School of Rural Public Health ▪ Texas A&M University System Health Science Center

Southwest Rural Health Research Center

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SRHRC FY 2003 and 2004 Research Agenda for ORHP/HRSA

- **Chronic Diseases Management in Rural Areas: Examination of Medicare and Medicaid Managed Care Programs, PI: Jane Bolin, Ph.D., JD, RN**
- **Medicaid Budget Cuts: Effects on Rural Nursing Homes and Rural Elderly and Disabled, PI: Charles Phillips, Ph.D., MPH**
- **Mental Health Services: The Effect of Variations in State Policies, PI: Catherine Hawes, Ph.D.**
- **The State of Rural Health Provider Organizations and Health Professional Shortages, PI: James Alexander, Ph.D.**
- **Rural Healthy People 2010 Expansion Project: Educational and Community based Programs, Public Health Infrastructure, and Access to Long Term Care, PI: Larry Gamm, Ph.D.**

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Chronic Disease Management in Rural Areas: A Research Update

Researchers at the Southwest Rural Health Research Center, Texas A&M School of Rural Public Health, Texas A&M University System Health Science Center are in their 3rd year of research on chronic disease management [DM] in rural areas. The project is funded by the Office of Rural Health Policy/Health Resources and Services Administration.

Originally launched in the fall of 2001, the Chronic Disease Management study is a multi-year examination of six health systems serving large rural or underserved populations. The research team has conducted on-site interviews with disease management leaders, conducted a mail survey of disease management professionals, and analyzed data on health and financial outcomes associated with chronic disease management.

Key Benefits of Disease Management Include:

Improved health: The research team has observed DM being carried out in both insured and uninsured populations with important patient-level markers associated with improved health over time.

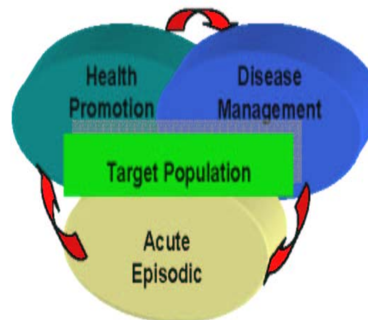

Diagram used with permission from D. Zazworsky.

Specifically, in an uninsured population, hemoglobin A1c was improved over three visits, with 79 percent of males below 8.0 and 74 percent of females below 8.0.*

*Normal range of hemoglobin A1c is 5% - 7.9%, although some practitioners will accept levels as high as 9.0.

Risk factor (RF) levels ranged from “RF 1” (Best) to “RF 4” (High Risk). Lipid levels for LDLs and blood pressure were lower in the vast majority of patients by the third visit. Patients also received regular eye exams and foot exams to look for evidence of diabetic circulation problems.

Reduced cost of care: In another rural health plan, patients enrolled in a pilot diabetes DM program were hospitalized fewer days than diabetics not enrolled in DM. Overall per-member per-year costs were 17% lower for diabetics enrolled in the pilot project.

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The Southwest Rural Health Research Center

The Southwest Rural Health Research Center is one of six rural health research centers funded by the federal Office of Rural Health Policy. The Center is part of the only school of public health with a specific focus on rural issues. Building on Texas A&M’s long history of research, education and service in rural areas, the Center was founded in 2000 and serves as a focal point for uniting various components of Texas A&M to conduct and also disseminate policy-

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Center info cont.
relevant research on critical rural health issues.

The Center draws its senior investigators from across the University and the Health Science Center, including the School of Rural Public Health, the Colleges of Medicine and Dentistry, the Program in Health Services Research, the Center for Housing and Urban Development [College of Architecture], and the Public Policy Research Institute.

The Center's investigators conduct policy-relevant research in many areas. However, the Center has three main focus areas:

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

Southwest Rural Health Research Center at the School of Rural Public Health in Bryan, Texas

Chronic Disease Management (**DM**) Project (continued from page 1)

Total in-patient hospital days were 73% less in 2001 and 60 percent less in 2002.

Financial savings for health plans: DM provides additional service elements in managing the health care of patients. Such efforts may result in substantial savings for health plans, including plans offering disease management services in largely rural areas. Rural health plans and health systems are achieving both clinical and financial benefits in employing the chronic disease management model in a variety of populations, including the uninsured, private pay, Medicaid and Medicare.

Table 1 lists comments and responses from the survey of Chronic DM professionals regarding benefits and impediments to chronic disease management.

Summary: Rural health care providers believe that DM improves the overall quality of care that patients receive and contributes to significant increases in patient satisfaction. Those systems that are successfully carrying out DM programs have "bought-in" to the team approach to patient care, believe that DM will save money for the plan in the long-run, and tend to rely more on nurses for monitoring, education, support and delivery of services. These early program success stories, some carried out in difficult populations, demonstrate that DM can be an effective approach to chronic care management and care coordination. Moreover, DM can contribute to quality of care within managed care, fee-for-service, and public systems. In sum, DM is becoming a valuable tool for controlling costs and improving patient health and overall satisfaction with health care.

Table 1: Identified Benefits and Impediments to DM

CARE-GIVING BENEFITS OF DM	IMPEDIMENTS TO PATIENT PARTICIPATION IN DM
• Supports self-care	• Attitudes (poor motivation, denial)
• Provides useful information	• Behaviors (lifestyle, diet, exercise)
• Responds to needs	• Knowledge (lack of understanding)
• Supports the organization	• Financial (drug costs, financial means)
• Promotes clinical guidelines	• Treatment (complexity, no support)
• Provides information for treatment	• Mental state (depression, nerves)
• Maintains patient loyalty	• Setting (transportation, distance or weather)

Source: Chronic Disease Management in Rural Areas Leader's Survey, 2002 (Year 1) (Zuniga, Bolin & Gamm, 2003)

For more information:
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Other projects currently in progress at the Center:

- **Quality Differences Between Rural & Non-Rural Nursing Homes. *PI: Charles Phillips, Ph.D., MPH***
- **Community Health Worker Certification. *PI: Marlynn L. May, Ph.D.***
- **Assisted Living and Medication Use. Project PI: Miguel Zuniga, Dr.PH,MD**
- **SCHIP and Medical Transportation. PI: Craig Blakely, Ph.D., MPH**
- **Chronic DM in Rural and Underserved Areas (Yr. 2): Patient Responses and Outcomes. PI: Jane Bolin, Ph.D., ,JD, RN**