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The purpose of this journal is to provide a forum for sharing ideas related to rural health. Authors are encouraged to submit relevant and current research studies as well as legislative and/or health care policy papers. Descriptions of innovative strategies in primary health care settings are especially welcome. Manuscripts will be evaluated for pertinence to the issues on a statewide basis. Response to our articles is also encouraged and will be printed under the section "Letters to the Editor."

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Letter From the Managing Editor

Lee Ann Paradise

We often hear the word "community" used in reference to modern health issues, but many of us have different ideas of what we believe defines a community. Webster's defines a community as a group of people with common interests that live in a particular area. Given this definition, most people would agree that a common interest of any community is access to quality health care. For people living in a rural environment, this can be a complex issue for a variety of reasons. Many of the articles that appear in this journal mention, at least on some level, the importance of community.

In this issue, we have two articles that discuss the value of a community coming together to deal with rural health issues. As we learn from Tommie Buchanan's article on community health intervention, the quality of prenatal care in a rural community can be greatly improved by the efforts of local volunteers. In William Lydon's article on rural coalitions, we are shown in a step-by-step manner how to build an effective coalition and assume a leadership role in our community. His article is especially important because it discusses the power of an individual's voice in local health issues. Mr. Lydon also discusses the value of volunteer service and emphasizes the importance of getting everyone to work in a fair and egalitarian way.

Sometimes strong leaders within a community can shine a spotlight on difficult problems that exist within it. Many people find the issue of domestic violence unpleasant to discuss, but sometimes one of the best ways to solve a problem is to bring it out into the open. It is not only important to identify the existence of a problem, but it is equally important to consider the possible underlying factors, such as alcoholism or drug abuse, that may lead to the problem. In Drs. Van Hightower and Gorton's article, they surveyed 820 women in a nine-state area with regard to domestic abuse and examined the role that alcohol and drug abuse played in its occurrence.

Rural health problems can vary according to community location and ethnic background. As discussed in the article by Dr. Darryl Williams and Roberta Caffrey, special efforts are sometimes required to assess community needs. A specifically designed questionnaire, given in both English and Spanish, was found to be particularly effective in the border community surveyed. Echoing the sentiment expressed by Mr. Lydon that no one knows a community better than the individuals living within it, through self-assessment community members identified the need for a school nurse and created the position. In addition, some unexpected results came from the survey regarding the prevalence of family and neighborhood violence. Consequently, community leaders plan to take the results into account when developing preventive care services.

At times the discussion of certain issues that impact the quality of health care in a rural community can be somewhat controversial. Most of the discussions involving the doctor/patient relationship focus on the need for doctors to spend more time with their patients. But what happens when some patients demand more time from their doctor than is medically required? How do we handle this delicate issue? In Dr. James Rohrer's article on high-users of rural family medicine, this issue is candidly discussed and pragmatic solutions to the problem are offered.

As our state and federal policy makers review the condition of rural health in America today, they are offering a helping hand to rural communities in a variety of ways. The Center for Rural Health Initiatives recently sponsored the Inaugural Texas Rural Health Summit, which identified several rural health issues that require attention. In their article, Sam Tessen and Jill McFarren discuss the agenda and outcome of the summit as well as the challenges that are faced by today's policy makers and rural citizens.

Policy makers and leaders within a variety of communities can take credit for the creation of the State Children's Health Insurance Program, which is often referred to as CHIP. Bryan Sperry, President of the Children's Hospital Association of Texas, explains the details of this important program that is designed to benefit our nation's children. Because each state that participates in this program must provide matching funds and submit a detailed state plan to the Health Care Financing Administration, it is to the credit of Texas that we have made a tangible commitment to the welfare of our children by participating in this valuable program.

As we can see, the term "community" is indeed much like the definition offered in Webster's dictionary. However, what really makes a community tick is the unique blend of individuals within it. When individuals come together as a team to initiate change and solve existing problems, then we see the true definition of community. Encompassing more than people with common interests, a true community is a group of people that embraces action with the intention to make positive change.

Setting a Rural Health Agenda for Texas: The Inaugural Texas Rural Health Summit

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Notes From the Field

In response to the rapid decline of access to health care due to the deterioration of the health care infrastructure in rural Texas, the Center for Rural Health Initiatives (CRHI) sponsored the Inaugural Texas Rural Health Summit in March 1999. The mission of the first-ever Summit was to bring together key state leaders, state health regulators, policy experts, and rural health professionals to collaboratively identify Texas' rural health needs and concerns. This article is a formal report on the groundwork laid by the 85 participants attending the Summit. This first step in the development of a rural health agenda for the state of Texas resulted in the identification of five rural health priorities for Texas. These five priorities, and others which were identified, significantly broaden the continuum of rural health issues of significance to rural Texans. They also provide, for the first time, a road map to guide rural health advocates as they address rural health issues and concerns.

Introduction

Health care delivery is changing dramatically all across our country. These changes have a significantly more critical impact on rural areas than on urban centers. The fragile rural health care infrastructure leaves little, if

any, room for the effects to be spread among providers as in the urban areas.

These changes have put increased emphasis on the need for rural providers, rural consumers, and their communities to work together in unprecedented ways to address the required changes. In fact, it may be only through long term collaboration and cooperation between all types of health care providers, the consumers of their health care services, and the communities that rely on that health care delivery for the economic health of the community that the future can be realistically addressed.

The first step is to initiate a process to begin identifying those issues and needs. That first step occurred in Austin on March 4, 1999. The CRHI sponsored the first-ever Rural Health Summit in the State of Texas. It brought together a diverse group of rural health care providers, representatives of rural communities and consumers, state agencies, and private sector interests to work together in a collaborative effort to identify Texas' rural health care issues and needs.

The Summit was co-sponsored by a number of key partners, including key professional associations, namely the Texas Academy of Family Physicians, Texas Academy of Physician Assistants, Texas Association of Rural Health Clinics, Texas Hospital Association, Texas Medical Association, Texas Nurses Association, Texas Organization of Rural and Community Hospitals, Texas Osteopathic Medical Association, and Texas Rural Health Association. The participation by key state leaders, Representative Patricia Gray (D-Galveston) and Dianne Delisi (R-Temple), reflected the concern for the well being of the state of Texas' rural health at the legislative level.

Critical perspectives were presented by panelists representing regulators and providers. The four panelists included: Patti Patterson, M.D., Executive Deputy Commissioner, Texas Department of Health in Austin, Maureen Milligan, Texas Health and Human Services Commission also from Austin, Ernie Parisi, Administrator, Llano Memorial Healthcare System in Llano, and Dan Dugi, M.D., Family Physician from Cuero.

The dialog that transpired at the Summit enhanced future planning, enabled issue development, increased awareness, and encouraged legislative discussions of the critical issues facing rural health care in Texas.

DETERMINATION OF ISSUES

The legislators and panelists presented their most critical issues for the Summit participants to consider and discuss. The following were the issues presented:

- Public health infrastructure.
- Access to primary care.
- EMS and Trauma system.
- Medicaid and Medicaid Managed Care.
- Legislation affecting rural areas.
- Telemedicine.
- Support for the Rural Community Health System.
- Rural Health Facility Capitol Improvement Fund.
- Increasing the ability of authorities and districts to borrow funds for the health care infrastructure.
- Extending health care coverage for rural families.
- Definitions of health professional shortage areas and medically under-served areas.
- Working with the Health Care Financing Department Regional Advisory Committee.

The audience was divided into randomly pre-assigned groups. These groups were designed to provide an interactive forum in which members could react to the initial issues proposed by the panelists and suggest additional issues. Groups were asked to rank the issues into a "top five" list. Finally, group members were to summarize the whole rural health situation through the suggestion of a slogan that could "sum up" the idea of rural health in Texas.

First, group discussions led to the determination of the "top five" rural health care issues. The following are the top five issues in order of priority as determined by the Summit participants:

1. Access to primary care.
2. Public health infrastructure.
3. Legislation affecting rural areas.
4. Rural Community Health System.
5. Definitions of Health Professional Shortage Areas and Medically Underserved Areas.

The remainder of the issues proposed by the panelists were ranked as follows:

6. Medicaid and Medicaid Managed Care.
7. Extending health care coverage for rural families.
8. Telemedicine.
9. EMS/Trauma system.
10. Hospital Capitol Improvement Fund.
11. Health Care Finance Administration Regional Advisory Committee.
12. Increasing the ability of authorities and districts to borrow funds for the health care infrastructure.

Additional grass roots issues (raised from the discussion groups)

The brainstorming of additional issues by group members resulted in a broad and diverse array of subjects, concerns, needs, and suggestions. The issues are further significant in that they represent input from a diverse cross-section of rural health leaders, practitioners, and advocates. These grass roots issues include:

- Mental health.
- Childcare.
- Services for persons with disabilities.
- Partnership of elderly and youth programs.
- Tobacco money–second round tied to healthcare.
- Dysfunctional communities–how to bring them together?
- Community development model.
- C.H.I.P. (Children's Health Insurance Plan).
- Lack of services, for example, immunizations.
- Bureaucracy (affects who provides services in rural areas, too much paperwork).
- Continuing education for providers.
- Lack of trained professionals; untrained persons providing services.
- Get real voices heard at state and federal levels.
- Organization of volunteers and using seniors with all their talents.
- Lack of attention to the broader economic and cultural issues related to determination of rural health facilities.
- Development of the planning process to address the continuum of care from prevention to tertiary care.

FINDINGS

Rural health is a very broad, varied, and under-valued topic. Yet, for the 3.1 million Texans who live in the 196 rural counties, rural health and health care is a crucial concern. Health and health care in rural Texas is also a concern for the remaining 85% of Texans who either travel from urban cities to visit rural Texas for vacation or relaxation, or travel through on the way to someplace else. Acute consideration of the status of health care in rural Texas should also be foremost to those Texans who think of rural Texas as a place to retire.

Defining health and health care requires sharp focus on primary care providers, rural hospitals, public health, emergency medical services, border health, and minority health. Too easily and too often, rural health is too narrowly or too parochially defined. The Inaugural Texas Rural Health Summit offered the opportunity for providers, consumers, agencies, advocates, and community representatives to concentrate on the broader view of rural health care and begin the process of developing a statewide rural health agenda for the entire state of Texas. Over 85 participants from across the state took this first-ever step and identified that agenda. As a result, the rural health discussion has broadened significantly.

Participants began the process with a set of twelve proposed priorities. That set was expanded through the input of Summit participants. The agenda that has emerged from the Summit suggests a significantly inclusive and broad range of priorities and issues. For example, the agenda includes both access to medical care and public health priorities, as well as legislative issues, the Rural Community Health System, and the federally proposed changes in the under-served area designation process. These specific issues represent a significant broadening of perspective, recognizing the continuum of health and health care in a larger definition of the community. Of note also is the recognition that federal level determinants are a major factor in the health of rural health care.

The list of issues in its totality serves to point out that rural health care is truly and realistically multi-dimensional. It not only includes the critical aspects of health care delivery and payor/finance but also coverage, community development, education and training, economic and cultural issues, and demographics. Rural health care must include providers, payors, government, population groups, technology, educators, and consumers at the table of discussion.

The entire list of priorities also draws critical attention to the fragility of the health and health care infrastructure in rural Texas, as well as to the results in rural areas of the constantly shifting changes in the delivery and financing of health and health care systems. The broad range of priorities also points out the wide scope of the issues, concern, and needs. In some ways, the results also brought more questions to the table, opening up new areas for discussion.

The work of the Summit participants served a second, equally critical function. The fact of the Summit itself and the results of the determination of the top issues brought rural health care and its issues to the fore-front. Rural health often suffers from the lower priority because of the proportionately lower population and proportionately fewer budget dollars. The Summit presented an opportunity for much needed attention and potential for increased awareness of rural health issues by more decision-makers and others. This education factor can make a significant difference in the state of health care in rural Texas.

CONCLUSION

The Summit is the first step in addressing the state of rural health in Texas. The initial agenda for a rural health plan is on the table and points out the need for action and direction. The agenda suggests the way for further discussion and the need for attention and resolution. One of the choices now faced by this Summit's participants, and others in rural health, is to decide how to approach addressing the top priorities identified at the Summit.

The reality facing rural communities and the availability of health and health care services to their rural citizens demands follow-up. The publication and dissemination of the Summit Proceedings is part of the first step (the first step being the Summit itself). The second step proposed as one avenue involves work groups to follow-up on agenda priorities; development of such work groups will be explored by the CRHI. The agenda and follow-up will require focus on an ongoing process, necessitating a second annual Summit to be held next year.

The first step has been taken. Words have led to discussions. Discussions have led to consensus and agreement. Now consensus must lead to action. That action can lead to results. By working together and continuing the process begun at the Inaugural Summit, rural Texans and their communities can, and will, enjoy a healthier life across rural Texas.

ADDRESSING THE PROBLEM OF UNINSURED CHILDREN: THE CHILDREN'S HEALTH INSURANCE PROGRAM

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ABSTRACT

In 1996, eleven million children nationwide were uninsured, and more than 90% of these children came from families in which at least one parent worked. Despite this country's decade-long robust economy, the availability and affordability of health insurance coverage continues to be a problem for millions of Americans. With strong bipartisan support, the United States Congress passed the State Children's Health Insurance Program (CHIP) as part of the Balanced Budget Act in the summer of 1997, which was just weeks after the regular biennial session of the 75th Texas Legislature had ended. On August 5, 1997, the President signed the Balanced Budget Act of 1997 into law.

Created to aid children in families with incomes too high to qualify for Medicaid and too low to afford private insurance, CHIP was the greatest apportionment of funds to children's health care since Medicaid was enacted. Over a 10-year period, $48 billion in federal funds would be made available in a modified block grant form to states to administer CHIP. Although Medicaid provides health insurance coverage for almost one in four children in the United States, Congress did not require states to expand Medicaid to serve more children. Instead, states were free to construct a state-designed insurance program within federal guidelines, to expand Medicaid, or to implement a combination of both. CHIP was structured to

allow individual states to set benefit levels based on certain benchmark benefit packages and to set age limits (up to age 19) and family income levels (up to 200% of the federal poverty level) for eligibility. To be eligible for CHIP, children must be uninsured, and children cannot be denied CHIP coverage because of pre-existing medical conditions.

States must provide matching funds and must submit a state plan to the Health Care Financing Administration (HCFA), which also administers the Medicaid and Medicare programs, for approval to receive federal CHIP funds.

UNINSURED CHILDREN IN TEXAS

Texas has the highest percentage of uninsured children in the United States (24%, as compared with the national average of 13%). As of 1998, 1.4 million Texas children were uninsured, and 86% of those children lived in homes where at least one parent worked.

Like many other states, Texas has attempted to address the problem of the lack of insurance coverage for children. Medicaid expansions initiated by the state in 1989 and subsequent federal mandates covered many of the poorest children in Texas. By the mid-1990's, Medicaid had grown to cover about 1.2 million children (one in four children). In 1995, the Texas Legislature enacted several pieces of legislation to reform the Medicaid program. These reforms attempted to make use of managed care to control costs while simultaneously extending coverage to additional families. However, the state's attempts to develop waivers of federal requirements to extend coverage were ultimately unsuccessful and Medicaid managed care implementation proceeded without the expansions of coverage.

In 1997, following an interim legislative study by the House Public Health Committee, the 75th Legislature established the Texas Healthy Kids Corporation (THKC), as a private corporation to provide low-cost health coverage for children. Similar to an initiative developed in Florida, THKC began its implementation efforts in the summer of 1997, at about the same time congress was creating the CHIP program. THKC has worked diligently to make insurance coverage for children available throughout the state. However, its efforts to raise private funds to subsidize coverage for low-income families not covered by Medicaid have been hampered because of uncertainty about how the state would choose to implement CHIP.

SECURING FEDERAL CHIP FUNDS FOR TEXAS

The Balanced Budget Act of 1997 allocated almost $2.5 billion in federal funds to Texas for CHIP over the first five years of the program, with $564 million available for the first year alone. Although state matching funds are required, more than 70% of the funding comes from the federal government. However, a state must get its plan approved by HCFA or it cannot receive funds, and the Texas Legislature had adjourned until January of 1999. In March 1998, with support from the state's political leaders, the Health and Human Services Commission (HHSC), the state's lead agency for Medicaid and CHIP, submitted a plan to HCFA. Under "Phase I" of CHIP the state would use Medicaid to provide coverage for teens below 100% of the Federal Poverty Level ($16, 800/year for a family of four in 1999), a group federal law requires states to cover by 2003. By speeding up coverage, the state secured federal funding for the first year of the program and created

the time to deliberate about how Phase II of CHIP would work in Texas.

THE TEXAS LEGISLATURE PREPARES

In the fall of 1997, House Speaker Pete Laney asked the Public Health Committee to examine options related to children's health in the Balance Budget Act, and in March of 1998, Lt. Governor Bob Bullock appointed a Senate Interim Committee on Children's Health Insurance. These two committees along with the House Appropriations Committee started a series of joint hearings in May 1998 to begin developing a CHIP Phase II plan.

In one of the most important events affecting the development of CHIP, Attorney General (AG) Dan Morales announced in January 1998, that a settlement had been reached in the lawsuit brought by the state of Texas against the major national tobacco companies. Morales proposed using $151 million in settlement funds to draw federal CHIP funding. In March 1998, Senate Finance Committee Chair Bill Ratliff and House Appropriations Committee Chair Rob Junell announced the resolution of tobacco settlement spending authority issues with the AG and pledged their efforts during the upcoming legislative session to use tobacco funds for CHIP.

BUILDING SUPPORT FOR CHIP

Texans have recognized that insuring children is sound social and fiscal policy for some time. The House Public Health Committee's 1996 interim study that led to the creation of Texas Healthy Kids found that insured children have easier access to preventive treatment and primary care, keeping them well, and keeping health care costs lower. Uninsured children are far more likely to delay seeking medical attention. That interim study also noted that uninsured children miss more school (with a 25% higher rate of absenteeism), which frequently means a parent is missing work and costing their employer money in lost time. Sick (and absent) children can't learn as well in school—a terrible and shortsighted investment in our future leaders.

Early in 1998, more than 40 statewide and many more local organizations signed on as members of the Texas CHIP Coalition. Formed from the Texas Maternal and Child Health Coalition, the CHIP Coalition's purpose was to educate state decision-makers and the public about CHIP and to ensure there would be consumer and provider input into the CHIP development process. The CHIP Coalition established a set of principles to help guide its advocacy efforts, which included:

- Covering as many children as possible,
- A comprehensive benefits package designed for children including preventive health services as well as any necessary care required by children with special health care needs, and
- Family-friendly administrative processes that would make it easy to enroll children and use the system.

The Coalition, with support from the March of Dimes and other member organizations, conducted a series of forums around the state to raise awareness as to how CHIP could benefit children in Texas.

A June 1998 poll conducted by Scripps Howard and requested by the Texas CHIP Coalition showed that the overwhelming majority of Texans (86%) favored using state funds to help low-income families purchase children's health insurance. [Seventy-nine percent of Republicans, 88% of Democrats,

and 84% of Independents favored this. When asked from where the money should come: Fifteen percent said the budget surplus; 24% said the tobacco settlement; 38% said a combination of these two sources; 16% said cuts from other programs; and, 7% did not know (Scripps Howard Texas Poll, 1998).]

THE LEGISLATURE ACTS

Legislature interim hearings concluded two months before the beginning of the regular session of the 76th Texas Legislature on November 10, 1998 with the adoption of final committee recommendations. The recommendations endorsed the use of a non-entitlement approach using Medicaid structures to the greatest extent possible, but with modifications to create a more effective program. The recommendations supported an aggressive outreach strategy to inform families and increase participation, a comprehensive benefits package that would meet the needs of children with special health care needs, use of managed care, sliding scale cost-sharing by families, and a simplified eligibility process.

Senator Mike Moncrief, chair of the Senate Interim Committee on CHIP, introduced SB 445 to implement the CHIP program based on the interim committee recommendations. The bill established a framework for CHIP and was passed unanimously by the Senate on March 11, 1999. House Public Health Committee Chair, Patricia Gray, sponsored the bill in the House. The House debated the bill and passed it to third reading by a 123-14 vote on April 30, 1999. Although there were differences in the House and Senate versions, it is clear that the interim committee process produced significant consensus on how CHIP should work. Differences between the House and Senate versions included:

- What eligibility level would be affordable for the state over time;
- What role the Texas Healthy Kids Corporation would play in the administration of the program;
- How future funding of the program would be handled; and
- Eligibility for legal immigrant children who are excluded from the program by federal law.

In the end, the Legislature decided to use 200% of the Federal Poverty Level ($33,600 for a family of four in 1999) for eligibility, to establish conditions under which HHSC could contract with THKC to manage the CHIP program, to give CHIP the first allocation of tobacco settlement dollars in future years, and to cover legal immigrant children using state funds.

CHIP Coalition members played an active and significant role by advocating for the program throughout the legislative process, including sponsoring a "CHIP Advocacy Day" on February 17, 1999 in which several hundred supporters from around the state came to Austin to meet legislators and legislative staff. Although there were some vocal opponents to CHIP, the bill passed both houses with overwhelming support. On May 28, 1999, Governor Bush signed SB 445 into law.

IMPLEMENTATION DECISIONS AND CHALLENGES

Significant implementation challenges now exist. Perhaps the most important challenge is to find and enroll eligible children. The state hopes to make coverage available by May 1, 2000. State estimates suggest that by 2001, CHIP Phase II will cover an average of 280,811 children per month, while Medicaid will reach

another 34,374 as a direct result of outreach. Those are impressive numbers, but a million children will still be uninsured in Texas, even with the projected full implementation of CHIP.

Outreach, Eligibility, and Enrollment

HHSC plans to contract for assistance to market the importance of health insurance coverage for children. HHSC also plans to contract with Community-Based Organizations (CBOs) or coalitions of CBOs to conduct outreach to families. Local insurance agents may also play some role in the program. The success of the marketing and community outreach efforts will be mirrored in enrollment levels, and the experience of other states and the Texas Healthy Kids Corporation can be instructive. Many states that started the CHIP implementation process earlier than Texas have failed to reach projected enrollment levels.

Barriers to successful enrollment efforts include lack of effective communication, complex eligibility requirements, and negative experiences with the Medicaid eligibility process. Communication strategies must be developed that will reach and motivate families to act. Complex, multi-page applications, excessive documentation and verification requirements, and inconvenient office hours and locations will discourage families from enrolling a healthy child in an insurance program.

Despite the promise of a simple application process for CHIP, the Medicaid eligibility process will effect the effort to reduce the number of uninsured children in Texas. Because CHIP covers children who do not have private insurance coverage and are not eligible for Medicaid, many children will be referred to Medicaid for an eligibility determination before they can be enrolled in CHIP. Medicaid eligibility requirements are more complex than those of CHIP; some would argue that the complexity is purposeful to discourage participation in the program. Of the 1.4 million uninsured children in Texas, an estimated 598,000 live in families with incomes below Medicaid eligibility.

One of the foundations of health care for children is the importance of a medical home for regular and ongoing preventative and primary care as a child grows and develops. Administrative processes of eligibility, enrollment, and disenrollment should be designed to recognize the centrality of the patient-provider relationship and the importance of avoiding unnecessary disruptions to that relationship. In a significant difference from Medicaid, SB 445 allows 12 months of continuous eligibility for CHIP. Short cycles of enrollment and disenrollment based on changes to program eligibility status are administratively costly and clinically inappropriate. Will CHIP show us a better way to serve children in a publicly funded health care program?

Finally, Texas faces critical challenges to coordinate outreach, eligibility, and enrollment processes for three programs (Medicaid, CHIP, and THKC) to avoid confusion and complications that could easily discourage families and lessen community support for providing health coverage to children.

Development of Service Delivery System

Advocates for CHIP were successful in efforts to ensure that legislation requires the benefits package to meet the needs of children, including children with special health care needs. SB 445 requires that a managed care delivery system will be used, and HHSC has initiated the process to develop contracts with managed care plans for CHIP, using HMOs in metropolitan areas and a PPO model and possibly HMOs in many rural areas.

Two recent initiatives to use managed care to provide health coverage to children have been implemented in Texas in recent years: In the Medicaid program and through the Texas Healthy Kids Corporation. More than 80% of the mandatory enrollees in Medicaid managed care are children, and THKC covers only children. Each program faces unique issues and offers lessons for CHIP implementation.

Although Medicaid managed care has demonstrated that it can provide Medicaid clients with primary care providers, numerous operational issues resulted in legislation in 1999 to suspend temporarily the roll-out of additional managed care projects in Texas until problems can be resolved. The adequacy of rates paid to managed care plans has been an emerging concern in several sites in Texas. Inadequate rates in the Medicaid programs of other states have resulted in the withdrawal of managed care plans from the program. Will CHIP premium rates be sufficient to encourage plans to participate and will rates paid to providers be sufficient to ensure children access to an appropriate array of providers? Can the right balance be found between the administrative requirements needed to ensure accountability in managed care without creating untenable complexities and administrative costs for the providers who care for children?

What role will the providers who traditionally care for children; pediatricians, family practitioners, school nurses, rural hospitals and clinics, children's hospitals, and others play in the new program? The vital role of safety-net providers in the rapidly changing world of health care was acknowledged in SB 445 requirements for plans to seek participation from traditional providers. The need for safety-net providers and for policies to support safety-net providers will continue even with aggressive enrollment of children in CHIP, given the number of uninsured children and families in Texas.

INVOLVEMENT IN CHIP DEVELOPMENT

The interim legislative study, the deliberations of legislative committees, and the operations of the Health and Human Services Commission have afforded many opportunities for public input into the design and development of the CHIP program to date. Credit should be given to legislative leaders and staff and agency officials for their willingness to engage in meaningful dialogue about CHIP and for their commitment to an inclusive policy development process. SB 445 gave clear authority to HHSC for the CHIP program. SB 445 provided a framework for the CHIP program, but left many significant design decisions to the agency.

Rural providers, advocates, and communities can be heard in the continuing process of implementing CHIP. There has been an unprecedented amount of information available through the Internet on federal CHIP policy issues, the experience of the other states, plans for the Texas Program, and activities of CHIP advocates in Texas.

To learn more about CHIP, try one of these resources:

- CHIP Coalition website: www.main.org/txchip
- HHSC website: www.hhsc.state.tx.us
- Texas Healthy Kids website: www.txhealthykids.com

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On the Border: A Community Health Intervention

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Abstract

The purpose of the community health project reported here was to evaluate the outcomes of a community health intervention located in southern New Mexico and known as the Promotoras project. Promotora is a Spanish word for promoter; in this instance, it is a culturally competent community health worker. The community health intervention was developed to provide basic health education and assist community members with access to a complicated health care system. The Promotoras interact with women and infants from several southeastern New Mexico communities to provide outreach, resource assistance, and educational interventions. The goals of the program include an increase in the percentage of women entering prenatal care in the first trimester of pregnancy and an increase in the birth weights of infants born to the Promotoras project mothers. A retrospective medical record assessment of 100 members was planned for post-delivery Promotoras patients. Overall, the Promotoras project is supported as an effective means to improve access to prenatal care and increase the birth weights of program infants.

Background

The southeastern New Mexico border area between Las Cruces, New Mexico and El

Paso, Texas presents a unique and challenging dilemma for the provision of community health care. A majority of the New Mexico population is rural and includes a large number of documented and undocumented medically indigent residents. There are significant cultural, financial, and geographical barriers to health services within the border communities. The presence of the culturally diverse population juxtaposed to serious political and social problems requires innovative use of scarce resources. The Promotoras community health intervention utilizes varied strategies to bridge Mexican-American clients with bilingual, bicultural health workers from the same community.

Within the fertile Rio Grande Valley lies Dona Aña County of New Mexico. The area is a seasonal home to large indigenous and migrant Mexican-American populations. The populations are young and poor, moving frequently as the agriculturally related employment progresses northward throughout the growing season. The median age reported in the New Mexico Selected Statistics is 26, and reflects a high fertility rate. The fertility rate is the number of live births per 1000 women 15 to 44 years of age. Dona Aña County reported 3,120 births in 1994, for a fertility rate percentage of 73.9 (1994 New Mexico Selected Health Statistics, 1996). An increased fertility rate in combination with poverty, substandard living conditions, and poor nutrition, increases the maternal and infant health risks (Sanchez-Bane, 1994).

PROMOTORAS PROJECT

The Promotoras project was developed to meet the needs of poor young migrant families. Initially, funding was provided by a Kellogg Foundation grant. Funding is now shared by the New Mexico Department of Health and La Clinica de Familia, a group of primary care clinics.

The project provides basic information on maternal and infant health subjects, breast-feeding, childbirth, reproductive health, and family planning. The Promotoras project fits within the educational and community-based categories of the "Healthy People 2000" objectives (Healthy People 2000, 1997). The intervention is consistent with numerous Healthy People 2000 listings of preventative services including screening, immunization, and counselling services offered. Objectives of the program include: (1) reduction in maternal/infant mortality and morbidity, (2) reduction in the number of low birth weight infants, (3) an increase in the number of breast-fed infants, and (4) an increase in the access to and use of first trimester prenatal care.

The Promotoras project recruited community health workers from the border communities to provide bilingual, bicultural basic health education to socially, geographically, and culturally isolated and under-served Mexican-American indigenous and migrant populations. The Promotoras were recruited by advertisement from the communities in need of the services. The requirements for consideration include the following qualities (1) bilingual, (2) literate (since there is a disparity between Mexican and American educational preparation, a high school diploma is not required), and (3) a helping heart (or basic motivation to help others).

The Promotoras curriculum was provided by the University of New Mexico. It is called "Reaching Out," a community health worker training manual. The Promotoras after recruitment are required to volunteer with the program to establish aptitude and ability to perform the program training. A training period of one year is provided for each Promotora. The program began in 1991.

Currently, there are six Promotoras serving the communities of San Miguel, Anthony, and Sunland Park, New Mexico. Most of the Promotoras are in the 30 to 40 years of age range.

The Reaching Out training program used in the Promotoras program consists of an orientation to program policies and safety procedures and is followed by sections of education on (1) communication skills, (2) community resources, (3) Prenatal Care Part I: Basics about prenatal care, (4) Prenatal Care Part II: Fetal development, labor and delivery, and postpartum care, (5) breast-feeding and nutrition, (6) substance abuse, (7) domestic violence, (8) sexuality, family planning and STDs, and (9) early childhood development. The curriculum utilizes several media for assistance with education. The Promotoras use bilingual printed materials, pictures, and videos, and access models of anatomical structures to present health-related education to the clients. The Promotoras interact with public schools, community agencies, health fairs, and many other aspects of community life in the border area.

The Promotoras are provided continued education on health subjects as they perform the community health worker role. Salary for the workers is slightly over minimum wage early on; a yearly salary raise with evaluation of performance is provided. The Promotoras are encouraged to get GEDs and continue with formal education. Several have chosen to pursue degrees in social work. Currently the Promotoras serve 457 clients with full services and approximately another 70 clients with limited services (Sapien, 1998). The Promotoras provide members of the community with culturally sensitive care, language specific education, and acculturation to a complex American health care system. Cultural sensitivity provided by indigenous community health workers allows effective communication regarding real or potential barriers to health care and identifies resistance to health care practices within diverse populations. A major barrier to health care in the New Mexico area is the undocumented status of many clients. The Promotoras serve all who request assistance without regard to documentation of citizenship. Health services may be avoided due to fear of detection, language difficulty, educational level, or literacy (Holland & Courtney, 1998). The Promotoras program provides service integration with other health care programs and providers within the community, for example, the Public Health Department, the local hospital, and primary care clinics. A similar organization of care, community case finding, community empowerment, increased access to care, and emphasis on cultural competence are included in recommendations concerning low-income women and prenatal care (Alexander & Korenbrot, 1995). Prenatal care and basic health education are particularly important to the large mobile Mexican-American population in southern New Mexico. Prenatal care, including education and medical screening, can reduce the number of costly low birth weight babies. Low birth weight babies represent a $4 billion annual national expense for health care services (Stout, 1997).

The unique contribution of the Promotoras project is the ability to identify cases within the community health worker's own community. The community health worker then develops a social connection with the client and provides effective educational and resource assistance. The community health worker intervention serves to support healthier maternal and infant pregnancy outcomes. The interaction between community members develops resources within the border communities including knowledge, acculturation, and social support

networks. The project empowers the community and adds health care resources, which are otherwise scarce and/or unapproachable to the border population. Additionally, the Promotoras project is customized to the specific cultural needs of the southern New Mexico Mexican-American population.

METHODS

A needs assessment was developed jointly with the medical, nursing, and social work leadership of the Promotoras project. Specifically the need for assessment of project outcomes was identified. The actual project outcomes would represent a measurable change in the health status of the project participants (St. Martin, 1996). The large mobile population flowing through multiple care sites represented a difficult situation for assessment outcomes. Three clinic sites, all associated with the project, were chosen for data collection. The La Familia de Clinica sites were at Sunland Park, NM, Anthony, NM, and San Miguel, NM. The project provided signed releases of information for the project participants. The information retrieved for project participants delivered during 1997 included: (1) gestational ages, (2) infant birth weights, and (3) date of entry into, and duration of, prenatal care.

DATA COLLECTION

A review of 100 clients was attempted from three clinic sites. The goals for the review were to: (1) determine the number of preterm infants, (2) establish the average birth weight and gestational age for the sample, (3) assess the number of breast-feeding mothers, and (4) calculate the level of prenatal care and gestational age at entry into prenatal care. Data collected includes maternal age and gravida information. From a review of 100 charts, 65 contained the necessary documentation, 21 were at too remote a site for clinic use, and 14 charts were not found for review or did not contain delivery information. A comparison of project data with the published Dona Aña County statistics provided the basis for revaluation of the impact of the Promotoras project intervention on sampled participants.

RESULTS

Low birth weight is considered by the state of New Mexico to be 5½ lbs/2500 gm or less at birth. Low birth weight is a risk factor in infant growth and development. The most recently published statistics from New Mexico and Dona Aña County were from the year 1994. In New Mexico in 1994, the incidence of low birth weight was 7.2% (1994 New Mexico Selected Health Statistics, 1996). Dona Aña County reported a 7.9% low birth weight in 1994. The Promotoras project sample, n= 65, reflected a mean birth weight of 7.21 lbs. with a range of 6.6 lbs. The lowest birth weight found in the sample was 4.8 lbs. and the greatest birth weight in the sample was noted as ten lbs. The percentage of low birth weight infants for the Promotora sample was 4%.

Term births are 37 to 41 weeks gestation as defined by 1994 New Mexico Selected Health Statistics (1996). Sixty-one or 94% of the project sample births were term births. The project sample did include four twin gestation infants not carried to term. The mean gestational age for the project sample, n= 69, was 37.2 weeks of gestation. In 1994, no or low level prenatal care in New Mexico residents was reported as 10.9%, that is, one out of every nine births for New Mexico had no or low prenatal care (1994 New Mexico Selected

Health Statistics, 1996). Prenatal care is a definite factor impacting maternal/infant morbidity and mortality. Dona Aña County reported no or low level prenatal care (11.8%) in 1994. In the Promotoras sample, three mothers presented for delivery with no documented prenatal care. Eight other clients entered the program in late stages of pregnancy and also with undocumented prenatal care histories. Thus, 16% of the Promotoras sample represent undocumented prenatal care information. Of the remaining project participants, 84% had documented adequate moderate to high levels of prenatal care, which is defined as greater then 20 weeks of prenatal care.

The sample maternal age information is presented in Table 1.

The average gravida/para for the sample was 3/2. The greatest gravida/para was 6/4 and the least was 1/0. The number of primiparous mothers was 12, or 18% of the sample. The number of multiparous from gravida two and gravida four was 48, or 73% of the sample. The grand multiparas numbered five and represented 7% of the total sample.

No fetal or maternal morality cases were found in the sampled group for 1997. Dona Aña County reported a 5.1% mortality rate in 1994.

Breast-feeding in the n= 65 sample at the time of delivery was documented as the choice of 85% of the mothers. No county statistics were available for comparison. Nationally, the percentage of mothers breast-feeding was noted to be 53.4% according to the 1988 National Maternal and Infant Health Survey (Kennedy & Visness, 1997).

DISCUSSION

The Promotoras project provides a needed border health service to the indigenous and migrant Mexican-American population of southern New Mexico. The established community health services refer five to ten positive pregnancy tests per day to the Promotoras program (Sapien, 1998). The Promotoras then make home visits, educate, and refer clients to appropriate care facilities and organizations. The number of referrals to the program indicates the certain need to support a community-wide pregnancy-related educational intervention. The program establishes a connection between the resources of Public Health, the Dona Aña County hospital, and the migrant primary care centers. The program provides a bridge between the isolated under-served Mexican-American population and adequate, appropriate health care services. The existence of the program creates empowerment within the community, efficient use of scarce financial

Table 1. Births by the Mother's Age in the Promotoras Sample

Age of Mother	Number of births in age range	Percentage
15 to 17	6	8.5%
18 to 19	7	10.1%
20 to 24	20	31.5%
25 to 29	16	24.7%
30 to 34	11	15.4%
35+	5	8.2%

assets, a social support and educational system for clients, health information access, and culturally acceptable care.

RECOMMENDATIONS

The following recommendations were proposed:

Goals

The goal of the Promotoras project is to increase the percentage of women receiving services. The program would flourish with strategies to increase the community outreach by the Promotoras, advertising and increasing the number of referrals through agencies. The appropriate strategies to reach greater numbers of participants would positively impact the walk-in delivery rate, and improve infant mortality and the health of neonates.

The goal of early entry into prenatal care would be supported by the peer and family support systems of the Promotoras project along with the appropriate basic health education provided. The impact of the early prenatal care would be the maintenance of healthier infants and mothers within the community.

The migrant population served by the Promotoras project is a vulnerable group due to under-education, isolation, and low income. Feasible projects that contribute to the improvement of the health status within the community require innovative care models. The documentation of outcomes for the project should be analyzed routinely and communicated to supporting organizations and funders.

Recommendations

Due to the migrant nature of the population, frequent language-specific communications should be advertised concerning the project activities, services, and associated agencies, presenting a varied entry into the project.

The changing physical environment and need for families to relocate several times during the year would support the use of a type of portable prenatal care and delivery record to be sent with the mothers. The records would improve continuity of care and allow ease of data collection for study. Currently, the Promotoras do a follow-up visit after delivery and the portable record would allow a greater number of outcomes to be measured easily with a follow-up case evaluation.

The entire population of the border states is subject to an increased risk of tuberculosis. Additional tuberculosis case findings and education would be a valuable public health tool available through the Promotoras project. Additionally, a yearly tuberculosis testing of the Promotoras personnel is advised.

The border population is in need of comprehensive research including the health behaviors, barriers to care, and ethnic/cultural issues specific to the southern international border. Access to information on the health beliefs, practices, and behaviors of the vulnerable population would assist health care providers to develop effective, acceptable, culturally sensitive services. Approximately $4 billion is spent annually for the health care services of low birth weight children (Stout, 1997).

The project supports the development of a third trimester intervention for client/family, including parenting, well child care, immunization, and family planning education. The project would routinely refer all mothers/newborns to Women's International Center (WIC) programs. The continuity of care perinatal-postnatal-to-wellness would benefit

all aspects of maternal/child health. Also the development of region-specific centers for the Rio Grande Valley would aid a mobile society to receive services easily.

The project could consider the use of trained volunteers to add to the pool of community health workers for case findings and a social support network. The project personnel and the project itself would benefit from the additional man-hours and the community's involvement.

CONCLUSION

Many of the recommendations concern the collection of data to document the outcomes of Promotoras project participants and corroborate the impact of the program on the health status of the communities. The resulting data analysis supports the development of a health intervention consistent throughout the border states. The potential positive outcomes and use of a uniform community health intervention are supported with vulnerable migrant populations. Additionally, the development of social support systems, culturally acceptable education, accessible health information, and ease of communication make the Promotoras community health worker model attractive as a community health tool. Use of the program increases access to health care and decreases barriers within a multicultural community. The model can be customized to fit the needs of any cultural group and allows significant cost savings related to poor pregnancy outcomes that are paid by public funds.

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Social Support and High-users of Rural Family Medicine

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Abstract

In this survey of rural Iowans, having more close friends and relatives was strongly associated with the odds of being a high-user of family medicine. Being satisfied with one's health insurance plan and health status also were significant. Respondents who believed that going to medical specialists is beneficial were less likely to be high-users of family medicine visits.

People who report many close friends may be sociable or they may have an underlying psycho-social problem that causes them to seek out others more often than most. Either way, demand management strategies might be fruitfully targeted at them, since their high use of family medicine visits consumes resources that less demanding patients may need.

Introduction

In a rational world, scarce medical resources would be allocated among patients in accordance with their relative need for care. In rural areas, where the time of a primary care practitioner is frequently stretched thin, failure to ration in accordance with need could have adverse consequences for those people who need care, but are not able to see a physician immediately.

When some people consume more physician time than they really need, others who need care may not be able to get it.

Therefore, studies of high-users of medical care are needed so that unnecessary demand for care can be managed. Interventions can be targeted at high-users, once we begin to understand who they are and what motivates their behavior.

The purpose of this project was to find predictors of being high-users of family medicine in rural Iowa. Specifically, we sought to determine whether social support would be related to higher levels of utilization. This question was addressed while holding constant socio-demographic, health beliefs, health care system, economic, and health status variables.

BACKGROUND

Sociological studies of medical care utilization by rural populations are common, though none have modeled the odds of being a high-user. Interestingly, each study customizes the measurement model it employs to reflect the research question at hand, most tend to measure social support in slightly different ways, and most tend to focus on special sub-populations such as the elderly. A review of nine studies of M.D. visits containing social support variables (Counte & Glandon, 1991; Strain, 1991; Van der Meer & Mackenbach, 1998; Wolinsky & Johnson, 1991; Parboosingh & Larsen, 1987; Blazer, Landeman, Fillenbaum, & Horner, 1995; Himes & Rutrough, 1994; Seccombe, 1995; McConnel & Zetzman, 1993), some of which focused on rural populations and some of which did not, revealed the following:

All of the studies included living arrangements, marital status, or social contact, but only two (Strain, 1991; Wolinsky & Johnson, 1991) included all three;

Of the six studies that included marital status, only one (Blazer, Landeman, Fillenbaum, & Horner, 1995) found it to be significant (being married reduced the number of M.D. visits);

Of the four studies that included living alone, none found it to be significant;

Of the three studies that included the number of friends or social contacts only one found statistical significance. Counte and Glandon (1991) reported that persons with no social contact also had fewer contacts with physicians;

All of the studies that used social contacts or friendships as variables assumed that more social support was better than less because it was expected to increase utilization. This is to be expected, since all of the studies were concerned with under-use of services (accessibility) rather than over-use. Yet, family physicians know that sociable patients frequently appear in their offices, often without real medical needs, and consequently they may need to be politely shunted away.

Though multi-item scales for measuring social support can be found in the literature, few surveys that seek to operationalize detailed models employ them, presumably because they are too long.

The study reported here is unique because it focuses on high-users of family medicine in a rural population. The results could have implications for demand management in circumstances where primary care resources are limited.

METHODS

A mailed survey of 1000 rural addresses was conducted in Iowa in 1998. Responses were received from 433, for a 43% response rate. Missing data reduced the sample to 407.

Subjects were asked to report how many times they had seen a family physician in the

last year. High-users were defined as persons who were above the 90th percentile (six or more visits) on this variable.

Measures of social support were the number of people in the household, being married, and the number of close relationships (friends or relatives) reported. The distribution of close friends was skewed, with about one-fourth of the respondents reporting ten or more close friends or relatives. Only 3.8% reported zero close friends. Two outliers reported 75 and 99 close friends, so the distribution was truncated at 50. The number of persons in the household also was skewed, so cases were classified as to whether there were "a lot in the house" if there were four or more persons in the household; 38.8% of the respondents had a lot in the house. Marital status was collapsed into married versus not married, since our earlier research had shown that using more detailed variations of marital status did not help to explain variations in M.D. visits (Rohrer, 1998).

We expected that those reporting more close friends would have higher utilization of family medicine than other persons. Similarly, being married and having more persons in the household were expected to be associated with greater odds of being a high-user of family medicine.

Control variables were grouped into five categories: socio-demographic, health beliefs, health care system, economic, and health status. Socio-demographic variables were as follows: living on a farm, being of German ancestry (the most common ancestry in the sample), religion (being Catholic, Lutheran, or other), being white, age, gender, and having attended college. Older persons were expected to be higher-users of family medicine as were married persons and women.

Health beliefs also were assessed. Respondents were asked about whether they believed family medicine, specialists, and surgery were beneficial, and whether each of these was worth their cost. Positive beliefs about the value of family medicine were expected to predict more intensive use of services.

Health care system variables were: having a usual source of care, not having had to wait for an appointment, perceived adequacy of the local health system, and perceived availability of physicians. Economic variables included being employed, not having had to avoid seeing a doctor due to cost, having health insurance, having prepaid health insurance (as opposed to fee-for-service), income category, and perceived adequacy of health insurance. All of these were expected to be associated with higher numbers of family medicine visits.

Health status was measured using self-rated health status, the number of nights spent in a hospital as an inpatient in the last year, and the number of visits to a specialist in the last year. Self-rated health status was broken into dummy variables representing, excellent, very good, good, fair, and poor health status. Poor health status was excluded as a comparison category.

The relationship between each categorical variable and being a high-user was tested using a chi-square. T-tests were used for continuous variables. Significant variables ($p<.1$) were included in a logistic regression analysis. Income over $75,000 was left out as a comparison category, as was poor health.

RESULTS

Descriptive statistics, stratified by whether or not the subject was a high-user of family medicine, are shown in Table 1. Over 65% of the respondents were married. Only 27% of the high-users had a lot of people in the household, in comparison to 40% of the normal users. High-users reported an average

of 12 friends, whereas normal users only reported seven.

About 10% of the respondents lived on a farm. The proportions being of German ancestry, Catholic, or Lutheran were about 0.45, 0.19 and 0.17, respectively. Other religious groups were too rare to include as variables. Almost all subjects were white. The average age was 54 years. About half the sample was male and had attended college. Age was the socio-demographic variable that differed significantly between high-users and normals.

Most respondents believed that family physicians and specialists were beneficial (60% to 80%) and most believed they were worth the cost (49% to 55%). High-users were less likely to say that speciality medicine is beneficial (59.2% vs 72.7%).

Almost all respondents had a usual source of care (over 85%). About one-third believed a shortage of family physicians existed in their counties and almost half perceived a shortage of specialists. About 15% had waited more than three days for an appointment. Almost half believed that their local health care systems were very good or excellent.

About 60% were employed. Less than 16% had avoided using medical care due to its cost, and less than 7% were uninsured. Less

Table 1a. Relationships Between Predictor Variables and Being Classified as High-users of Family Medicine, Rural Iowans (1998).

	Not	High-User
Social Support		
Married (%yes)	69.27	65.31
Lot in House (%yes)	40.36	26.53*
Friends (mean)	7.35	11.63***
Socio-demographic		
Lives on farm (%yes)	10.68	10.20
German (%yes)	45.31	44.90
Lutheran (%yes)	19.5	14.29
Catholic (%yes)	20.05	18.37
White (%yes)	94.27	95.92
Male (%yes)	51.30	46.94
College (%yes)	52.34	44.90
Age (mean)	53.08	61.04***
Health Beliefs		
Family medicine is beneficial (%yes)	80.21	79.59
Specialty medicine is beneficial (%yes)	72.66	59.18*
Surgery is beneficial (%yes)	69.27	59.18
Family medicine worth cost (%yes)	54.43	55.10
Specialty medicine worth cost (%yes)	54.69	61.22
Surgery worth cost (%yes)	53.39	48.98

* $p<.10$, ** $p<.05$, *** $p<.01$

Table 1b. Relationships Between Predictor Variables and Being Classified as High-users of Family Medicine, Rural Iowans (1998).

	Not	High-User
Health Care System		
Usual source of care (%yes)	89.58	85.71
Shortage of family M.D.s (%yes)	32.03	32.65
Shortage of specialists (%yes)	46.35	46.94
Appointment wait (%yes)	12.50	18.37
Excellent local health system (%yes)	15.89	10.20
Very good local health system (%yes)	31.77	36.73
Good local health system (%yes)	36.46	34.69
Economic		
Employed (%yes)	61.98	36.73***
Avoided care due to cost (%yes)	15.10	10.20
No insurance (%yes)	6.77	4.08
Prepaid rather than FFS (%yes)	22.14	32.65
Income under 20,000 (%yes)	15.63	30.61***
Income 20-35,00 (%yes)	13.80	16.33
Income 35-75,00 (%yes)	54.43	32.65***
Insurance forms never problem (%yes)	62.50	59.18
Insurance best/2nd best (%yes)	51.82	67.35**
Insurance never bureaucratic (%yes)	52.86	57.14
Health Status		
Excellent health (%yes)	12.24	6.12
Very good health (%yes)	41.67	18.37***
Good health (%yes)	36.72	42.86
Fair health (%yes)	8.33	20.41***
Number of nights in hospital (mean)	0.26	1.29***
Number of specialist visits (mean)	1.34	5.14***

* p<.10, ** p<.05, *** p<.01

than one-third had pre-paid (as opposed to fee-for-service) health insurance. Most people's incomes fell between $35,000 and $75,000. About half perceived their insurance plans to be either best possible or second best and a similar percentage said their insurance was never bureaucratic and never a problem. High-users had lower incomes and were more likely to say that their insurance was best or second best.

Over 50% of the respondents described their health as excellent or very good. High-users were less likely to say their health was very good or excellent. The average number of nights spent in the hospital in the last year was 1.29 for high-users and only 0.26 for normal users.

Logistic regression analysis was used to test the significance of social support while controlling for the effects of other variables.

Only three variables were significant at the 0.05 level: the number of close friends, health status, and the number of visits to specialists. Increasing the number of close friends by one person predicted an increase in the odds of being a high-user by 10%. Increasing the number of visits to specialists by one predicted an increase in the odds of being a high-user of family medicine by over 30%. Believing that specialists are beneficial and rating ones health insurance as best or second best were marginally significant ($p<.10$). Persons who believed specialists were very beneficial were only 44% as likely to be high-users of family medicine. Believing that they had very good insurance was associated with a doubling of the odds of being a high-user.

DISCUSSION

The findings of this study should be treated with caution, since less than 50% of the persons sampled responded to the survey. This increases the risk of selection bias. However, the response rate achieved here is typical of many such studies. Furthermore, the sample has a similar age distribution to that of the area sampled (rural Iowa), except that fewer adults under 25 and more persons over 65 responded to our survey. Therefore, our results should not be generalized to young adults. Another limitation is the reliance on a single item measuring high social contact. Future research should address this with multiple items. In addition, examination of the root causes of high social contact is warranted. These could lie in several different personality characteristics, each of which might affect primary care visits differently, and could require different types of therapeutic interventions.

Interestingly, financial access was not found to be important, whether it was measured by lacking health insurance coverage or by reports of avoiding medical visits due to cost. This is not too surprising, since less than 10% of the Iowa population lacks health insurance and it is a relatively wealthy state. Accordingly, the results may not be generalizable to other, dissimilar states.

Since medical resources are limited in rural areas, the family physician's time should be allocated in accordance with medical need. People with impaired health status would be expected to see their doctors more often. People who just need reassurance could be diverted toward less expensive providers.

However, we know that this is not always how it works. Many of the patients a family practitioner sees on any given day are primarily in his or her office for psycho-social reasons, rather than medical reasons (Cummings, 1997). These people may have genuine medical symptoms, but their illnesses may be caused by poor coping skills, personality disorders, or social circumstances. And, of course, in some patients the symptoms are imaginary.

People who report having many close friends may at first appear to be happy and friendly types who are highly social. However, they also could be needy individuals who frequently seek social interaction for psychological reasons. Whether they are friendly people, anxious people needing reassurance, or lonely people does not change the fact that in many rural communities the family physician's time is too valuable to consume multiple visits with friendly chats.

Having documented the fact that "high-socials" are likely to be high-users of family medicine, the question becomes: what can be done about it? Several suggestions come to mind. First, if a practice is not over-burdened, then the physician could function as counselor as well as medical provider. This would be

good for achieving patient satisfaction and high market share. However, it is an expensive use of the physician's time and may require some additional training in psychological assessment and psychosomatic medicine. A variation on this strategy is for the physician to make the psychosomatic diagnosis, but then refer the patient to a mental health professional in private practice in the community.

When the practice is busy, investment in ancillary personnel who can determine the psycho-social reasons underlying the high number of medical visits some people demand, and provide counseling to the "high-socials," may be a sound strategy. Caution would have to be exercised to assure that the non-medical staff salaries do not exceed the revenue obtainable from billable services. This might mean only part-time personnel can be supported in many practices. Given the shortage of mental health professionals in rural areas, finding qualified individuals who are willing to work part-time may be difficult.

A third option is to make use of a consulting model, in which a mental health professional provides telephone consultation to family practitioners on an as-needed basis, rotates through a dispersed group of practices on a scheduled basis to provide on-site counseling, and, perhaps, provides diagnostic assessment and follow-ups via telemedicine.

All three of these options depend on the availability of instrumentation for use by the family physician that permits brief and valid assessment of the psycho-social factors that may be driving the high-user of medical care. Personality, dysfunctional coping strategies, stress, hostility, depression, and other hidden determinants of demand must be identified. Research is needed to expand the repertoire of tools available for efficient assessment by rural primary care providers, who may lack the support staff sometimes found in larger, urban practices.

CONCLUSIONS

While many of us would like to spend more time talking to our physicians, if such interactions take away time from patients who have unaddressed medical problems then they should be limited. In today's parlance, this is called demand management or "decision improvement" (MacStravic & Montrose, 1998). Lonely people and patients who need psychological help are more appropriately served by non-medical providers when the physician's time is limited.

Rural family physicians spend much of their time dealing with non-biological issues. The ability to detect psycho-social complications is part of being a good diagnostician. On the other hand, consumption of scarce clinic hours dealing with patients who mainly just want attention is wasteful, when other patients with more urgent needs are in the waiting room. Similarly, patients whose underlying problem is psychological could be referred elsewhere, if they can be expeditiously identified and if mental health professionals are available.

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COMMUNITY HEALTH IMPROVEMENT COALITIONS

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ABSTRACT

Citizen associations, or coalitions, were first observed by Alexis DeTocqueville on his epic journey to the United States in 1831. He noted in his writings that much of the work of American democracy was done by coalitions. As rural health care professionals, you may find yourself in a leadership role in a local health improvement coalition. This article is intended as a guide for you so that you will be better prepared for a leadership role. As a coalition develops, you will need to create a vision, assess the community's assets and its needs, determine priorities, develop goals and objectives, and take action to achieve the goals. Organization, planning, and laying a foundation are paramount for a coalition to be successful.

INTRODUCTION

As a variety of rural health care professionals become involved in their communities by volunteering with health improvement coalitions, it may become necessary to know something about coalitions and how they work. This is especially important if you are a rural health professional because you may find yourself in a leadership role with a community health improvement coalition.

Successful coalition development involves several basic steps. First, it is important to know what a coalition is and the

importance of the internal work of coalition development—laying the foundation. Also, it is important to understand how coalitions can help improve community life.

Although some established coalitions currently exist, there are many emerging coalitions looking for their niches. As a leader with a coalition, you could be instrumental in helping a new coalition develop into a sustained organization that works to improve the health of your community.

COALITIONS AND DEMOCRACY

Coalitions are not new to the American scene. They were observed in action in 1831 by Alexis DeTocqueville, a French nobleman and political scientist, who came to the United States to, "appraise the meaning and actual functioning of democracy in order to understand how it might serve to supplant the outworn aristocratic regime in Europe (DeTocqueville, 1945)." DeTocqueville observed many "associations" during his visit. What he called associations, we know as coalitions today. He wrote in his memoir, "The health of a democratic society may be measured by the quality of functions performed by private citizens (DeTocqueville, 1945)."

He found it remarkable that Americans did so much of the work of democracy in local citizen associations. He further observed that: "Americans of all ages, all conditions, and all dispositions, constantly form associations. ...The Americans make associations to give entertainment, to found seminaries, to build inns, to construct churches, to diffuse books, to send missionaries to the antipodes; they found in this manner hospitals, prisons, or schools. ...Wherever, at the head of some new undertaking, you see the government in France or a man of rank in England, in the United States you will be sure to find an association. ...Is this the result of accident? Or is there in reality any necessary connection between the principle of association and that of equality (DeTocqueville, 1945)?"

Again, DeTocqueville put his finger on the pulse of something unique to the American democracy—the notion of equality and that we did not rely on aristocracy to condescend their beneficence to achieve improvements in community conditions. Americans formed coalitions to improve community conditions in the past and we still do that today.

Webster's defines a coalition as a "temporary alliance of distinct parties, persons, or states for joint action." A working, rural Texas definition of a coalition could also be stated as follows: A coalition is a group of concerned citizens who have organized themselves together to affect positive change to improve community life. There are many examples of national, regional, and state coalitions available on the Internet. Most of the coalitions to be found on the Internet are for entertainment, but there are many with more serious advocations. One such site is the Coalition of Essential Schools that boasts a growing network of over 1,000 schools and 24 regional centers that coaches schools through systematic change. Their website states that they have a national vision with a commitment to local implementation (Coalition of Essential Schools, 1999). Other national coalitions include the American Coalition for Fathers and Children, the Coalition for Consumer Health and Safety, and the Family Resource Coalition of America. There are also regional coalitions such as the I-95 Corridor Coalition and the Mid America Assistance Coalition. On the state level there seem to be more coalitions such as the Texas Home School Coalition, the Recycling Coalition of Texas, the Tennessee Literacy Coalition, the New York State Citizen's Coalition for Chil-

dren, Inc., and the California Coalition of Nurse Practitioners. As you can see from this list, coalitions are formed either around an issue, such as consumer safety, literacy, commerce, or children; a professional group, such as nurse practitioners; or around a population or ethnic/racial group.

As DeTocqueville pointed out, coalitions are very important to the success of democracy and much of our political process begins with the advocacy efforts of coalitions. Even at the local level in our rural communities, coalitions are effective vehicles for improving community life.

ORGANIZATION AND PLANNING

What makes coalitions successful? Many people would say, "vision." Vision is very important to the success of a coalition, but more importantly what makes a coalition successful is organization. A disorganized coalition with great vision will accomplish nothing or very little. On the other hand, a well-organized coalition with a little vision can be very successful.

Customarily, the planning process is linear and always starts with a vision statement, then moves into assessment, priority setting, developing goals and objectives, planning, delegating, and then action. This is an ideal process, but often people start the process somewhere in the middle. Thus, the process is not linear, but circular in nature. Community coalitions usually begin with stating goals and objectives, then move into planning and then to action. It's not necessarily bad to move in this progression, it just takes longer for the coalition to progress from goals to action and then go back to develop a vision and finally assess and revise their goals. Often, when coalitions develop from goals to action and skip vision, assessment, and priority setting, when they get to the action step, the members realize they need more people to be involved to achieve the goals, which leads to a recruitment campaign. It is at this juncture that a coalition realizes it needs a vision and mission to be able to answer the question, "What does the coalition do?" At this point, a coalition can collapse from frustration.

As a potential leader in a coalition, you need to be aware of how the process works so you can help the coalition members appreciate why it is better to start the process with a vision, and you can help the coalition stay on track through the process. An excellent resource for you to use in your leadership role is the book, "Building Communities from the Inside Out," by John Kretzman and John McKnight (1993).

A clear vision for the coalition is critical to recruiting new members and obtaining financial support. In their book, Kretzman and McKnight (1993) describe six steps to "serious" community planning. The authors define "serious" as a twenty-year commitment to change. The six steps are:

1. Set the table: Bring together the local associations and local institutions to begin developing a coalition. The difference between an association and an institution is that an association is organized by consent, and an institution is part of a system organized to control resources. Both must be represented if a coalition is to be successful.

2. Build a vision: A vision tells others who you are, what you are about, where you are going, and when you expect to get there. Visioning doesn't always happen at the beginning of the development process. Community coalitions are anxious to get to work and often jump into goals and

objectives right away. As a leader in a coalition, you may have to let this happen and wait until someone asks the question, "Where are we going with this plan?" This is the point where visioning will be meaningful for the coalition because they will be ready to connect their goals, objectives, and action to a vision for the future of the community.

3. Define goals and objectives: Goals need to be clearly defined, attainable, and measurable. The difference between vision, goals, and objectives is as follows: Vision tells others who you are, what you are about, and where you are going. Goals tell you how you are going to get there. Objectives are the steps to achieving a goal.

4. Assess the community's assets: Most assessments survey only the community's needs and shortcomings. You need to look at the assets the community has as well; otherwise, the assessment is only another long list of problems that becomes insurmountable and overwhelming, eventually discouraging anyone from working on solutions.

5. Combine the forces of your local associations and the local institutions: Only by combining the resources of these two forces, local associations and local institutions, can a coalition access all the potential resources in the community to address the priorities it has identified.

6. Draw in outside help: This last step in the process is where the coalition would seek grant funds for supporting projects. Many coalitions make the mistake of jumping to this step right away before they have taken the other steps that are crucial to their development and establishment. Only after a coalition is well organized, has a plan that is based on the results of a community assessment, has identified its priorities, and has clearly defined a set of achievable goals, should a coalition seek grant funding.

FOCUS ON VISION AND GOALS

As with all groups, coalitions have their problems. To help you surmount these problems, the two most important things you can do as a coalition leader are focus on the vision and be patient. People become involved in coalitions and don't know what they are getting into. You might hear some members say, "I'm a doer, give me something to do." Or you might hear, "All this sitting around and talking about the future and planning doesn't do any good." To help prevent this dissatisfaction from happening, when recruiting your members, you should recruit for specific jobs the coalition needs. If you need someone to do public relations, you should recruit someone with the skills to do public relations. If you need someone to organize a Habitat for Humanity building project, then you need to recruit someone with the necessary skills. This requires that the coalition leadership list out the skills necessary for each job that is related to a goal so when you are recruiting new members, you can immediately give them something to do.

Most often, when coalitions begin forming, they are heavy with "agency-type" people, who are from local institutions and usually represent the institution's interests on the coalition. There are often too many agency and medical types, and not enough ordinary people involved in community coalitions. You need to bring in enough mechanics, electricians, and plumbers, for example, to balance out the medical or human service agency types that might be in the coalition. Non-medical types can give refreshing insights to community issues and

problem solving that would otherwise be missed.

Some members will have unrealistic expectations of what the coalition should be doing. This can drive a wedge through the membership and cause division. Again, it begins with the recruiting process. As you bring in new members, recruit them for specific purposes and make sure they clearly understand the coalition's vision and goals. Also, with a large representation of agencies on a coalition, the members can begin to push their agency's agenda, which can prevent cooperation between agencies and individuals on the coalition. This is another reason to balance agency membership with more non-agency types.

As a leader in a community coalition, you may often find yourself resolving personality conflicts. It could be said that the difference between a leader and a manager is that a leader manages relationships, and a manager manages tasks. If you find yourself in a leadership role, you will be managing relationships between coalition members and between the coalition and other organizations.

Sometimes, coalitions might look for a "quick fix" to a problem and not take the time to develop a vision, set priorities, develop goals and objectives, and recruit new members. You can help curb the "quick fix" response by helping coalition members stay focused on the vision and working on accomplishing the coalition's goals.

LAYING THE FOUNDATION

In order for a coalition to become established, the members must address the internal work of laying the foundation. Coalitions don't just happen; they grow. They begin with a few people, a common idea, and a place to meet. A coalition will grow from this seed only if new members are actively sought and recruited to join in the effort. Recruiting membership is a continuous activity of any successful coalition. The worst thing that can happen to a coalition is that its members become burned-out from doing all the work, all the time. This usually happens because the group did not actively recruit new members. With new members come additional skills, resources, and an extension of the coalition's ability to do its work. For a coalition to be strong and active, recruiting should be a constant activity rather than an annual campaign. Coalitions that do not constantly and actively recruit new members become clubs for a select few who will eventually become disheartened and burned-out.

When recruiting new members, the first question someone will ask is: "What does your coalition do?" All too often, we assume that the name of the coalition says it all. Everyone in the coalition should be able to answer this question without hesitation. All the members of the coalition need to have a clear sense of its vision. Also, the members should be able to clearly articulate the goals of the coalition as well as give examples of either the work the coalition has already accomplished or plans to do in the very near future.

RECIPE FOR SUCCESS

Once a coalition has started to organize, there is still much internal work that needs to be accomplished to establish the coalition. Here are some recommendations for successful coalition development—a short recipe for success to help a coalition become established:

1. Meet at the same time, same day, and same location each month: A roving meeting is like a moving target—people will lose interest if they can not fix on the

target. Evenings are better for coalition volunteers who can not get away during the day. Not everyone in the coalition will be able to meet during the day over the lunch hour. If the coalition is going to be truly representative of the whole community, then the "agency types" need to be willing to meet in the evening to accommodate the business owners, major employ ers, and citizen groups.

2. Meet in a location conducive to meetings and training: The location should also be neutral and not be at a coalition member's agency or organization. If the coalition is hosted by one of its member agencies, then that agency is placed in a position of control over coalition activities. Meetings should not be conducted in anyone's home. Otherwise, they become social events. The local bank or public library might have a meeting room available in the evening.

3. Expand the coalition membership: The coalition should include members from the local associations and local institutions. Associations are groups such as the Chamber of Commerce, Lions Club, Kiwanis Club, Parent/Teacher Association, 4H, or Scouts. Institutions are the governmental organizations, the school district, colleges, hospitals, clinics, banks, utility co-ops, police, and elected offices such as city council, mayor, county commissioners, and county judges. Local associations are strong with human resources, and local institutions are strong with physical resources. To be effective and become firmly established as a forum for community planning and improvement, a coalition needs to have a balance of representation of local institutions and local associations.

4. Use Rules of Order, elect officers, keep meeting minutes, and maintain files: It is imperative to begin the process of applying for 501c (3) status. Officers should include a chairman, vice chairman, secretary, treasurer, parliamentarian, member-at-large, and possibly an ex-officio member. Robert's Rules of Order or any other book of order will explain the officers needed and their respective roles. The secretary is the one officer usually responsible for keeping the meeting minutes. Use a standard minute format and distribute the minutes to the members for review and acceptance at each meeting. Maintain files of meeting minutes, all incoming and outgoing correspondence, bills, receipts, and accounts.

5. Establish standing committees: Much of the work of a coalition is accomplished by smaller groups of coalition members in committees. Here are a few examples of basic standing committees:

a) Executive committee: This committee is composed of the officers of the coalition: chairman, vice chairman, secretary, treasurer, parliamentarian, member-at-large, and ex-officio member. This committee oversees the operations of the coalition, makes financial recommendations, and plans the agenda for the coalition's regular meetings.

b) Planning committee: Often the largest and most diverse group, this committee is responsible for the development and implementation of the community assessment process. They use the assessment results to develop a community health improvement plan. Once the assessment is completed, this committee could function as an advisory committee and advise the larger coalition on issues pertaining to implementing community improvement and its impact.

c) Membership committee: Generally this committee's primary functions include the recruitment and training of new members. This committee should develop a recruitment plan that clearly outlines an orientation process for new members.

d) Development committee: This committee will plan, organize, and conduct fund-raising events as well as identify private and public sources of grant funding to finance the community improvement goals of the coalition. This committee might also write grant proposals to request funding from private and public sources.

e) Public relations committee: This committee will write newspaper articles about the activities of the coalition. It will be important for these members to work with the local media to promote the work of the coalition.

f) Education committee: Based on priorities identified from the assessment process, this committee will develop a plan for promoting health to adults and children in the community. To support the plan, they will need to obtain or develop educational materials to promote health, healthy living, and to improve the health of the community.

6. Develop vision and goals: The coalition needs to develop a vision of a healthier community and goals for achieving that vision. They do not have to be elaborate, but they must be achieved through consensus of the coalition members and derived from a community assessment process. The vision and goals are essential in helping the coalition develop and maintain a unified focus and sense of purpose.

7. Rent a post office box: Use a post office box address for all coalition correspondence. The secretary or treasurer should be the coalition member responsible for obtaining mail and distributing information to the coalition members.

8. Create and buy letterhead and stationary: This will help the coalition begin establishing an identity in the community and will confirm the unity among the coalition members. It is very confusing to people when a coalition uses the letterhead of one of its member agencies, which may cause the coalition to lose potential financial support and members as a result.

9. Keep a history book: This is a fun project for the community youth who want to be involved in the coalition. They can take pictures of the events of the coalition, keep photo albums, collect stories from coalition members about the events, and save the newspaper articles that are printed about the coalition.

10. Begin the incorporation process: After the coalition has accomplished some of these preliminary steps, then they can begin the process of drafting the Articles of Incorporation and Bylaws. For information, contact the Office of the Texas Secretary of State. You can obtain the booklet, Tax-Exempt Status for Your Organization (Publication 557) (Cat. No. 46573C) from the United States Department of the Treasury, Internal Revenue Service by writing to this address: Central Area Distribution Center, P.O. Box 8903, Bloomington, IL 61702-8903.

Listed below are some suggested books and training videos that will be helpful. As you become involved with a community coalition, remember the words of Mark Twain, who said, "Always do right. It will please some and astound the rest."

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TRAINING VIDEOS

"Accessing the Media". ACTA Publications, Chicago, IL. (800) 397-2282.

"Recruiting New Members". ACTA Publications, Chicago, IL. (800) 397-2282.

"Running Good Meetings". ACTA Publications, Chicago, IL. (800) 397-2282.

"Mobilizing Community Assets". ACTA Publications, Chicago, IL. (800) 397-2282.

Community Needs Assessment as a Tool for Rural Health Planning

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Abstract

Concerns about the health care needs of rural populations have increased in recent years, but these needs have not been clearly described. Such descriptions are difficult because health care resources and requirements are likely to be different in every community. They also probably vary according to the geographic location of the community. In order to assess the health care requirements of a community of mixed heritage located in the border region of Texas, a bilingual assessment of community needs was undertaken. This survey demonstrated a number of demographic and medical factors that would influence community planning for health matters. The usefulness of the survey to local government officials was reflected in community actions taken as a result of the findings from the survey. In addition, unanticipated information was identified concerning the immunization status of preschool children and community anxieties about such issues as family violence and drug use. Systematic use of such community-based needs assessment surveys may be a useful strategy in the development of comprehensive health care programs for rural communities and regionalized health care networks.

Introduction

Even though concern for the health care needs of rural Americans has become an issue

at both the state and national levels, there is not a clear description of these needs. For example, some authorities have cited the attrition and aging of the rural physician population and the closure of rural hospitals as evidence for the loss of health care resources for rural communities. At the same time, others have argued that advances in transportation and medical technology have made rural health care facilities obsolete. Similar debates occur with regard to a catalog of putative rural health care needs. In these changing times, such opposing views need to be evaluated, and a rational analysis must be made. It is likely that the needs of an individual community represent a unique balance of opposing points of view. The scope of health care in each rural area must also be defined more clearly. Thus, it is certain that in order to develop an effective strategy for the provision of essential health care services to rural populations, an assessment of needs is a required first step.

The purpose of this report is to describe the development and application of a community health survey as a means to assess the health needs of a selected rural border community. Review of the survey findings have permitted the community to determine priorities for planning preventive health care programs and to identify specific needs for health care promotion, disease prevention, and treatment. Such priorities have suggested the need to develop referral programs that would promote the quality of life for all persons in the community.

MATERIALS AND METHODS

Survey Sample

The selection of a representative community for study was based upon a number of criteria including: population size comparable to other communities in the area, economy based upon agriculture, representative ethnic diversity, location within the region considered to be the "border," and presence of identifiable health care resources. In addition, community involvement was established through discussions with community leaders to make certain of their willingness to participate in the process.

The selected community was located in a "frontier county," for example, a county with a population density of less than six persons per square mile. The population of the community was 2,274 in the 1990 census, and represented a population of Hispanic and Anglo ethnic groups that was similar to that of the region at large. Accordingly, a survey with block design was developed to provide a statistically valid sample based upon ethnicity, gender, age, and household composition derived from census data. Households were selected throughout the community to provide population blocks that were representative of the population-at-large with resepct to the variable of ethnicity, gender, and age. This resulted in a randomized block experimental design for subsequent analysis. The bio-demographic family survey sampled a representative portion of households from the total population with information collected from both Hispanic and Anglo households. The survey population included 177 households and 575 individuals, or 18.4 % and 25.3% of the respective totals. These populations were further stratified into six different age groups.

Institutional Approval

The study design, survey instruments, and documentation records including consent forms were reviewed and approved by the Texas Tech University Health Sciences Center Institutional Research Review Board before the study was begun within the community.

Survey Instrument

The data collection instrument used for this survey was derived from a document used to assess the health care needs of a binational Hispanic metropolitan community, El Paso-Juárez (Handal, 1992). The instrument was modified using guidelines published in Healthy People 2000, Health Promotion and Disease Prevention Objectives (United States Department of Health and Human Services, 1991), and Healthy Texans 2000 Partnership (Texas Department of Health, 1991).

The survey instrument was divided into three parts. The first part contained 23 data fields concerned with information about household socioeconomic status, and access and utilization of health services. The second part contained eight data fields concerned with individual health matters including status of immunization, nutrition, contagious and chronic diseases, prenatal, maternal and childcare, and substance abuse. The third part contained two data fields that permitted the recording of narrative responses about the perceived need for and importance of the development of preventive care programs within the community.

Interviewing Method

Interviewers were recruited from students and faculty of the School of Nursing as well as workers from the local Health Department's Community Outreach Program. Most interviewers were bilingual, but interviews were conducted in the language, Spanish or in English, appropriate to the household. All interviewers were oriented through an intensive training session using a written guidebook.

The survey was conducted with door-to-door visits during a six-month interval. Each participating family member who gave written permission to be interviewed was assured in writing of compliance with confidentiality. All members of a participating household were surveyed. Each household survey required about 45 to 60 minutes to complete.

Data Analysis

Survey questionnaires were designed to allow rapid entry into a database tied to baseline data obtained from the United States Bureau of Census 1990 Census of Population

Table 1. Selected Demographic Information for the Community and Study Populations

	City Population	Survey Sample	% Surveyed
Total	2274	575	25.3
Anglo	732	281	38.4
Hispanic	1529	294	19.2
Households	964	177	18.4
Anglo	341	96	28.2
Hispanic	588	81	13.8
Married Couples	559	116	20.8
Single Parent	107	14	13.1
Other	-	47	-

and Housing Summary Tape File 3A CD ROMs. The computer information system also incorporated geographic information software that permitted linkage of census data to maps of census tracts, divisions, and cities, and to compare data collected from the survey to the existing census data. Data reduction and analysis allowed sorting by variables and statistical evaluation. Confidence intervals at the 95% level were calculated, and comparisons were made using the Student's t-test.

RESULTS

Demographic information about the study population is shown in Table 1. The population was found to be stable, with 66% of heads-of-households having resided in the community for more than 10 years and only 15% having lived there for less than three years. Also, 62% of those individuals owned their own home. Ninety-four percent of those individuals reported that they were native-born United States citizens.

Table 2 shows the distribution of surveyed individuals according to ethnicity, gender, and age. Nearly equal numbers of Hispanic and Anglo individuals were surveyed.

Table 3 shows selected information about compliance with preventive health measures according to ethnicity and gender. Hispanic males consistently showed a lower level of compliance than any of the other groups. Only about one-half of the Hispanic male population had undergone a prostate examination while over three-quarters of Anglo males had had that procedure. Further, although there was no statistically significant difference observed, the means for numbers of males receiving prevention services were consistently lower than of females from the same ethnic group. Immunization status of children was not statistically different in Hispanic and Anglo groups or between males and females. Eighty-three percent of children one to two years of age were reported to be immunized, and 86% of children zero to five years of age were reported to be immunized. However, in older children, Hispanic males below the age of 15 years appeared to have a lower rate of immunization compliance than Anglo males. Compliance was also lower than that in both Anglo and Hispanic females who had almost identical immunization rates.

Behavioral patterns are also different in males and females (Table 4). In both Anglo and Hispanic populations, men use both alcohol and tobacco more frequently than women do. Of all groups, the Hispanic men use both alcohol and tobacco more frequently than any other group, but there is great overlap between the various populations.

Unanticipated results of the survey and for which no data are shown include demon-

Table 2. Distribution of the Sample Population According to Ethnicity, Gender, and Age

		Age in Years						Total
		0-5	6-12	13-20	21-40	41-75	76+	
Anglo	Male	19	20	20	32	40	2	133
	Female	20	24	26	32	36	10	148
Hispanic	Male	22	21	20	35	22	5	125
	Female	26	26	18	43	46	10	169
Totals		87	91	84	142	144	27	575

strable changes in community behavior during and following the course of the survey. The community developed an increasing interest in the survey and its results. Even before the survey was completed, as a direct result of the interactions of the surveyors with community leaders, the need for a school-based nurse was identified, and the position was established and filled. The community also asked for an exit conference concerning the survey findings. This conference was convened and resulted in continued consultative activities between the community and the health sciences center.

DISCUSSION

It is widely held that the availability and the quality of health care in rural communities is less than that which is found in urban areas. The closure of rural hospitals and the declining number and increasing average age of rural physicians contribute to this belief. However, few data are available to describe the comparisons of health care in these contrasting settings, and surveys of rural health issues is sparse in comparison with information about urban centers. Such information is important to obtain if we are to develop an effective plan for providing health care to such diverse populations. Assessment of health care needs has been advocated as the important first step in the process of developing a service plan. Such a process is common for large city hospitals. Rural communities often lack the resources to carry out such an assessment. This study demonstrates the role that academic health centers can play in support of rural communities. It also illustrates the educational value that such studies can afford participating health sciences students. Similar studies have been carried out successfully using student

Table 3. Preventive Health Measures Taken According to Ethnicity and Gender

Intervention	Group	Gender	Total	Positive Behavior	Mean	95% C.I.	p
Pap Smear	Anglo	Female	82	68	82.9	73-90	
	Hispanic	Female	105	88	83.8	75-90	
Prostate Exam	Anglo	Male	42	35	83.3	68-92	0.05
	Hispanic	Male	24	12	50.0	30-70	
Blood Pressure Screen	Anglo	Female	134	111	82.8	75-89	
		Male	119	99	83.2	75-89	
	Hispanic	Female	146	129	88.4	82-93	
		Male	103	78	75.7	66-83	
Immunization (Adult)	Anglo	Female	93	69	74.2	64-82	
		Male	80	69	86.2	76-86	
	Hispanic	Female	97	75	77.3	67-77	
		Male	72	58	80.6	69-81	

Table 4. Behavioral Patterns According to Ethnicity and Gender

Behavior	Group	Gender	Total	% users	95% C.I.	p
Alcohol Use	Anglo	Female	138	29.7	22-38	
		Male	124	36.3	28-45	
	Hispanic	Female	150	26.0	19-34	
		Male	106	49.1	39-59	
	Total	Female	288	27.8	23-33	0.08
		Male	230	42.2	36-49	
Tobacco Use	Anglo	Female	99	18.1	11-27	
		Male	92	28.3	20-39	
	Hispanic	Female	114	17.5	11-26	
		Male	80	42.5	32-54	
	Total	Female	213	17.8	13-24	0.02
		Male	172	34.9	28-43	

interviewers and university resources to provide effective assistance to rural communities (Kulig and Wilde, 1996; Smith and Barton, 1992).

This study further demonstrates the importance of involving community members in the process. Workers who are familiar with the community are able to gain access that might be difficult for "outsiders." At the same time, they are aware of issues within the community and can provide important guidance. Perhaps most importantly, their participation in the survey process may afford early insights that lead to interventions. The development of a position for a school-based nurse was a direct outcome of such a situation.

In some groups within the study population, the survey identified clear health care needs. Cancer surveillance in both Hispanic males and females was less than in their Anglo counterparts. Not surprisingly, alcohol and tobacco use appeared to be greater problems in males than in females. Of particular note, 83% of children one to two years of age were said to have been immunized. This information was gathered before the initiation of the "Shots over Texas" program initiated by the State Department of Health. By contrast, the immunization rate for similarly aged children in surveys of large Texas cities was as low as 10% (Corrigan, 1992). This apparent discrepancy should be studied further. Moreover, immunization rates in other rural communities should also be investigated. Ongoing surveys by the Texas Department of Health should help to compare rural and urban successes in childhood immunization rates (McCullough, 1994).

The study also permitted the targeting of groups in special need of health education and intervention. Hispanic males were more likely to use tobacco products, and were less likely to have had appropriate immunizations or physical examinations for prostate disease and hypertension. These observations indicate the need for specific educational efforts and health care services directed toward the Hispanic male population.

The most surprising finding of the study

was the frequency with which family and/or neighborhood violence was observed (98.9% of the 177 sample households). This finding has been of special interest for community leaders as they plan for health promotion and preventive care services. It is also of note that the findings have been useful to the physicians and hospital staff of a larger nearby community as they develop plans for outreach clinics and for long-term relationships between group physicians and other health care providers such as nurse practitioners and physician assistants.

An unexpected consequence of this study has been the request of other communities within the same health care service area for similar studies to identify their own needs. One potential outcome of these extended studies is the creation of a comprehensive needs assessment for the entire region. As regionalized services are considered and planned, such a global database may serve as an important tool in the development of a cost effective and high quality health care service network.

SUMMARY

Community needs assessment is an established method for determining health care needs. This method may be useful in rural communities where health care resources are diminishing. The use of survey instruments that are sensitive to local factors, such as ethnicity and language, is important to assure useful information. In a representative rural community within the Texas Border Region, such a survey demonstrated health care needs that could be used for local planning. The survey identified immediate needs that could be corrected by strong action steps from local authorities and revealed surprising information about public health care issues such as the immunization status. Such a survey is well received by local citizens if they perceive that the results of the survey may be used for community planning.

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A Predictive Model of Domestic Violence Among Latina Farmworkers

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Abstract

This study examined the prevalence of domestic abuse experienced by low income, Latina farmworkers in a nine-state area. Among the 820 study participants, 17% reported that during the past year, they had been physically or sexually abused by a husband, boyfriend, family member, or companion. The statistically significant predictors of domestic abuse were drug/alcohol use by the respondent's partner and pregnancy.

Introduction

During the last twenty years, domestic violence has been the focus of rising public awareness. Social scientists, legal experts, medical professionals, and public policy analysts have produced a substantial body of research concerning physical and sexual abuse within families. Domestic violence training among law enforcement officials has improved, and police have become more responsive to family abuse (Bourg & Stock, 1994; Roberts, 1996). A grassroots "shelter movement" has helped create a nationwide network of housing and counseling services for domestically abused women and their children (Dziegielewski, Resnick, & Krause, 1996). Within the last several years, health care institutions have undertaken a concerted effort to improve domestic violence screening

and treatment practices, and training of health care personnel (Schornstein, 1997). Despite this progress, there has been little research concerning domestic violence in rural areas among low income and racial/ethnic minorities. We analyzed domestic violence among Latina patients who received medical treatment at eleven federally funded migrant health care clinics in nine states. These clinics are mandated by federal law to address the unique health care needs of migrant and seasonal farmworkers (Migrant Health Act, 1962).

BACKGROUND

In response to concerns voiced by migrant health clinicians about domestic violence injuries among migrant and seasonal farmworker women, the Migrant Clinicians Network (MCN), in 1994, established the Practice-Based Research Network (PBRN) to document the extent of domestic violence among farmworker women. [MCN provides networking, education, accreditation, and research services to clinics that serve migrant and seasonal farmworkers.] The PBRN addressed the problem of family violence by documenting the prevalence of domestic abuse and promoting improved screening and intervention for farmworkers. By 1997, migrant farmworker health care clinics in Michigan, New York, Colorado, Wisconsin, Pennsylvania, Iowa, Washington, Texas, and North Carolina were participating in the PBRN domestic violence program. Our analysis examined the prevalence of victimization among Latina farmworkers and the degree to which various social and demographic factors predicted intimate violence against these women.

Literature Review

Previous researchers have found that domestic violence occurs among all racial, ethnic and socioeconomic groups (Bachman & Saltzman, 1995; Centerwall, 1984; Straus, Gelles, & Steinmetz, 1980; Walker, 1984). Analyses also have shown that residents of urban and rural areas experience similar rates of family abuse (Bachman & Saltzman, 1995; Websdale, 1997; Zawitz, 1994). One study of immigrant women in California found that 25% to 35% had been victims of domestic abuse (Hogeland & Rosen, 1991). Anderson's (1993) analysis of victimization among immigrant Latinas in the Washington, D.C. area revealed that domestic violence against them increased after they immigrated to the United States. Additionally, Anderson (1993) found that the rate of battering was highest among undocumented or conditional resident Latinas who were married to citizens of the United States or lawful permanent residents.

Pinn and Chunko's (1997) study of medical practitioners' role in developing culturally sensitive interventions in domestic abuse cases suggests that low income women, and those who live in isolated conditions (i.e., do not own telephones, reside in remote areas, and do not speak English) are at highest risk for all types of violence. In addition, women in these circumstances lack access to appropriate community-based services designed to treat and prevent family abuse (Pinn & Chunko, 1997). Pinn and Chunko (1997) also argue that low income women who are members of racial or ethnic minorities have been underrepresented in past studies of domestic violence. Rural residency also is an isolating factor that influences family abuse and access to domestic violence services. In his analysis of police responses to domestic violence in rural settings, Websdale (1997)

concluded: (a) physical isolation associated with the rural milieu provides batterers with opportunities to engage in abusive behavior, (b) patriarchal attitudes of rural law enforcement officers impede timely and effective responses to domestic violence calls, and (c) rural battered women encounter acute difficulties in using potentially supportive domestic violence services. Gagne's (1992) case study of spousal abuse and social control of women in a rural Appalachian community found that the culture and social structure of that setting facilitated family abuse. Within that community, a patriarchal social structure, cultural norms that objectified and devalued women, and geographic isolation established a social context that permitted men to exercise violent social control over women (Gagne, 1992).

Our study seeks to build upon previous research by analyzing the prevalence of domestic violence among low income Latina farmworkers. We also examined the influence of social factors such as drug/alcohol use, marital status, race, migrant status, pregnancy, and age on the intimate abuse of these women. In addition, implications for future research and domestic violence interventions are discussed.

METHODOLOGY

Not surprisingly, the same characteristic that increases the vulnerability of certain groups to the dangers of domestic violence—isolation from mainstream society—also makes them exceedingly difficult to research. A place of access that holds promise for conducting research on domestic violence among hard-to-reach populations in rural areas is the health service system, particularly rural clinics that specialize in low income populations. The sample used in this analysis was selected from the adult female patient population of eleven nonprofit clinics in nine states that receive federal funding to serve migrant and seasonal farmworkers. It has been estimated that three-fifths of farmworker households have incomes below the federal poverty level (Mines, Gabbard, & Steirman, 1997). Therefore, rural nonprofit health care clinics are an excellent setting for learning about the health needs of low income, migrant and seasonal Latina farmworkers. Migrant farmworkers are laborers who leave their permanent place of residence to find employment in agriculture. Seasonal farmworkers are laborers employed in agriculture who do not leave their permanent residence to find work.

During several visits to clinic sites, researchers representing the MCN Practice Based Research Network trained clinic staff in basic issues related to intimate violence and in the administration of a domestic violence questionnaire. All of the clinic staff who participated in the study received two to four hours of training. In addition, procedures were established for protecting respondents' confidentiality, and for managing the data collected at each site.

Because the safety of the survey respondents was of primary concern, the population sample was selected on a convenience basis. That is, only adult women who were not in the company of a male partner were invited to participate in the study. After receiving informed consent, bilingual clinic staff conducted face-to-face interviews with each respondent in either English or Spanish, depending on the preference of the respondent. Interviewers recorded the respondent's answers on the survey instrument. All of the interviews were confidential.

Sample Characteristics

Table 1 presents the descriptive characteristics of the study sample. A sample of 820 Latina farmworkers completed the survey instrument. Respondents' ages ranged from 18 to 72 with a mean age of 30 (SD=11.2). Fifty-seven percent (n=469) of the sample were pregnant, 37% (n=302) were not pregnant, and 6% (n=49) did not respond to the survey item concerning pregnancy. Most of the women in the study, 68% (n=561), were legally married or cohabitating with a male partner. Twenty-eight percent (n=233) were single, widowed, divorced, or separated, and 3% (n=26) did not report their marital status. Thirty-five percent (n=287) reported that they were migrant farmworkers, and 38% (n=312) reported that they were seasonal workers (i.e., permanent residents within the local area). Twenty-seven percent of the sample (n=221), did not identify themselves as either migrant or seasonal workers.

Survey Instrument

Circumstances within the clinics such as heavy patient loads and limited personnel, the safety of the women, and the potential psychological discomfort of the patients called for a research instrument that was brief and required little time for completion. Given the constraints and the interest in obtaining generalizable results, the PBRN researchers used the MCN Domestic Violence Assessment Form as a survey instrument. [The MCN Domestic Violence Assessment Form was originally developed by Dr. Judith McFarlane, College of Nursing, Texas Women's University, Houston, Texas. The form was adapted by MCN for use in a migrant health center setting and used with permission.] This instrument has demonstrated a high degree of internal reliability (Rodriguez, 1995). To facilitate interviews with non-English speaking respondents, the survey was printed on one side of the page in Spanish and on the other side in English.

The Domestic Violence Assessment Form elicits basic demographic information and asks the following questions: (1) Does your husband/boyfriend/companion use alcohol or drugs?, (2) During the last year, have you been physically abused (hit, kicked, pushed) by another person?, (3) Have you been forced to have sexual relations in the last year?, and (4) Are you afraid of your husband/boyfriend/companion/relative or other person threatening you? If the respondent answered "yes" to Question 1, she was asked if her husband/boyfriend/companion abused her when he was drunk or using drugs. If she answered "yes" to Questions 2 or 3, she was asked if the abuser was her husband, boyfriend, companion, ex-husband, relative, or other. If respondents gave an affirmative response to Questions 2 or 3, they also were asked to provide the total number of abuse incidents and the last time the abuse occurred. The questionnaire included a full anterior and posterior body map for charting injuries and designating areas of abuse.

Analysis of Data

Because the dependent variable in this study is a dichotomous measure of spousal abuse, logistic regression analysis was used to predict the likelihood of respondents being victimized.

The significance of the contribution of each independent variable may be seen in the Wald statistic (the ratio of the regression coefficient B to an estimate of its standard error). Regression coefficients were considered statistically significant if $p < .05$ or if the Wald statistic exceeded a critical value of two (Hosmer & Lemeshow, 1989). The Exp (B) for each logistic regression coefficient gives the logs-odds ratio for the predictor variables

Table 1. Descriptive Characteristics of the Study Sample

Characteristics	Percent	Frequency
Age of Respondents*		
18 to 27	48.3	396
28 to 37	28.0	230
38 to 47	10.0	82
48 to 57	4.6	38
58 to 67	3.2	26
68 to 77	0.4	3
Missing	5.5	45
Martial Status		
Married or co-habitating	68.4	561
Single, divorced, separated, or widowed	28.4	233
Missing	3.2	26
Children		
No	14.5	119
Yes	80.0	656
Missing	5.5	45
Pregnant		
No	36.8	302
Yes	57.2	469
Missing	6.0	49
Migrant Status		
Migrant	35.0	287
Seasonal	38.0	312
Missing	27.0	221
Drug/Alcohol Use by Spouse		
No	63.3	519
Yes	34.3	281
Missing	2.4	20
Abused (physical abuse or forced sex)		
No	77.3	634
Yes	17.4	143
Missing	5.2	43

* Mean Age= 30.04

(Menard, 1995). Odds ratios greater than one indicate an increase in the odds of being abused and odds ratios less than one indicate a decrease in the odds of being abused.

Our analysis sought to develop an empirically based parsimonious model that can be used to predict spousal violence among migrant and seasonal Latina farmworkers. Because the extant research suggests a high co-incidence of substance abuse and intimate violence (Neff, Holamon, & Schluter, 1995; Bennett, 1995; Norton & Manson, 1995; Brookoff, O'Brien, Cook, Thompson, & Williams, 1997), the major independent variable in our regression model was a dichotomous measure of drug/alcohol use by the respondent's spouse (drug/alcohol use=1, no drug/alcohol use=0). To evaluate whether the relatively high level of mobility among migrant Latina farmworkers influenced the likelihood of abuse, a variable that measured respondents' farmworker status was included in the model (migrant=1; seasonal=0). Several previous analyses of domestic assault have examined the relationship between various demographic factors and intimate violence (Julian & McKenry, 1993; Neff et al., 1995, Grandin & Lupri, 1997; Brookoff et al., 1997; Acierno, Resnick, & Kilpatrick, 1997). Following these studies, the demographic controls included in our study are age (number of years old) and martial status (married or cohabitating=1, single, divorced, separated, or widowed=0). A recent metaanalysis of violence against pregnant women (Gazmararian et al.,1996), and previous research focusing on physical abuse during pregnancy (Amaro, Fried, Cabral, & Zuckerman, 1990; McFarlane, Parker, Soeken, & Bollock, 1992; McFarlane, Parker, & Soeken, 1995), indicate that pregnancy may increase the risk of domestic violence. Therefore, we controlled for respondents' pregnancy by including in our analysis a dichotomous measure of that variable (pregnant=1, not pregnant=0). To explore further the influence of family characteristics, we also controlled for whether respondents had children (had children=1; did not have children=0).

RESULTS

Among the 820 Latina farmworkers who were participants, 17. 4% (n=143) reported that they had been physically or sexually abused during the last year. Husbands were the sole perpetrators in 37% of the reported cases of physical abuse. Boyfriends were named in 15%. Both husbands and boyfriends were perpetrators in 20% of the physical assaults. [The questionnaire did not request detailed data about the respondents' intimate relationships. It is possible that during the year in question some of the women were abused by a boyfriend before, during, or after an abusive marriage.] Other abusers included companions (13%), ex-husbands (6%), and family members (9%). Forced sexual contact was reported by 33 women, approximately one-fourth of those who were abused. Husbands were the main perpetrators of sexual abuse (64%), followed by companions (18%), boyfriends (9%), and ex-husbands (9%). During the year in question, the number of abuse incidents experienced by respondents who were abused ranged from 1 to 70, and the average number of incidents per abused respondent was 11.5.

Multivariate Regression Analysis

Table 2 presents the results of the logistic regression analysis in which abuse is the dependent variable. The Exp (B) for each logistic regression coefficient gives the logs-odds ratio for the predictor variables (Menard, 1995). Odds ratios greater than one indicate

an increase in the odds of being abused and odds ratios less than one indicate a decrease in the odds of being abused. The model fit well (Model chi-square=93.77, df=6, p < .000) and correctly classified 82.12% of the cases. After controlling for migrant status, age, martial status, and whether the respondent had children, two variables were significantly related to the probability that the respondents had been abused during the preceding 12 months. The logs-odds ratio for drug/alcohol use shows that women with husbands, boyfriends, or companions who used drugs or alcohol, were approximately eight times more likely to be victimized than women with spouses, boyfriends, or companions who abstained from drug/alcohol use (p < .0000). In contrast to drug/alcohol use, pregnancy reduced the probability of victimization. By a factor of 0.42, or 58% (p < .0036), pregnancy decreased respondents' chances of being abused. Measures of statistical significance for the influence of migrant status, age, whether the respondent had children, and marital status, indicate that these variables did not significantly affect the likelihood that the respondents would be abused. Stepwise regression procedures were employed to find the most parsimonious model for predicting respondents' victimization. Using both forward and backward stepwise regression methods, the reduced model that best predicted spousal abuse was one that excluded respondents' marital status from the full model. However, the reduced model did not fit the data as well as the full model (Reduced Model chi-square 92.57, df=5, p<.000).

DISCUSSION AND CONCLUSIONS

This study examined the prevalence of domestic abuse experienced by Latina farmworkers and the influence of various factors on the intimate victimization of these women. Among the study participants, approximately 17% had been physically or sexually abused by a husband, boyfriend, or companion. The strongest predictors of domestic abuse of Latina farmworkers included in this analysis were drug/alcohol use by respondent's partner, and whether the respondent was pregnant.

Table 2. Logistic Regression Predicting Spousal Abuse

Predictor Variables	B	Wald	Sig	R	Exp(B)
Drug/Alcohol Use	2.12	58.90	.0000	.34	8.32
Pregnancy	-.86	8.45	.0036	-.12	.42
Age	.02	.96	.3263	.000	1.02
Children	.70	1.45	.2283	.000	2.01
Migrant/Seasonal	.27	1.06	.3042	.030	.76
Martial Status	-.18	.39	.5286	.000	.83
Model chi-square	93.77		.000		
Degrees of Freedom	6				

Prevalence of Spousal Abuse

The observed rate of spousal abuse found in our sample (17%) is comparable to domestic violence rates present in the general population. For example, this rate of domestic violence matches the 17% rate of domestic violence injuries reported in a recent nationwide United States Department of Justice survey of emergency room admissions (Rand, 1997). This finding is also consistent with previous studies that found similar rates of domestic violence in urban and rural settings (Bachman & Saltzman, 1995; Zawitz, 1994). However, cultural factors that discourage Latina women from acknowledging spousal abuse (Torres, 1991) and from reporting domestic violence (McFarlane, Soeken, Reel, Parker, & Silva, 1997; Bonilla-Santiago, 1996), increases the possibility that victimization among our study sample underestimates the actual amount of intimate violence suffered by this population of women.

Factors that Predict Domestic Abuse

Women in this study with intimate partners who used drugs or alcohol, were significantly more likely to be abused than respondents whose intimate partners were abstainers. The direct influence of drug/alcohol use on spousal abuse was present regardless of respondents' marital status, age, race, migrant status, whether they were pregnant, or had children. These findings are consistent with a large volume of research that documents the positive relationship between drug/alcohol use and domestic violence. However we do not conclude from these findings that drug or alcohol use causes domestic violence. Recent analyses of alcohol-related battering suggest several possible explanations for the influence of drug/alcohol use on spousal abuse. Conner and Ackerly (1994) tentatively concluded that alcohol produces physiological and cognitive changes, and interacts with frustration to produce aggressive behavior manifested in alcohol-related battering. Other researchers argue that use of drugs or alcohol may facilitate the onset and continuation of violent attacks by intimate partners (Zubretsky & Digirotama, 1996).

Our analysis shows that Latina farmworker women who were pregnant were less likely to be victims of domestic violence than those who were not pregnant. Given the paucity of research pertaining to the influence of pregnancy and non-pregnancy on partner violence (as opposed to research focusing on the prevalence of abuse among pregnant women), we can only speculate about possible relationships between pregnancy and abuse. Because the regression model used in our analysis does not specify a temporal ordering of pregnancy and abuse there are two contrasting possibilities. First, becoming pregnant might actually lessen the probability of victimization of farmworker women. This could occur if abusers have internalized pro-natalist values that mediate against victimizing women who are pregnant. Second, a rational actor model would suggest that farmworker women who have experienced abuse might choose to avoid pregnancy. In other words, being free from abuse might have a positive influence on the decision of farmworker women to become pregnant, while experiencing abuse would have the opposite effect. This outcome would contribute to our finding of a negative relationship between pregnancy and abuse. It should be noted that despite our finding of a negative relationship between pregnancy and abuse, 46% of the abused respondents were pregnant. Although respondents were not asked if they were victimized during their pregnancy, the distribution of abuse reported here supports

previous research that suggests pregnancy to be a high risk period for women (McFarlane et al.,1995; Stark & Flitcraft, 1996).

Among the sample population included in this study, domestic violence was an equal opportunity scourge in terms of age, marital status, fertility, and migrant status. Although violent victimizations by intimate partners are generally more likely to be targeted against younger women (Bachman, 1994), the domestic violence victims in this study were not clustered within a particular age group. Young adult, middle-aged, and elderly Latinas in this study faced essentially the same likelihood of being abused. Respondents who were married or cohabitating were not significantly more likely to be victimized than women who were single, divorced, separated, or widowed. Similarly, the likelihood of being abused was not significantly influenced by whether respondents had children. Migrant status also was not statistically significant.

IMPLICATIONS

These conclusions have several implications for future research and for improving domestic violence services to Latina farmworkers. First and foremost, our analysis underscores the unmet need for additional research pertaining to family violence among this under-served rural population. Based on the prevalence statistics presented in this paper, we estimate that approximately one out of every five Latina farmworkers are victimized by domestic violence. For this reason, we conclude that domestic abuse among this population should be recognized and treated as a major public health problem.

Previous research indicates that low income, minority women are less likely to access domestic violence services (e.g., law enforcement, social service agencies, and domestic violence shelters) than populations that are not so marginalized from mainstream society (Pinn & Chunko, 1997; Van Hightower & Gorton, 1998). Inaccessibility and underutilization of these services means that rural health care clinics are likely to be valuable settings for research and intervention in domestic violence among farmworker families. However, for intervention to be successful, health care personnel must be skilled in assessing patients' risk for physical and sexual abuse. Our analysis indicates that all Latina farmworkers should be routinely screened for the presence of domestic violence and drug/alcohol use by their intimate partners. Moreover, assessments for the presence of violence should be sensitive to multi-cultural perspectives of domestic abuse (Pinn & Chunko, 1997). The information gathered from these clinical evaluations can be used to assist patients in developing safety plans and to refer them to other community resources.

Because of the closer ties among their residents, rural communities offer interesting potentials for creating a community ethos that discourages domestic violence (Websdale, 1997). Public health care officials, social workers, school nurses, substance abuse counselors, and criminal justice personnel can and should join this endeavor by improving their intervention skills and building public awareness about the treatment and prevention of domestic violence among Latina farmworkers and other rural Hispanic women.

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