and physician services.*

#### **2002**

Stensland J, Mueller CD & Sutton JP. (2002). *An analysis of the financial conditions of health care institutions in the Appalachian Region and their economic impacts. Final Report prepared for the Appalachian Regional Commission.*

Sutton JP, Franco SJ, Mueller CD, Dunbar J & Blanchfield B. (2002). *Rural dimensions of Medicare reimbursement for inpatient and outpatient institutional and physician services.*

Stensland J, Sutton JP & Milet MM. (2002). *Are fundamental changes to Medicare's disproportionate share methodology needed?*

Mohr PE & Schoenman JA. (2002). *Federal funding for emergency medical services.*

Schoenman JA, Mohr PE, Mueller CD & Milet MM. (2002). *EMS activities under the Medicare Rural Hospital Flexibility Program. In Rural Hospital Flexibility Program Tracking Project: Year Three Report (covering fiscal year 2001-2002) (Chapter 4). Washington, DC: Federal Office of Rural Health Policy.*

Stensland J, Schoenman JA, Mueller CD & Singer A. (2002). *Capital needs of small rural hospitals.*

Stensland J & Milet MM. (2002). *Variance in the profitability of small-town rural hospitals.*



Mueller CD, Schur CL & Milet MM. (2002). *Outreach and the State Children's Health Insurance Program: Lessons from three rural states*. Final Report to the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.

O'Grady MJ, Mueller CD & Wilensky GR. (2002). *Essential research issues in rural health: The State Rural Health Directors' perspective*.

O'Grady MJ, Mueller CD & Wilensky GR. (2002). *How State Rural Health Directors obtain and use research*.

## **2001**

Blanchfield B, Sutton J, Milet MM & Franco S. (2001). *Will the outpatient prospective payment system increase the number of distressed rural hospitals in Iowa, Texas, Washington, and West Virginia?*

Mohr PE. (2001). *The quality of Medicare outpatient claims data and its implications for rural outpatient payment policy*. [http://www.projecthope.org/CHA/pdf/opt\\_qual.pdf](http://www.projecthope.org/CHA/pdf/opt_qual.pdf)

Mohr PE, Cheng CM & Mueller CD. (2001). *Establishing a fair Medicare reimbursement for low-volume ambulance providers*. <http://www.projecthope.org/CHA/pdf/WVol4no2.pdf>

Mueller CD. (2001). Physician perceptions of the Critical Access Hospital. In *Rural hospital flexibility program tracking project. Year 02 report (covering fiscal year 2000-2001)* (pp. 3H1-16). Washington, DC: Federal Office of Rural Health Policy. <http://www.rupri.org/rhfp-track/year2/index.html>

Schoenman JA, Mohr PE, Mueller CD. (2001). EMS activities under the Rural Hospital Flexibility Program. In *Rural hospital flexibility program tracking project. Year 02 report (covering fiscal year 2000-2001)* (pp. 4/1-4/35). Washington, DC: Federal Office of Rural Health Policy. <http://www.rupri.org/rhfp-track/year2/index.html>

Sutton JP, Blanchfield B, Singer A, Milet MM. (2001). *Is the rural safety net at risk? Analyses of charity and uncompensated care provided by rural hospitals in Washington, West Virginia, Texas, Iowa, and Vermont*. <http://www.projecthope.org/CHA/pdf/WVol4No1.pdf>

## **Other Publications**

### **2004**

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



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Berk ML, Schur CL, Dunbar JR, Bozzette SA & Shapiro MF. (2003). Migration among persons living with HIV. *Social Science and Medicine*, 57(6), 1091-1097.

## 2002

Moscovice I & Stensland J. (2002). Rural hospitals: Trends, challenges, and a future research and policy analysis agenda. *Journal of Rural Health*, 18(supplement), 197-210.

Schur CL, Berk ML, Dunbar JR, Shapiro MF, Cohn SE & Bozzette SA. (2002). Where to seek care: An examination of persons in rural areas with HIV/AIDS. *Journal of Rural Health*, 18(2), 337-347.

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Stensland J & Stinson T. (2002). Successful physician-hospital integration in rural areas. *Medical Care*, 40(10), 908-917.

Sutton JP, Stensland J, Zhao L & Cheng M. (2002). Achieving equity in DSH payments to rural hospitals: An assessment of financial impact of recent and proposed changes to the DSH payment formula. *Journal of Rural Health*, 18(4), 494-502.

## 2001

Blanchfield B & Sutton JP. (2001). *Rural quality of care: Issues and challenges*. Report prepared for the Medicare Payment Advisory Commission.

Cohn SE, Berk ML, Berry SH, et al. (2001). The care of HIV-infected adults in rural areas of the United States. *Journal of Acquired Immune Deficiency Syndromes*, 28(4), 385-392.

Sutton JP, Blanchfield B & Milet MM. (2001). Profitability of rural hospitals in Texas: Implications for access to charity care. *Texas Journal of Rural Health*, 19(1), 40-48.



## WWAMI Rural Health Research Center

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The Washington, Wyoming, Alaska, Montana, Idaho (WWAMI) Rural Health Research Center (RHRC) is one of six 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, which was established in 1988, is based in the Department of Family Medicine at the University of Washington School of Medicine and works closely with the WWAMI 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.

## Current Publications

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

## Working Papers

85. Doescher MP, Jackson JE & Hart LG. (forthcoming). *Prevalence and trends in Smoking: A National Rural Study.*
84. Hagopian A, Johnson KE, Fordyce MA, Blades S & Hart LG. (2003). *The role of the Rural Hospital Flexibility Program in addressing workforce issues (with a special focus on the business office).*
83. Hagopian A, Thompson MJ, Johnson KE & Lishner DM. (2003). *International medical graduates in the United States: A review of the literature 1995 to 2003.* WWAMI Center for Health Workforce Studies.
82. Benedetti TJ, Baldwin L-M, Andrilla C, Holly A & Hart LG. (2003). *The productivity of Washington State's obstetrician-gynecologist workforce: Does gender make a difference?* WWAMI Center for Health Workforce Studies.
81. Johnson KE, Skillman SM, Ellsbury KE, Thompson MJ & Hart LG. (2003). *Updating hospital reference resources in the US-associated Pacific Basin: Efforts of the Pacific Islands Continuing Clinical Education Program (PICCEP).* WWAMI Center for Health Workforce Studies.
80. Baldwin L-M, Fay MM, Larson EH, Lishner DM, Mauksch LB, Katon WJ, Walker E & Hart LG. (2003). *Modeling the mental health workforce in Washington State: Using state licensing data to examine provider supply in rural and urban areas.* WWAMI Center for Health Workforce Studies.
79. Skillman SM, Hutson T & Andrilla CHA. (2003). *Washington State hospitals: results of 2002 workforce survey.* WWAMI Center for Health Workforce Studies.
78. Baldwin L-M, et al. (forthcoming). *Access to specialty health care for rural American Indians in two states.*
77. Thompson MJ, Lynge D, Larson EH. & Tachawachira P. (forthcoming). *Characterizing the general surgery workforce in rural America.*
76. Johnson KE, Kaltenbach E, Hoogstra K, Thompson MJ, Hagopian A & Hart LG. (2003). *How international medical graduates enter U.S. graduate medical education or employment.* WWAMI Center for Health Workforce Studies.
75. *Women's reproductive health care in rural Washington: who provides care and what is their scope of practice?* (2001).

74. Chan L, Hart LG, Ricketts TC III & Beaver SK. (2003). *An analysis of Medicare's incentive payment program for physicians in health professional shortage areas.*
73. Patterson D & Skillman SM. (2002). *Health professions education in Washington State: 1996-2000 program completion statistics.* WWAMI Center for Health Workforce Studies.
72. Baldwin L-M, MacLehose RF, Hart LG, Beaver SK, Every N & Chan L. (2002). *Quality of care for acute myocardial infarction in rural and urban U.S. hospitals.*
71. House PJ. (2002). *The direct-care paraprofessional workforce providing long-term care services in the United States: Wyoming case study.* WWAMI Center for Health Workforce Studies.
70. Palazzo L, Hart LG & Skillman SM. (2002). *The impact of the changing scope of practice of NPs, CNMs, and PAs on the supply of practitioners and access to care: Oregon case study.* WWAMI Center for Health Workforce Studies.
69. Rosenblatt RA, Schneeweiss R, Hart LG, Casey S, Andrilla CHA & Chen FM. (2002). *Family medicine residency training in rural areas: How much is taking place, and is it enough to prepare a future generation of rural family physicians?*
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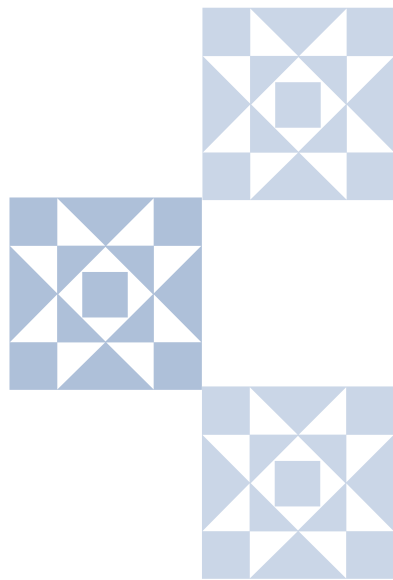
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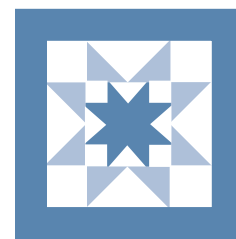


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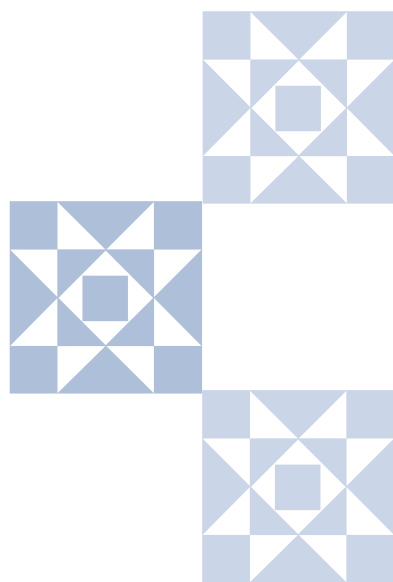
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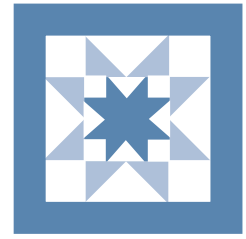
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- ❑ Database for Rural Health Research in Progress
- ❑ Establishing Evidenced-based Safety Standards for Rural Hospitals – Phase I (with University of North Dakota and the Maine Rural Health Research Center)
- ❑ An Evaluation of New Hampshire’s Rural Hospital Flexibility Program
- ❑ Maine Mental Health Evidence-Based Practice Planning Initiative
- ❑ The Role of Advanced Practice Registered Nurses in Addressing Rural Health Workforce Shortages
- ❑ Rural Hospital Flexibility Performance Monitoring Project
  - Using Program Logic Models to Monitor the Performance of State Flex Programs

### ■ **North Carolina Rural Health Research and Policy Analysis Center**

- ❑ Access to Health Care for Young Rural Medicaid Beneficiaries
- ❑ Analysis of the Cesarean Section Rates in Rural Hospitals
- ❑ Analytic Capacity to Respond to Changes in Medicare and Medicaid, Data Assistance to Policy Staff at the Federal Office of Rural Health Policy, and Production of Short Policy Briefs
- ❑ Changes in the Supply, Distribution, Workload and Reimbursement Patterns of Pharmacists in Rural Areas
- ❑ Development of a New Methodology for Dental Health Professional Shortage Area Designation
- ❑ Impact of The Medicaid Budget Crisis on Rural Communities: A 50-State Survey
- ❑ The North Carolina Rural Health Guide

- ❑ The Role of Intensive Care Units in Critical Access Hospitals
- ❑ Rural Hospital Closures, 1990-2000: Community Profiles and Economic Indicators Before and After the Event
- ❑ Rural Hospital Flexibility Performance Monitoring Project
  - Community Impact Assessment
  - Critical Access Hospital Conversion Tracking and Quarterly Email Surveys
  - Financial Performance Measures of Critical Access
- ❑ Survey and Analysis of EMS Scope of Practice and Practice Settings Impacting EMS Services in Rural America
- ❑ Unmet Needs for Health Care Services: An Analysis of Children with Special Health Care Needs in Rural Areas

### ■ RUPRI Center for Rural Health Policy Analysis

- ❑ Developing and Using a Classification Schema to Identify Sentinel Communities in the U.S.
- ❑ Do Communities Make a Difference in Access? A National Study
- ❑ Establishing a Fair Payment for Rural Physicians
- ❑ 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
- ❑ Why Are Health Care Costs Increasing and Is There a Rural Differential in National Data?

### ■ South Carolina Rural Health Research Center

- ❑ Diabetes and Hypertension in Rural Hispanics
- ❑ Effects of Alcohol Use on Educational Attainment and Employment in Rural Youth
- ❑ Impact of Medicaid Managed Care, Race/Ethnicity, and Rural/Urban Residence on Avoidable Maternity Complications: A Five-State Multi-level Analysis

- ❑ Mental Health Risk Factors, Unmet Needs and Provider Availability for Rural Children
- ❑ Rural Health Center Expansion and Recruitment Survey (with WWAMI)
- ❑ Teen Violence
- ❑ Trends in Uninsurance Among Rural Minority Children

## ■ Southwest Rural Health Research Center

- ❑ 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
- ❑ Nursing Home Quality: A Comparison Between Rural and Non-Rural Nursing Homes
- ❑ Rural Healthy People 2010 Expansion: Access to Long-Term Care and Rehabilitation Services, Educational and Community-Based Programs, and Public Health Infrastructure
- ❑ The State of Rural Health Provider Organizations and Health Professional Shortages

## ■ University of 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
- ❑ Establishing Evidence-Based Safety Standards for Rural Hospitals – Phase I (with University of North Dakota and the Maine Rural Health Research Center)
- ❑ Refining and Field Testing a Relevant Set of Quality Measures for Rural Hospitals
- ❑ Rural Hospital Flexibility Performance Monitoring Project
  - Analyzing Critical Access Hospital (CAH) Scope of Services and Organizational Linkages



- Critical Access Hospital Access To and Use of Capital
- Developing a Quality Performance Measurement System for Critical Access Hospitals
- Evaluating the Financial Impact of Critical Access Hospital Conversion Over Time

## ■ Walsh Center for Rural Health Analysis

- ❑ 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
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## ■ WWAMI Rural Health Research Center

- ❑ Access to Cancer Services for Rural Colorectal Cancer (CRC) Medicare Patients: A Multi-State Study
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- ❑ Chartbook of Family Practice Graduate Medical Education Programs in Rural America
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  - Survey of Hospital Business Offices in Washington: Staffing Issues and Barriers to Efficient Operations
  - Workforce Survey of Washington State Pharmacies

## ■ Individual Grantees:

### **Alan Allery, University of North Dakota**

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

### **Joellen B. Edwards, Ph.D., RN, East Tennessee State University**

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

### **Gerald M. Eggert, Ph.D., Monroe County Long Term Care Program, Inc.**

- A Rural Analysis of "A Randomized Controlled Trial of Primary and Consumer-Directed Care for People with Chronic Illnesses"

### **David Hartley, Ph.D., University of Southern Maine**

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

### **Tim Henderson, M.S.P.H., M.A.M.C., National Conference of State Legislatures**

- Rural Access and State Loan Repayment for Dentists

**William J. McAuley, Ph.D., Agency for Healthcare  
Research and Quality**

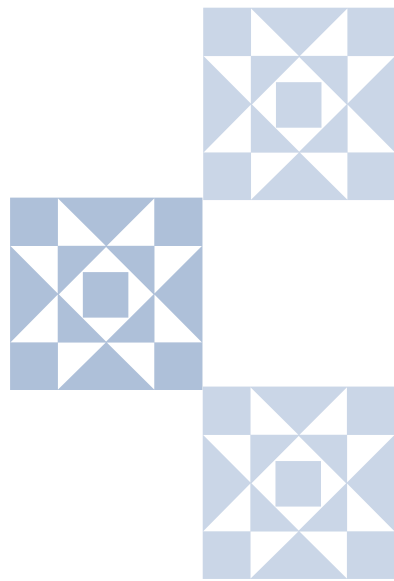
- Rural and Urban Differences in Utilization of Formal Home Care

**Patricia L. Moulton, Ph.D., University of North Dakota**

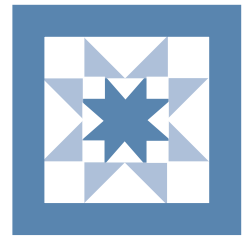
- Prevalence of Chronic Disease and the Degree of Rurality of American Indian Elders in a Nationally Representative Sample of 100 Tribes

**Jennie C. I. Tsao, Ph.D., University of Florida**

- Impact of Bioterrorism on Rural Mental Health Needs



## List of Projects by Funding Source



### ■ Agency for Healthcare Research and Quality

- ❑ Establishing Evidence-Based Safety Standards for Rural Hospitals – Phase I (with Federal Office of Rural Health Policy, HRSA)

### ■ American Cancer Society

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

### ■ Bureau of Health Professions, HRSA

#### ■ WWAMI Center for Health Workforce Studies

- ❑ Dental Hygienists in Washington: 2003 Survey
- ❑ Identification of Factors that Promote the Recruitment/Acceptance of American Indians and Alaska Natives into the Health Professions
- ❑ Survey of Hospital Business Offices in Washington: Staffing Issues and Barriers to Efficient Operations
- ❑ Workforce Survey of Washington State Pharmacies

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

- ❑ An 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
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- ❑ Impact of the Home Health PPS on Access in Rural America
- ❑ Impact of The Medicaid Budget Crisis on Rural Communities: A 50-State Survey
- ❑ Impact of Medicaid Managed Care, Race/Ethnicity, and Rural/Urban Residence on Avoidable Maternity Complications: A Five-State Multi-level Analysis

- ❑ Improvement in the Quality of Care for Acute Myocardial Infarction (AMI): Have Rural Hospitals Followed National Trends?
- ❑ 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
- ❑ Medicaid Budget Cuts: Effects on Rural Nursing Homes and Rural Elderly and Disabled
- ❑ Medicaid Budget Cuts and Long-Term Care Supplement
- ❑ Mental Health Encounters in Critical Access Hospital Emergency Rooms: A National Survey
- ❑ Mental Health Services: The Effect of Variations in State Policies
- ❑ Mental Health Risk Factors, Unmet Needs and Provider Availability for Rural Children
- ❑ 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 (AIs) and Alaska Natives (ANs)
- ❑ Nationwide Analysis of New Entrants into Medicare+Choice Demonstrations
- ❑ Native Elder Care Needs Assessment: Development of a Long Term Care Planning Tool Kit
- ❑ Nursing Home Quality: A Comparison Between Rural and Non-Rural Nursing Homes
- ❑ Options for Structuring Disproportionate Share (DSH) Payments to Account for Uncompensated Care: Impact on Rural Hospitals
- ❑ Post-Acute Care: A Rural and Urban Comparison
- ❑ Prevalence of Chronic Disease and the Degree of Rurality of American Indian Elders in a Nationally Representative Sample of 100 Tribes
- ❑ Public Health System Performance Measurement: Are Standards Applicable to Rural Communities?

- ❑ Quality of Women’s Care in Rural Health Clinics: A National Analysis
- ❑ The Role of Advanced Practice Registered Nurses in Addressing Rural Mental Health Workforce Shortages
- ❑ The Role of Intensive Care Units in Critical Access Hospitals
- ❑ Rural Access and State Loan Repayment for Dentists
- ❑ A Rural Analysis of “A Randomized Controlled Trial of Primary and Consumer-Directed Care for People with Chronic Illnesses”
- ❑ 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 Closures, 1990-2000: Community Profiles and Economic Indicators Before and After the Event
- ❑ Rural Hospital Flexibility Performance Monitoring Project
  - Analyzing Critical Access Hospital (CAH) Scope of Services and Organizational Linkages
  - Community Impact Assessment
  - Critical Access Hospital Access To and Use of Capital
  - Critical Access Hospital Conversion Tracking and Quarterly Email Surveys
  - Developing a Quality Performance Measurement System for Critical Access Hospitals
  - Evaluating the Financial Impact of Critical Access Hospital Conversion Over Time
  - Financial Performance Measures of Critical Access Hospitals
  - Using Program Logic Models to Monitor the Performance of State Flex Programs
- ❑ Rural Quality Improvement Focus on Diabetes
- ❑ Rural-Urban Commuting Area (RUCA) Development Project: Demographic Description and Frontier Enhancement

- ❑ Rural and Urban Differences in Utilization of Formal Home Care
- ❑ Rural-Urban Physician Payment Differences Across the Nation: Methodological Changes
- ❑ The State of Rural Health Provider Organizations and Health Professional Shortages
- ❑ Stay or Leave: Evidence from a Cohort of Young Rural Physicians
- ❑ Survey and Analysis of EMS Scope of Practice and Practice Settings Impacting EMS Services in Rural America
- ❑ Teen Violence
- ❑ Trends in Uninsurance Among Rural Minority Children
- ❑ Unmet Needs for Health Care Services: An Analysis of Children with Special Health Care Needs in Rural Areas
- ❑ 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

### **The National Cancer Institute**

- ❑ Colorectal Cancer Care Variation in Vulnerable Elderly

### **National Center for Health Workforce Analysis, HRSA**

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

### **National Institutes of Mental Health**

- ❑ Maine Mental Health Evidence-Based Practice Planning Initiative

### **The North Carolina Hospital Association (NCHA)**

- ❑ The North Carolina Rural Health Guide

### **The Robert Wood Johnson Foundation**

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