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TEXAS JOURNAL OF RURAL HEALTH

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2000

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MISSION STATEMENT

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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Call For Papers

TEXAS JOURNAL OF RURAL HEALTH

The Journal is now accepting manuscripts for publication on various topics relating to rural health issues. The Journal is particularly interested in articles on the following topics: migrant farmworker health, current legislative policies, critical access hospitals, and public health issues as well as rural health clinic management. Also, articles on the Balanced Budget Act and how it effects rural health care are especially welcome.

Papers should be submitted to the Managing Editor as outlined in the "Instructions for Authors."

Amendments Section

In our last journal issue (Vol. XVII, No. 4), Dr. Joe Gorton, Ph.D. was inadvertently listed as the second author of the article, "A Predictive Model of Domestic Violence Among Latina Farmworkers." In actuality, he was the primary author and should have been listed first.

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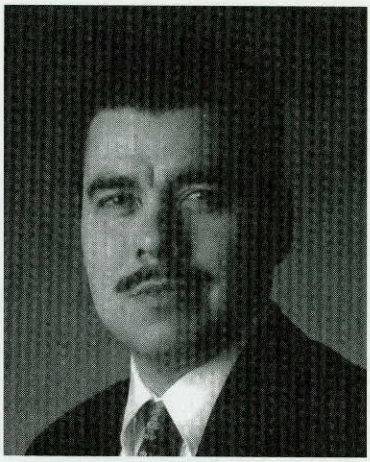
Editor's Comments



Leonel Vela, M.D., M.P.H.

On behalf of the *Texas Journal of Rural Health* (TJRH) editorial board and staff, I want to extend a Happy New Year and Happy New Millennium wish to our entire readership. This first TJRH edition of the year 2000 contains articles that address a diversity of interests. We will continue our commitment to publish high quality articles containing current and relevant information on rural health. We thank you for your continued support and interest.

It is unfortunate that one significant concern still plaguing some rural communities is the uncertain future of their hospitals. Although the circumstances jeopardizing the viability of these hospitals are complex and diverse, one potential option for these hospitals comes in the form of "The Critical Access Hospital Program." This program, which was established through the Balanced Budget Act of 1997, is the focus of Richard Hoeth's article. Through his article, Mr. Hoeth addresses many of the questions that have surfaced regarding this program.

In a previous editorial I have espoused on the importance of addressing the health problems faced by rural communities on the United States/Mexico border. The article by Barbara D. Adams et al. discusses a project that focuses on preparing health professions students to assist in accomplishing the goal of improved health and well being for border communities. Preparing these students to respect and understand the linguistic and cultural factors they will encounter as health care practitioners on the border will serve them and the border communities well. In many border communities, some important and critical members of the health care team are the lay community outreach workers, or *promotoras*. The article by Lorenza Zuñiga et al. discusses the role of *promotoras* and how their training prepares them to provide significant and ongoing benefits to the communities they serve.

As we enter the New Millennium, inadequate funding continues to pose a significant obstacle to addressing rural health priorities. In his article, Roberto Anson urges each states' rural health and public health advocates to take an active role in assuring that "tobacco settlement" funds target rural health. He indicates that funds be specifically allocated to target rural health needs in tobacco cessation, health education, and also prevention.

Rural communities are not uniform, but rather comprised of various population groups with their own specific health care needs. In the case of older rural adults, more research is needed to better ascertain their health status and gaps in access to health care services. The article by Bette Ide concerns a pilot study undertaken to evaluate utilization of services by older adults as a

function of Health-Related Hardiness, overall health and functioning.

Diabetes is a chronic disease that unfortunately remains quite prevalent in this country, including in rural communities. Certain population groups are particularly at risk for this disease. The article by Paul Villas et al. reports on a study to evaluate how screening for a skin condition known as "acanthosis nigricans" in children may help predict risk for the future development of health problems, including diabetes.

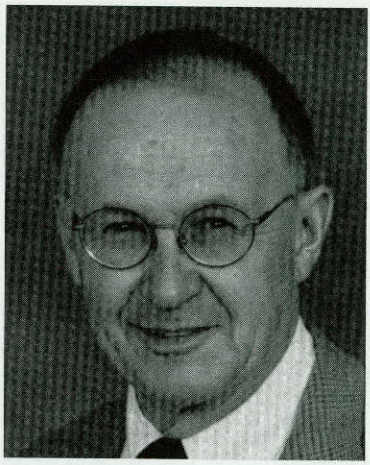
The lack of adequate emergency medical services in many rural communities throughout the United States continues. In many communities the physician provider is a Family Practice Physician who responds to a multiplicity of medical needs. One significant challenge is the preparation of those primary care providers to respond to situations that necessitate intervention by an emergency-medicine-trained physician. The article by Kim Bullock et al. is the first of a two-part series that discusses an innovative program that blends training in Family Medicine and Emergency Medicine. The focus of this program is to prepare physicians that can address the primary care and emergency medicine needs in rural communities.

As the articles in this TJRH edition reflect, rural health remains a dynamic and exciting field that requires a proactive response to its many challenges. In that light, the Office of Rural and Community Health (ORCH) at the Texas Tech University Health Sciences Center (TTUHSC) embarked on a strategic planning process in the Fall of 1999. The ORCH is the "home" office for the *Texas Journal of Rural Health*, and as the Vice President of this office I was motivated to proceed with a strategic planning process before the start of the New Millennium. A diverse group of participants (council of governments representing rural counties, rural county judges, health science deans, researchers, and state and federal officials) was invited to participate in the one-and-a-half day facilitator-led session. The focus of the session was on identifying future directions for the TTUHSC as the institution carries out its service, education, and research mission to benefit rural populations.

What most impressed me about the strategic planning session, beyond the work that was accomplished, was the participants' genuine, wholehearted commitment to improving the well being of rural communities. I realized that this national cross-section of rural health advocates accurately represented our TJRH readership, and the multitude of others, who unselfishly give their time and talents in the service of others. This level of commitment, in partnership with rural communities, holds great promise for setting the stage for a better tomorrow in the New Millennium.

Special Services and Certification Issues

Notes From the Field



Darryl M. Williams, M. D.
Director
Office of Border Health
Texas Tech Health Sciences Center
El Paso, Texas

In this and the next issue of the *Texas Journal of Rural Health* Drs. Bullock, Hahn, Gerard, and Rodney present their views on two important issues that face all of us involved in providing health care services to rural America.

The first of these concerns has to do with the provision of what has come to be viewed as specialized services to rural populations. Although Bullock, Hahn, Gerard, and Rodney address the specific area of emergency medicine, this issue can be more broadly generalized. It is understandable that physicians specifically trained in emergency care will not choose to establish their practices in rural communities. On most days their services will be underutilized and they will undoubtedly find themselves modifying their practice to accommodate local health care needs. The same could be said for orthopedic surgeons, other surgical subspecialists, and even some primary care physicians such as pediatricians. And yet people who reside in rural areas will need all of these services and more.

Traditionally, there have been two approaches to this problem. The first is to provide enriched training for practitioners in rural areas so that they may handle a broader range of problems competently but on their own. Second, referral systems have been developed to ensure that the primary health care provider has strong backup from specialists in the nearest big city. This has the obvious disadvantage that patients must often travel hundreds of miles to a foreign environment to receive focused care. More recently, telemedicine and other technology-based systems have been developed in an effort to bridge these gaps in distance and resources. All three methods have their advocates, and each has contributed to an improvement in the health care services available to the rural community. However, we still face the challenge of how to develop and provide health care that is comparable in both quantity and quality for our rural population as that available in our great cities.

The second concern has to do with the matter of certification. Since its beginnings over 60 years ago, the process has evolved from a sort of "good old boy's" recognition of accomplishment to what we have today. It has become a ticket that is required for a growing list of inclusions such as hospital privileges, membership in a physician panel, reimbursement for services, and even employment. Yet we have failed to answer satisfactorily two fundamental questions about certification: 1) "Certification for what?" and 2) "Certification by whom?"

As to the "Certification for what?", no thoughtful medical educator would claim that physicians cannot competently perform services outside of their certified practice scope. Probably every one of us has done such on more than one occasion in the past, and everyone would acknowledge that there are many gray areas between the turf of competing specialties. At the same time, certifying examinations cannot possibly cover all of the situations and decisions that a physician will face in the day-to-day practice of his or her own specialty. And so, at best, a certification can attest only that the recipient has performed a circumscribed examination at a satisfactory level at a particular point in time according to a group of similarly-trained physicians.

As to the "Certification by whom?", the answer seems easy–the respective specialty board. The problem arises as to the selection of the board and the exercise of authority. In most cases, the specialty board is closely inter-linked with its related Residency Review Committee who decides on the requirements for an acceptable training program. This kind of conflict of interest has led to loss of collegiality, unnecessary duplication, and mindless turf wars. An excellent example can be drawn from our own rural clinics where students and graduate trainees from several disciplines including internal medicine, family medicine, pediatrics, and advanced practice nursing are taught in the same ambulatory care environment. The problem is that only family medicine faculty can teach the family medicine residents, only advanced practice nursing faculty can teach the advanced practice students–and so on and so on. And all of this because of the respective accrediting bodies in the name of "sound education." What a shame that we are all so caught up in the seeming importance of our own discipline that we fail to acknowledge that we can learn a great deal from one another and with one another. It is time to begin to break down some of the artificial barriers that we have built for ourselves.

USE OF STATE TOBACCO SETTLEMENT FUNDS: A LEGAL AND STRATEGIC ANALYSIS WITH IMPLICATIONS FOR RURAL AND PUBLIC HEALTH

Roberto Anson
Director
State Office of Rural Health Program
Office of Rural Health Policy
Health Resources & Services Admin.
Rockville, Maryland

ABSTRACT

In November 1998, the attorneys general of 46 states signed a legal agreement with the five largest tobacco firms that are projected to net states about $206 billion over the next 25 years. These payments are linked to tobacco sales. This is the largest legal settlement in the industry. Many states are not targeting the use of these funds for health education and/or smoking cessation programs. Legislative sessions for this year and the year 2000 are focusing on how to spend these state tobacco funds. The significant opportunity is assuring that rural health and public health advocates voice their concerns and become significant "players" in assuring that funds are used for rural health needs involving tobacco cessation and health education and prevention. The window of opportunity for influencing the fiscal allocation process is narrowing. Funds won't start flowing until June 30, 2000 or until 80% of the states, representing 80 % of the payout, finalize settlement details.

INTRODUCTION

A legal earthquake registered a maximum rating of ten and shook the corridors of corporate tobacco boardrooms. The rumblings echoed in legal chambers nationwide. Yes, a sizeable legal shake-up hit on November 16, 1998. That date is a monument to the

largest financial recovery in the nation's history resulting in an unprecedented legal reform in the tobacco industry. In November of 1998, the attorneys general of 46 states signed a legal agreement with the five largest tobacco firms that will net states an estimated $206 billion over the next 25 years.

So when does the money start to flow? More significantly, will rural communities benefit? What strategies might states use to assure that funds are set-aside for rural and public health? What must be done, by whom, by when, and how? Are these questions being asked by rural and public health advocates in each state? The health and well being of current and future generations in a nation where 24% of the population lives in rural communities is the galvanizing force that should energize communities.

The funds won't start flowing until June 30, 2000 or until 80% of the states, representing 80% of the payout, finalize settlement details. Most states, according to the Health Policy Tracking Service have used the 1999 legislative session to begin the debate in their respective states over how to spend the money (Health Policy Tracking Service, 1999). This is where the action is. The urgency, from my perspective, is that the rural health and public health community responsible for improving rural public health is not significantly involved in the negotiations and in mobilizing the critically needed public support and media attention to secure set-asides for rural health. This is a big opportunity with big bucks attached to it.

A search of the literature reveals an almost deserted landscape on negotiating funds for rural health on a state-by-state basis from the tobacco settlements. The urgency is not only the need to protect the public's health, but also the limited window of opportunity to effectively have an impact in negotiations behind closed doors and away from the public spotlight. A political diagnosis: negotiate now before the Presidential election campaigns get too far ahead or risk loosing the attention of politicians, the public media, and consumer advocates who may be engrossed in other aspects of a presidential campaign process in the year 2000.

CHARGES & ACCUSATIONS

States claimed that tobacco companies conspired to withhold information about adverse health effects of tobacco, that the tobacco giants manipulated nicotine levels to keep smokers addicted, and that they conspired to withhold products that were less risky from the market. In filing their lawsuits, state attorneys general contended the industry was targeting children.

The settlement was negotiated with the industry by attorneys general from the following eight states: California, Colorado, North Carolina, Oklahoma, Pennsylvania, North Dakota, New York, and Washington. Four states, Mississippi, Florida, Texas, and Minnesota already had settled with tobacco companies prior to November of 1998.

Well, this sounds good, but what is the downside and will this seeming victory be short lived? Successful litigation does not ensure successful outcomes. A major caution sign is the neon glaring sign named "Enforcement." Without vigilant and effective enforcement of all provisions, the progress negotiated could evaporate as quickly as water in a summer birdbath. In a press release issued by the National Association of Attorneys General (NAAG), it noted that it would take years to complete all the state law suites and even longer to exhaust the inevitable appeals. The attorneys general were quoted as saying: "the settlement moves the fight out of the courtroom and onto the streets so we can begin protecting kids now (National Association of Attorneys General, 1999)."

The results of a landmark study found states and the United States Department of Health and Human Services not enforcing the country's sole legislation protecting children and teens from tobacco. In the first comprehensive analysis of state and federal performance in restricting sales of cigarettes to minors, a study sponsored by the Robert Wood Johnson Foundation, which was released in October of 1999 reveals that "states, territories and the United States Department of Health and Human Services (DHHS) are failing to ensure that young Americans cannot purchase tobacco (Robert Wood Johnson Foundation, 1999)." The Synar Amendment is the nation's only legislation to restrict rampant sales of tobacco to children and teens under the age of 18.

President Clinton, in his January 1999 State of the Union address, stated his intention to pursue a similar lawsuit against tobacco companies to recover federal costs for such care, which he said amounted to hundreds of billions of dollars.

During late 1999 a new movie was released entitled "The Insider." The movie traced the story of whistle-blower and former Brown and Williams scientist, Jeffrey Wigand, and the efforts of 60 Minutes to air his accusations that the company lied to Congress about nicotine's addictive properties. I saw this documentary/drama and it is very timely because of the recent litigation settlement.

MAGNITUDE OF THE PROBLEM: INVISIBLE TOMBSTONE EFFECT

Smoking kills more people than alcohol, AIDS, car crashes, illegal drugs, murders, and suicides combined. This is certainly shocking. So, why no huge public outcry? Because these deaths take place individually, quietly, and over a long period of time. It is not dramatic or instant like a fiery plane crash.

Ninety percent of new smokers are children and teenagers (American Cancer Society, 1999). Each day thousands of children start smoking and about a third of them will die prematurely as a result of their choice to smoke. Thousands more die from other tobacco-related causes such as fires caused by smoking (more than 1,000 deaths yearly nationwide), exposure to second hand smoke (an estimated more than 40,000 deaths) and use of smokeless tobacco. Smoking is responsible for 87% of lung cancer deaths in the United States according to the American Cancer Society (American Cancer Society, 1998). Minorities are disproportionately targeted and affected by the tobacco industry. For example, studies have documented that tobacco products are advertised and promoted disproportionately to ethnic communities.

Each year, about 45,000 African-Americans die from a smoking-related disease that could have been prevented according to the Centers for Disease Control and Prevention (CDC) (Center for Disease Control, 1999). Annual tobacco industry advertising expenditures nationwide are projected in excess of $5.2 billion. For example, annual health care expenditures in Georgia directly related to smoking are $1.7 billion. Published research studies found that kids are three times more sensitive to tobacco ads than adults (Coalition for a Healthy & Responsible Georgia, 1999).

Kentucky, probably the state whose economy is most dependent on tobacco, has the highest smoking rate in the nation according to CDC data. Kentucky is second only to North Carolina in tobacco production, but Kentucky's economy relies on it more. About two-thirds of the farms in Kentucky grow tobacco (Nando Times, 1999). It is not easy for tobacco dependent states to go through economic "withdrawal."

A study from the Center for Rural Health

and Social Service Development at the Southern Illinois University at Carbondale shows that adolescents who report initiating use of smokeless tobacco between 6 and 8 years of age in rural communities were using it on a more frequent basis that those who had started using tobacco products later (Cronk & Sarvela, 1997). Research from the Oregon Health Sciences School at the University in Portland confirms the progression of this use of smokeless tobacco products. The rate of female chewing tobacco use is unusually high. Isolated rural communities have significant adolescent tobacco abuse, and prevention and treatment strategies need to be developed for this special population (Salehi & Elder, 1995).

STATE ACTIONS

Center stage for the action is in each state capitol. One of the most critical issues faced by both state legislative and executive branches is the negotiation and decision process on how to spend the tobacco settlement funds. The urgency for public health and rural health advocates to become involved in influencing the negotiations can spell the difference between effective use of funds or the potential for waste and missed opportunities. Warning signs along this road filled with potholes are evident from news articles. For example, the New York Times featured an article written by David Stout (1999) entitled "Few States Are Using Settlements in Tobacco Suit to Cut Smoking." Only 6 of the 46 states that participated in the 1998 $206 billion settlement have made major commitments to use their windfalls to cut down tobacco use according to Jeffrey Koplan, the director of the Centers for Disease Control and Prevention.

National leadership and funding is coming from the nonprofit sector with the American Medical Association's national program office of the Robert Wood Johnson Foundation's (RWJFs) Smokeless Tobacco Prevention and Control Program. In August of 1999, this special grant program awarded grants to agencies in Alabama, Arkansas, and South Carolina. These three states will use the grants to develop collaborative strategies statewide to securing added funding from their state's tobacco industry settlement to improve health care. The RWJFs Southern Rural Access Program (SRAP) newsletter of October 1999 featured a two-page summary on the SRAP states with tobacco settlements and brief updates on eight southern states (Hull & Beachler, 1999). Mississippi has the distinction of becoming the first state to form a permanent tobacco settlement trust fund protecting the principal and spending the interest and dividends in a strategic approach to improving health care (Hull & Beachler, 1999).

The Texas settlement provides $15.3 billion to the state and about $2.3 billion to the counties/hospital districts to reimburse them for health care costs they incurred for treating indigent persons suffering tobacco related ailments. Also, funds will be used to set up a State Children's Health Insurance Program, to create a Rural Health Capital Improvement Revolving Loan Fund and a variety of special health care initiatives. The Texas Center for Rural Health Initiatives was and is a key partner is assuring that these resources are used to improve the well being of people in rural communities.

Arkansas, like Mississippi, is a trendsetter in the use of tobacco funds for health care. The Arkansas political leadership in the executive and legislative branches agreed that the tobacco settlement funds should be used for health care issues. About $1.6 billion will be equally divided among smoking prevention

initiatives and medical research. In the neighboring state of Louisiana, a legislative plan calls for settlement funds to be divided between the Millennium Trust and the Louisiana Trust. According to the SRAP newsletter, the funds will be split between the Health Excellence Fund dedicated to children's health programs grants for innovative health care sciences and comprehensive chronic disease management services. Alabama is expected to receive $3.17 billion from the settlement. During 1999, Governor Don Siegelman signed legislation allocating $60 million to the Children's First Programs. The state plan also calls for 10% to be allocated to the state Department of Public Health for youth tobacco prevention activities. In Georgia, the legislature established a new Tobacco Community Development Board in the summer of 1999. Governor Roy Barnes proposes that two thirds of the settlement funds be fully devoted to health care for Georgians. The state of South Carolina is expected to get about $2.2 billion in payments over a twenty-five year period. The legislature in West Virginia during the 1998 session allocated the first payment of the tobacco settlement funds. Funds will be equally divided between the Tobacco Settlement Medical Trust Fund and the more general Tobacco Settlement Fund. There is cause for pause because all these revenue projections are dependent on the sales and revenue in each state so fiscal estimates should be viewed with some caution.

All these uses provide some benefits and cases can be made for each of the actions cited above. However, many of those actions are not aligned with the intent in how tobacco settlement funds should be used. State self-determination is an important principle. How it gets implemented and to what extent the public good is best served is a different issue. States are not obligated to use their settlement money fighting tobacco or on health programs. However, the public should have a major voice in how these funds should be used and an extended debate and clear criteria would seem fair and appropriate before state legislators and other elected and appointed officials make these decisions. These monies can be used to help prolong the length of life or they can be used for other purposes.

The six states that the CDC said had made anti-tobacco, public-education commitments in line with its recommendation are: Hawaii, New Jersey, Maryland, Minnesota, Vermont, and Washington state. Children's rights advocates were effective in influencing 36 states to allocate at least some of their tobacco funds to health programs benefiting kids. The Washington, D.C. based Health Policy Tracking Service compiled and coded a map showing the states that have bills pending or laws enacted with youth provisions involving tobacco settlement funds. This is a great opportunity for a rural health advocacy group, like the National Rural Health Association (NRHA) to develop a similar tracking tool involving all states on the legislative status and decision-making indicating whether rural health dollars had been set-aside in their states. The states of California, Oregon, and Massachusetts enacted higher tobacco taxes in recent years after anti-tobacco advertising and educational campaigns were implemented. The CDC data for those three states shows a significant decline in tobacco use from 1992 to 1996 as a result of higher taxes. That suggests an effective strategy with wide applicability for other states to consider.

When I travel to rural communities there are some common images: gas stations and convenience stores selling tobacco products, seeing older people cigar smoking, witnessing people of varying ages lighting up, and especially observing youth and teens smoking with gusto. The small round object in the rear pants pocket of men or teenagers

often reveals how widespread spit tobacco is in small and rural towns.

The principle of prevention starts with absorbing the truth contained in the Chinese proverb that says: "When you drink the water, remember the spring."

OPTIONS & CHOICES FOR ACTION

Because creativity often occurs at the intersection of change, this tobacco settlement litigation and negotiation is a mixing bowl of opportunities. The question is: will this change help or hurt rural and public health care in each state? The tobacco settlement issue has shifted to the state level. Now the focus is on negotiating how the funds will be spent and on dealing with any legal challenges to the litigation. The funds that are expected to flow to each state and how they are to be spent present consumers and advocacy groups with an unprecedented opportunity. The window of opportunity to influence the allocation of funds for different projects is narrow. The urgency for public health and rural health groups to influence the funding allocation process is critical. The outcomes will largely be a result of: politics, purposeful timing, coalition building, strategic and flexible partnerships, and effective consumer advocacy and the support of legislative and elective officials.

CONCLUSION

A strategic reality of progress is the energizing principle that whatever holds our attention determines our action. Will rural health and consumer advocates as well as public regulators and state and federal enforcement agencies be able to focus concentrated attention long enough to make the needed headway to improve the health of rural Americans and of our nation when it comes to reducing use of tobacco products? The single most compelling fact is that cigarette smoking remains the most important preventable cause of death in the United States. The tobacco settlement fund legal battle now moves out of the courtroom to the public arena. Massive public education, vigorous enforcement and sustained vigilance and monitoring by public health and consumer health groups in the public and private sector will be needed. A strong motivation to become energized is the health and future of our rural communities. We are all responsible. The tobacco settlement fund represents an enormous opportunity for rural and public health advocates to contribute to a healthier rural community. The outcome is up to us.

(The author's views are not intended to represent any official view of his employer)

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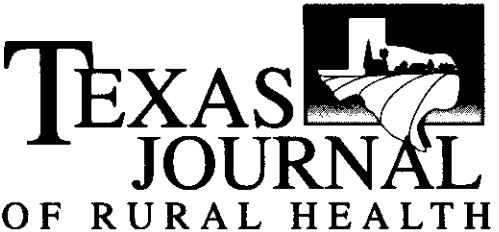

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ADDITIONAL CONTACT INFORMATION

Center for Rural Health Initiatives:
Website: http://www.crhi.state.tx.us.
E-mail: tessen@crhi.state.tx.us
Health Policy Tracking Service:
1 (202) 624-3567

Intercultural Cancer Council:
Website: http://icc.bcm.tmc.edu.
E-mail: jcc@bcm.tmc.edu

National Center for Tobacco-Free Kids:
Website: http://www.tobaccofreekids.org

Rural Health Connections Newsletter:
Website: http://www.collmed.pcu.edu/rhpc

Rural Information Center Health Services:
Website: http://www.nal.usda.gov/ric/richs
E-mail: rich@nal.usda.gov
1 (800) 633-7701

Southern Rural Access Program
Rural Health Connections Newsletter.
Website: http://www.collmed.pcu.edu/rhpc

Tobacco Web & Information Resources
Center for Disease Control & Prevention:
http://www.cdc.gov/tobacco

An icon to the state system appears on the CDC Office on Smoking (TIPS) web site and the "Online Help" section provides users with detailed information on how to use this resource.

The Critical Access Hospital Program: A Service Delivery Model for Selected Rural Hospitals

Richard Hoeth, F.A.C.H.E
Vice President
Rural Health/Membership
Texas Hospital Association
Austin, TX

Abstract

"The Critical Access Hospital Program is a limited-service hospital design that combines potentially improved reimbursement with cost savings from relaxed operating requirements to help ensure financial viability. In communities that have difficulty recruiting doctors, services at these facilities may be provided by a non-physician practitioner under the remote supervision of a physician.

The Critical Access Hospital Program offers a new option to rural communities working toward ensuring adequate access to high-quality health care services for its residents. This is not to say that the Critical Access Hospital option is necessarily the preferred model for delivering health care services in every community. For an individual hospital, the decision to seek designation as, or conversion to, a Critical Access Hospital involves careful review of the capacity of the model to meet the health care needs of the community and to support the continued financial viability of the organization (American Hospital Association, 1998)."

Introduction

The Critical Access Hospital Program, also known as the Medicare Rural Hospital Flexibility Program, was established by the Balanced Budget Act (BBA) of 1997 (Public

Law 105-33). The purpose of the program is to improve access to essential health care services through the establishment of limited service hospitals and rural health networks. The Critical Access Hospital (CAH) model is not a new concept, but it enables all states to participate by using the CAH model. Two previous, pilot programs, the Essential Access Community Hospital/Rural Primary Care Hospital (EACH/RPCH) program and the Montana Medical Assistance Facility (MAF) demonstration program were limited in their application to a few designated states.

The primary benefit of a CAH is the ability of a participating hospital to receive Medicare reimbursement based upon cost, reasonable cost, or the better of Diagnosis Related Group's (DRG) or cost for inpatient, outpatient, and emergency services as well as swing bed care. In addition, the Texas Medicaid program will allow reasonable cost reimbursement for CAH's to provide such services (Center for Rural Health Initiatives, 1999a). The availability of favorable reimbursement for both Medicare and Medicaid rural hospital patients is crucial, since the percentage for these two payors combined ranges from 50% to 90% for all Texas rural hospitals (Texas Hospital Association, Data Analysis Group, 1999a). Most other payors for Texas rural hospitals are commercial and private pay patients. Exceptions to this are rural hospitals adjacent to major Texas metropolitan areas, which have a higher penetration on managed care than other more remote rural hospitals (Texas Hospital Association, Office of Rural Health & Hospital Affairs, 1999).

One other major benefit of a CAH is that there is more flexibility in staffing requirements under the Medicare Conditions of Participation by virtue of ability to use non-physician practitioners under physician supervision. Nurse staffing may also be more flexible, dependent upon certain periods when there may be no inpatients. Under the normal Conditions of Participation, a nurse was required to staff an inpatient unit, even if no inpatients were being treated at that time.

CAHs full service hospitals, and other health care providers also are organized into rural health networks and maintain agreements for the referral and transfer of patients, the development and use of communication systems, and the provision of emergency and non-emergency transportation services. Each CAH within a network must have an agreement for credentialing and quality assurance with a hospital within the network, a Peer Review Organization (PRO) or equivalent entity, or another appropriate entity identified in the state rural health plan (Rural Health Consultants, 1999).

WHAT DOES A CRITICAL ACCESS HOSPITAL LOOK LIKE?

Just exactly what does a CAH look like, and what services can it provide? Briefly, a CAH is an acute care hospital which:

- Provides outpatient, emergency, and limited inpatient services.
- Is rural (for example, not in a designated Metropolitan Statistical Area (MSA), nonprofit, or public, currently a licensed hospital, and currently participating in the Medicare program, and meets the state plans criteria for CAHs.
- May have up to 15 acute care (hospital-level) beds. A CAH that participates in the swing bed program may maintain up to 25 beds to furnish both acute and skilled nursing-level care, provided that no more than 15 of the beds are used for acute care at any one time.

- Provides inpatient acute care for up to 96 hours, unless discharge or transfer to a referral facility is precluded due to inclement weather or other emergency conditions. A PRO or equivalent entity may, on request, waive the 96-hour restriction on a case-by-case basis (Rural Health Consultants, 1999).

WHAT ARE THE ELIGIBILITY CRITERIA FOR THE TEXAS CAH PROGRAM?

In order to be designated a CAH under the Texas CAH program, a facility must meet at least one of the following seven eligibility criteria:

1. The hospital is at least 35 miles from the nearest hospital; or
2. The hospital is at least 20 miles from another hospital located in a county of 50,000 persons or less, and it must be the sole provider in the county; or
3. The hospital is located in a Federally designated frontier area (designated by the Federal Census); or
4. The hospital is the only acute care hospital in the county; or
5. The hospital is located in a county that has death rates higher than state averages in at least three of the five leading causes of death: heart disease, cancer, chronic obstructive pulmonary disease, stroke, and unintentional injuries; or
6. The hospital is located in a county that has death rates that exceed the state average for all causes of death; or
7. The hospital is at least 20 miles from another hospital (to determine distance, refer to the Texas Mileage Guide, found at www.cpa.state.ts.us/comptrol/texastra.html) and meets one of the following criteria:
   - The hospital is located in an area that meets the criteria for designation as a Health Professional Shortage Area (HPSA); or
   - The hospital is located in a Medically Under-served Area (MUA); or
   - The hospital is located in a county where the percentage of families with income less than 100% of the Federal poverty level is higher that the State average for families with income less than 100% of poverty; or
   - The hospital is located in a county with an unemployment rate that exceeds the state's overall unemployment average; or
   - The hospital is located in a county with a percentage of population age 65 or older that exceeds that state average.

In addition to the eligibility criteria, the Texas CAH program requires applicants to meet the following additional two requirements:

1. Attach a statement from their financial consultant and/or Chief Financial Officer stating that they have conducted a formal financial feasibility analysis and what impact CAH status would have on the hospital's bottom line for a specific comparative financial period.
2. The hospital must hold at least one public, "town hall" meeting with a hospital representatives present who represent the board, administration, and medical staff members to:
   - Explain the concept of a CAH,
   - Explain how a CAH would impact care and access locally, and
   - Seek input and support of local citizens for pursuing CAH status (Center for Rural Health Initiatives, 1998).

HOW WAS THE TEXAS CAH PLAN DEVELOPED AND HOW WILL IT OPERATE?

The Texas Critical Access Plan was developed through the collaborative efforts of a statewide working group. Spearheaded by the Center for Rural Health Initiatives (CRHI)(the state office of rural health in Texas), members of the working group began to convene regularly in April 1998 to develop a state Critical Access Plan and an application process for hospitals seeking designation as a CAH. Members of the working group included representatives from the Texas Department of Health (hospital licensure, hospital certification, data analysis, EMS and trauma divisions), Texas Hospital Association (THA), Texas Organization for Rural and Community Hospitals (TORCH), Texas Medical Foundation, and Texas Health and Human Services Commission (State Medicaid Office)(Center for Rural Health Initiatives, 1999b). Participating members of the working group realized the importance of expeditiously establishing a CAH program in Texas because the THA, in concert with TORCH, had developed a list of approximately 45 prospective CAH candidates (Texas Hospital Association, Office of Rural Health, 1998). Many of these facilities are rural, low-volume hospitals in West Texas and the Panhandle region, where population ratios are low and several of the hospitals in those regions were taxing hospital districts. Consequently, the working group members had a sense of urgency.

The focus of the working group was not only to develop a state plan expeditiously, but also to develop an application process which was clear and required as little paperwork as possible in order to meet the legal requirements for the CAH program. Since the CAH program application process, the CAH Application Package Checklist, and the CAH application form combined are nine pages in length, I believe the work group accomplished its objective (Center for Rural Health Initiatives, 1999c).

The working group met under the coordinated guidance of CRHI, whose staff, most notably Janet Leubner, were instrumental in documenting the recommended sections of the Texas CAH Plan as well as the CAH application process and form. In addition, members of the Health Care Financing Administration's (HCFA) regional office in Dallas were kept informed of the group's efforts and were involved in the plan development process. CRHI submitted the final state CAH plan toward the end of 1998, and the HCFA Regional Office approved the plan as submitted in February of 1999. The application process was completed prior to July 1, when CRHI announced to Texas hospitals that the Center was ready to begin accepting applications.

In early December of 1998, the Office of Rural Health Policy (ORHP) distributed draft guidance for administration of a Critical Access Grant Fund of $25 million dollars, which had been appropriated by Congress for federal fiscal year 1998-1999 (American Hospital Association, 1999). The initial grant allocated to Texas in the early summer of 1999 was $200,000. These funds could be used for state level program implementation, as well as for planning and implementation of CAH's, rural health networks, and enhanced or expanded EMS. CRHI intended to use a portion of the original grant funds to support a staff person, who will be responsible for assisting CAH applicants during the application process. In addition, THA's office of Rural Health and Hospital Affairs has been contracted to provide technical assistance to the program, oversight of the application process, and education to CAH applicants and their community leaders. Outcome

measures and research efforts relative to the CAH program and its impact on Texas CAH facilities are in the planning stages, and those elements of the program will be more well defined as we gain actual experience with designated CAH's. These services will be made available as long as the CAH program is a viable option in Texas, and as long as the federal government continues to provide supplemental funding.

CRITICAL ANALYTICAL DECISION POINTS FOR CAH APPLICANTS

The decision to convert to a CAH status may not be an easy one. Hospitals considering the CAH service delivery option should thoroughly analyze their own unique situation. Clearly a hospital which will not stand to gain additional reimbursement, should go no further in their deliberations. However, the health care economic environment is in a constant state of flux. Projected Balanced Budget Act reductions in outpatient reimbursement are scheduled for implementation in July 2000. A decision not to pursue CAH status could be altered if a hospital's outpatient reimbursement under the new prospective payment system at that time is reduced drastically (Various models forecast between an 8% and 17% reduction in outpatient reimbursement under BBA 97)(Texas Hospital Association, Data Analysis Group, 1999b).

Under the guidelines for the CAH program, a hospital may convert to a CAH, and it may also convert back to full service acute care hospital at a later date. There are no time limits, other than waiting periods incurred as a part of the application and survey process. However, one additional caveat is that hospitals converting back to a full service acute care hospital status from a CAH may lose any physical plant waivers they may have had under the Medicare program (Health Care Financing Association, 1988). The CAH program is a work-in-progress, and aspiring participating hospitals should pursue this model only if it makes good financial and operational sense.

Likely candidates for conversion to CAH status are hospitals with (American Hospital Association, 1998):

- DRG payment, including capital, that is less than cost.
- High Medicare inpatient utilization and low average length of stay (especially for Medicare patients).
- No significant amount of inpatient services that would not be typically performed in a CAH.
- Significant contractual adjustments on Medicare outpatient laboratory services.
- Significant excess of Medicare outpatient cost over charges.
- Significant limitation of cost reimbursement due to the blend of prevailing charges or standard overhead amount.
- Difficulty retaining physicians.
- Average length of stay near or below 96 hours.

Two other financial factors have been identified in Texas, which may affect the decision to convert to CAH status: Sole Community Provider status and Medicare Dependent Hospital status. The firm of Parrish, Moody, & Fikes in Waco, Texas presented data at the July 1, 1999 CAH Program update sponsored by CRHI, THA, and TORCH. Bill Parrish, CPA, reported at the update that approximately half of his rural hospital clients would not benefit from being a CAH hospital due to already receiving more favorable reimbursement as a Sole Community

Provider (the only hospital in the county) or as a Medicare Dependent Hospital (a hospital with at least 60% Medicare patients)(Parrish, Moody, & Fikes, 1999). This funding underscores the vital importance of a thorough financial analysis for each CAH program aspirant.

One program related issue for a large number of rural Texas hospitals is the treatment of custodial care patients. At the July 1 CAH Workshop sponsored by CRHI, THA, and TORCH, several of the hospitals stated that they had several custodial care or assisted living patients being treated within their acute care unit. HCFA reported that their most recent policy directive prohibited the treatment of custodial or assisted living patients in Medicare certified beds (Center for Rural Health Initiatives, 1999a). Subsequent follow-up conversations with the Texas Department of Human Services revealed that hospitals treating four or more custodial or assisted living patients needed to obtain a separate personal care license for that purpose (Texas Department of Human Services, 1999). In any event, in order to qualify as CAH's, a facility would need to segregate its custodial and assisted living patients in non-certified beds, separate from their inpatient units.

In addition to the great significance of a financial feasibility study, the other most critical decision point for CAH applicants is community education and acceptance of the CAH model. Many rural citizens may see the CAH model as undesirable in comparison to the full service model they may have enjoyed for several decades. However, good communication with community leaders and sharing of information regarding the CAH model and its impact upon a local hospital can overcome the fears of local citizens. The importance of good communication and involvement of community leaders in the CAH conversion process was a major reason why the working group recommended a town hall meeting as part of the conversion process, in addition to a formal action on the part of a Hospital's Board of Trustees. Like any important decision regarding the hospital's future, an informed and supportive community will lead to greater acceptance of the CAH model and a smoother conversion process. CRHI staff and THA's Office of Rural Health will assist hospital CEO's, their boards, and their medical staffs in conducting community meetings upon a hospital's request.

CONCLUSION

The Critical Access Hospital Program is one optional service delivery model for low-volume rural Texas hospitals. The CAH model may or may not be viable for a specific organization. Hospitals seeking CAH status should exercise considerable diligence in conducting a thorough financial feasibility study of the anticipated impact of CAH on their bottom line versus a specific comparative financial reporting period. Future regulations such as the implementation of a BBA's new prospective payment system for outpatient services should be taken into account, as well as other laws which may impact reimbursement either positively or negatively. And, of course, all analyses reviewed and other relevant information about the CAH model should be discussed thoroughly with community leaders at a town hall meeting, prior to a final recommendation by the administration and Board approval to pursue CAH designation.

Even if a hospital does decide to become a CAH, the hospital and community leadership should not be lulled into a false sense of complacency. The CAH model may very well be very appropriate for many rural, low-volume hospitals, but it is not a panacea or a "magic bullet" in and of itself. In today's

fragile health care environment, the CAH model represents one of a number of innovative and creative programs and services which much be constantly evaluated and reevaluated to ensure optimum use of a rural hospital's scarce resources.

As of November 2, 1999, five Texas hospitals had submitted their applications for designation as Critical Access Hospitals. Three applications have been processed by the Texas Department of Health, and pending successful completion of their Medicare survey, should be approved as Critical Access Hospital providers.

The Center for Rural Health Initiatives recently appointed Dave Pearson as the Program Administrator of the Texas Critical Access Hospital program. Mr. Pearson is available to assist hospitals in completing their applications to request designation as a Critical Access Hospital. He can be reached at the Center's toll free number, 1 (877) 839-2744.

The working group will be meeting again soon to discuss data collection and reporting requirements of Critical Access Hospitals, an evaluation mechanism for the Critical Access Hospital program, and a system for ongoing monitoring of designated Critical Access Hospitals. These additional initiatives are being undertaken in an effort to demonstrate the value of the Critical Access Program in Texas and to ensure continual future support of the program by the federal government.

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"Advanced Practice" Family Physicians as the Foundation for Rural Emergency Medicine Services (Part I)

Kim Bullock, MD, FAAFP, BCEM
Assistant Professor
Department of Family/Communtiy Medicine
Georgetown University
Washington, D.C.

Wm. MacMillan Rodney, MD, FAAFP, FACEP
Professor
Department of Family/Emergency Medicine
University of Tennessee
Memphis, Tennessee

Tony Gerard, MD, FAAFP
Assistant Clinical Professor
Department of Family/Emergency Medicine
Pennsylvania State University
Hersey, Pennsylvania

Ricardo Hahn, MD, FAAFP
Chairman
Department of Family Medicine
University of Southern California
Los Angeles, California

Abstract

This article reviews the medical specialties of emergency medicine and family medicine as they currently exist. Although both are unrestricted in their general scope of practice, family medicine is perceived as primary care and community-based. Emergency medicine is hospital-based and a subspecialty discipline. In rural and under-served communities, these two specialties blend together by necessity. This two-part article provides background for bridge building and innovation by blending these specialties.

In response to long-standing community needs, a group of family practice educators established and sustained a teaching practice built upon the foundation of family practice, public health, and emergency medicine. A one-year fellowship in rural family and emergency medicine was part of the infrastructure of this project.

The project, now in its ninth year, specifically addresses the issue of using an advanced curriculum in family/emergency medicine to assist with improving the access, cost, and quality of care in rural and under-served communities.

Introduction

No one has yet aligned family practice, public health, and emergency medicine with the needs of rural and under-served communi-

ties. In response to long-standing community needs, a group of family practice educators established and sustained a teaching practice built upon the foundation of all three disciplines in a rural hospital. Prior to the development of this blend of family practice and emergency medicine, first-hour care in the community was haphazard and fragmented. Additionally, the community was paying almost $700,000 per year for coverage from "moonlighters" who had no long-term commitment, no roots in the community, nor uniform clinical skills (Rodney, Martin, & Hahn, 1998)(see Figure 1).

The establishment of an additional fellowship year in rural family medicine and emergency medicine was part of the infrastructure for this rural project. After the graduation of five candidates and with an established linkage to a certification process, health care policy analysts and community leaders have requested further information on the development of these programs in rural communities (Gerard, 1997; Blondell, Norris, & Coombs, 1992; Burnett, Mark, Midtling, & Zellner, 1995; Mesick, 1992). This need is concurrent with requests from the National Rural Health Association (NRHA), the Society of Teachers of Family Medicine (STFM), and the American Academy of Family Physicians (AAFP) for technical adjustments to the Balanced Budget Act of 1997. These adjustments specifically request support for rural programs. In the Balanced Budget Act of 1997, Congress capped the total number of training positions which qualify for Graduate Medical Education (GME) "pass-through" funding via the Medicare programs. Over $8 billion is annually distributed to teaching hospitals. Funding is also available through many state Medicaid programs. For example, in Tennessee, more than 50 million Medicaid dollars per year are awarded in support of residency training programs. However, these training programs are capped and are reserved for support of urban programs in association with academic health centers. Less than 1% goes to the support of rural programs.

Once again, the 1998 AAFP Congress of Delegates faced a series of resolutions requesting that the AAFP study, ". . .potential impact of board certification as a privileging distinction in emergency facilities, and that the AAFP develop an action plan to support the professional needs of [family physicians]

Figure 1. Integrating the Emergency Department into a Rural Teaching Practice in Tennessee

Source	1993-94 $	1994-95 $	1995-96 $	1996-97 $	1997-98 $
Patient Care	204	495	569	680	1,207
Hospital Education Contract	0	347	662	691	1,230
Emergency Department Contract	657	697	683	725	788
Total	861	1,539	1,933	2,096	3,184

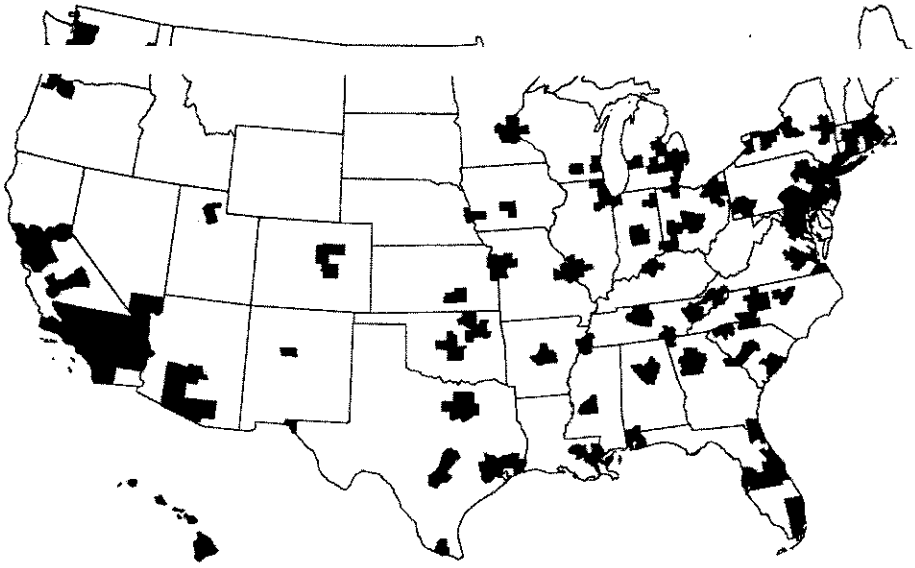
Note: Emergency department services were integrated into the recruitment and funding of a rural teaching practice in Tennessee. These funds grew to support seven additional full-time equivalent physicians who rotated coverage for the emergency department and other hospital services (including obstetrics).

who provide care in emergency facilities (American Academy of Family Physicians, 1998a)." Additionally, other resolutions requested consideration and support for competency-based evaluations with regard to emergency medicine procedures (American Academy of Family Physicians, 1998b) and support for family physicians who perform surgical procedures, many of which are in conjunction with emergency care services (American Academy of Family Physicians, 1998c).

Since evidence suggests that political and economic issues unnecessarily cloud the development of this important pathway for family physicians serving rural communities, this paper provides a "state-of-the-art" overview of the certification and training issues regarding the development of this hybrid practice style. One author has described this hybrid as an integrated healthcare system based on a foundation of OB-capable family physicians who also provided emergency care services 24 hours a day, seven days a week throughout the year (Haskins & Kallail, 1994).

Family physicians can provide high quality, cost effective care for all patients in different clinical settings (Adams, 1989; Hunt, 1993). Although many family physicians currently provide emergency treatment in hospitals, their abilities have been questioned. This bias against family physicians is ironic, since family and emergency medicine

Figure 2. Health Markets with Populations ≥ 360,000 in the United States



Aside from the areas in black, residency-trained, emergency medicine physicians are not available for staffing of rural hospitals. Even in metropolitan areas, substantial numbers of specially qualified internists, pediatricians, and family physicians provide emergency care.

Adapted from Kronick R., et al. (1993). New England Journal of Medicine, 328, p. 152.

practitioners are the only true generalists; they see patients regardless of age, gender, or organ system (Gerard, 1995). Compounding this problem is the fact that because family physicians cannot access the American Board of Medical Specialties (ABMS) certification process in emergency medicine, many are excluded from certain administrative and clinical appointments (Sciammarella & Gerard, 1994; Wicher, Cummings, & Gerard, 1993). Professional respect for family practice has occurred through the development of a rigorous training program, which encompasses both medicine and surgery, acute and non-acute care (Stevens, 1978). This educational experience is provided in the ambulatory and hospital setting with particular attention paid to the health of the individual or the family as a unit. There is an emphasis on the doctor-patient relationship, a broad knowledge base, and community-oriented primary care. This has endowed family physicians with the necessary skills to make appropriate decisions, ranging from the unscheduled extremes of the emergency department to the predictable scheduling of continuity of care in the doctor's office.

The birth of emergency medicine arose partly from the need for better trained physicians who could treat critically ill or multiple trauma patients (Rosen, 1994). In 1979, Emergency Medicine was sanctioned by the American Board of Medical Specialties (ABMS) as the twenty-third medical specialty. Family physicians were among those who championed the cause.

Family medicine has contributed significantly to the well being of the emergency rural-health care system. The majority of after hours and weekend coverage in rural communities has always been provided by family physicians. Residency trained American Board of Emergency Medicine (ABEM) certified physicians do not settle in these under-served areas (Moorhead & Asplea, 1998) or, if they do agree to come, it is difficult to retain them for any length of time (Howe, 1995). This point is illustrated in a most recent American College of Emergency Physician's (ACEP) survey, which identified shortage areas of ABEM certified emergency physicians (see Figure 2).

Initially, family physicians were actively involved in the advancement of emergency medicine. Several charter members of ACEP were family physicians with a strong interest in moving the specialty forward. American Board of Family Practice (ABFP) members were also involved in the developmental phase of ABEM with the founding ABFP executive director serving on the board of the ABEM for several years (Edmundson, 1994). Some senior leaders in family medicine have expressed regret that organized family medicine did not actively pursue ways to maintain some emergency medical care within its domain. In 1993, the ABFP explored a combined training program leading to double board certification. This was rejected by ABEM members even though collaborative projects had been developed between ABEM and the American Board of Pediatrics and Internal Medicine (Rodney, 1995).

Central to the issue of family physicians practicing emergency medicine are fundamental concerns over competency and certification. Because the issues of rural emergency medicine and the role of family physicians in emergency care have not been adequately defined, there are many organizations involved (see Glossary).

Established in 1968 to represent all physicians committed to emergency practice and its academic advancement, ACEP has been unable to solve the controversy over certification (see Glossary). The result has been fragmentation within the specialty and competition between organizations who represent the needs of dissatisfied ACEP members. ACEP recently changed its

membership criteria, and starting January 1, 2000 new members must be board certified or residency trained in emergency medicine. At the same time, the criteria for staffing emergency departments have emphasized board certification over actual physician performance (Henry, 1995; Parker, 1995; Bullock, 1995). Specialty-neutral credentialing is a problem. If better standards are not developed for evaluating emergency department applicants, the practice of emergency medicine by family physicians could be jeopardized. The American Academy of Family Practice (AAFP) and ABFP have responded by describing a core curriculum for family physicians in emergency care.

Limited access to the ABEM examination through closure of the practice track has become one focus of the debate. There is currently no formal ABMS process for emergency physicians trained in other disciplines, such as family medicine, to be recognized as competent to practice emergency medicine. The ABEM exam was first offered in 1980 (Weigenstein, 1980). From 1980 to 1988, there were two ways for physicians to qualify for the examination. One could either complete a residency in emergency medicine, or satisfy the requirements of a "practice tract" pathway. The prerequisites of this option were 7,000 hours and 60 months of practice experience with a specified number of CME credits in emergency medicine.

In 1988, this alternative pathway was terminated, sparking considerable controversy and dissension. Some felt that this closure was arbitrary and premature. Others felt this action was inevitable, and adequate notification had been provided in the medical literature. They contended that the practice tract was a "necessary evil" during the specialty's infancy.

The 1990 Daniel vs. ABEM suit filed in New York was partly in response to this controversial decision (Public Document, 1990). Those who felt that access to the certification process was unfair and inequitable began this formidable legal challenge that is slowly grinding its way through the courts. Thirty defendants are identified, including ABEM, several hospitals, and other indicted alleged co-conspirators. One hundred seventy-six plaintiffs are currently involved in the case who allege that with the practice tract closure they were denied due process and that ABEM violated the Sherman & Clayton Antitrust Act. Perhaps the issue of most concern is the agreement between ABEM and the American Board of Internal Medicine (ABIM) to establish an "academic internist" emergency medicine option. Internists in academic settings could take the ABEM exam without completing a residency in the specialty. No similar opportunity was created for family physicians who may have been just as qualified to take the ABEM exam. This pathway closed in July 1995. Although the litigation appeared to the plaintiffs to be the only effective response to ABEM's position, the lawsuit has impeded other diplomatic solutions to the certification debate.

The controversy surrounding certification and competency is linked to the process of how physicians are certified and by which organization. The medical profession has a closely regulated structure for conferring certification to those seeking specialty recognition (Havighurst & King, 1983a; Havighurst & King, 1983b). The ABMS has granted specialty status to twenty-four allopathic specialties since 1933. Applicants must complete a residency program approved by the Accreditation Council for Graduate Medical Education (ACGME), which is comprised of the AMA, ABMS members, and other representative bodies. A subgroup has been certified through a "grandfather" clause, which permits physicians with extensive experience in the specialty to take the exam

without a residency (Havighurst & King, 1983b). Two competitive non-ABMS certifying boards have developed a similar credentialing system. They are the American Osteopathic Association (AOA) and the American Association of Physician Specialists (AAPS). The AOA began in 1897 with the development of Osteopathic Medicine and is distinct from the AAPS, which was founded in 1952 (American Osteopathic Association Department of Publication, 1995). Both offer their own specialty exam; Board Certification in Emergency Medicine (BCEM) by AAPS and the American Osteopathic Board of Emergency Medicine (AOBEM) through the AOA (see Glossary).

These three certifying bodies function independently of each other and do not recognize specialty boards outside of their own. Predominance of the ABMS system has led many to interpret non-ABMS credentialed physicians to be less qualified or inferior (Havighurst & King, 1983a). This situation is unlikely to change, since allopathic and osteopathic groups do not collaborate on problems associated with credentialing and competency testing. Non-ABMS candidates have had to work aggressively for recognition in the marketplace alongside those with ABMS certification. As recently as 1995, some national and state medical societies forbid membership to osteopathic physicians. Significantly, the courts in 1963 concluded that the certificates of AAPS certified emergency physicians were both "valid and official (American Association of Pharmaceutical Scientists, 1995)."

Credentialing issues have been detrimental to the emergency medical workforce. There is a shortage of board certified emergency medicine physicians and family practioners have not been recognized for their role in providing quality emergency department care. There are 14,000 to 18,000 emergency physicians who do not have certification in emergency medicine. Previous reports estimated the emergency medicine workforce at around 26,000 to 30,000, with approximately 13,000 certified by ABEM (American College of Emergency Physicians, 1993; Americian Board of Medical Specialties Research and Education Foundation, 1996). More accurate data from a comprehensive survey done in 1997, estimate that there are approximately 32,000 emergency physicians, 46% of whom are ABEM certified. Thirty-three percent of these physicians are residency trained in emergency medicine (Moorhead & Asplea, 1998). A large percentage of the remaining group of practicing emergency physicians have completed one of the traditional primary care disciplines with some sub-specialty training and are not credentialed in emergency medicine. To become emergency medicine certified, however, their only options are to complete an emergency medicine residency program or to pass the BCEM exam. The BCEM examination has recently approved the fellowship pathway for primary care physicians.

New strategies are needed to resolve the workforce shortage and quality of care issues for rural emergency medicine. In 1980, the Council on Graduate Medical Education projected an under supply of trained emergency physicians to meet the growing demands of emergency care.

At that time it was felt that at least 1,100 new physicians committed to the specialty would be needed yearly to improve this shortage (Graduate Medical Education Advisiory Committee to the Secretary, 1980; American Medical Association, 1993; Young & Sklar, 1995; Doan-Wiggins, 1995; United States Department of Health & Human Services, 1992; Crowder, 1994; University of California San Francisco Center for the Health

Professions, 1995; Josiah Macy, Jr. Foundation, 1995). Currently, there are more than 1000 emergency medicine graduates each year, and some emergency medicine leaders feel that the major problem is no longer a workforce shortage, but a maldistribution of residency-trained emergency physicians (Moorhead & Asplea, 1998).

SUMMARY

In summary, Part I details the background of physician shortages in rural family/ emergency medicine. Part II will describe recent proposals regarding various approaches to combine family medicine and emergency medicine for the benefit of rural communities.

[Part II of this article will appear in Volume XVIII, Number 2 of the *Texas Journal of Rural Health*.]

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GLOSSARY

AAEM: The American Academy of Emergency Medicine was incorporated in 1994 under the direction of Dr. James Keaney, author of "the Rape of Emergency Medicine." This organization defines the emergency medicine "specialist" as a physician who is ABEM certified (American Academy of Emergency Medicine, 1994).

AAFP: Established in 1947 as the American Academy of General Practitioners, the American Academy of Family Practice won approval in 1969 as the twentieth American specialty. In 1993, 60% of the membership, according to the AAFP survey, was in some way involved in emergency care (American Academy of Family Practice, 1995).

AAPS: The American Association of Physician Specialists, formerly the American Association of Osteopathic Specialists, was incorporated in 1952 to provide specialty

certification to osteopathic physicians trained at allopathic institutions. In 1992, the Board opened up the exam to qualified allopathic physicians. ASPS has 12 approved specialty boards of certification and emergency medicine as well as the largest number of allopathic physicians.

ABEM: The American Board of Emergency Medicine was established in 1979. A task force was organized in 1975 to help create the first board examination and in 1980, 640 candidates qualified to take the examination. For the first time, scoring was based on specific pre-selected criteria instead of comparing the results on a standardized curve, which had been customary for other specialty examinations (Weigenstein, 1980).

ABFP: Chartered as a group in 1969 as the American Board of Family practice, the first certifying examination was offered in 1970. Although, as alternate pathway for academic internists was agreed upon by ABEM and the American Board of Internal Medicine, no such arrangement exists for family physicians with similar qualifications.

ABIM: The American Board of Internal Medicine was established in 1936. Approximately one half of all internists in the United States are certified by this body. A program leading to special certification in emergency medicine was proposed in the past. However, ABIM, through a series of negotiations, agreed to support primary board status for ABEM in exchange for a "special academic internist pathway" leading to ABEM certification.

ABMS: The American Board of Medical Specialists is the umbrella organization for the 24 allopathic medical specialty boards since 1933. ABMS publishes a quarterly news report concerning its activities on important medical issues.

ACEP: In August of 1968, the American College of Emergency Medicine was formed. The American Board of Medical Specialties recognized Emergency Medicine as a specialty in 1979. Membership has grown since 1968 to over 18,000 ABEM certified and non-ABEM certified emergency physicians, as well as residents and medical students (Jacobson & Wittlake, 1999; Hoffman et al., 1999).

ACEP (Section on Certification Process): This is an important subcategory of the college that has worked within the organizational structure to represent the needs of both ABEM and non-ABEM certified physicians. Many members are emergency physicians with residency training in family practice.

AEP: The Association of Emergency Physicians was formed in February 1993 as the Association of Disenfranchised Physicians and was changed in April 1993 to its current title. It was organized in response to the perceived inadequate actions displayed by ACEP toward board certification issues and problems surrounding closure of the practice in 1988. Membership includes primarily non-ABEM certified practicing physicians and has grown from a small group of fifteen physicians to well over 1500 (Pope, 1995).

AOA: The American Osteopathic Association is the oldest of the certifying organizations. It was established in 1897 and maintains its membership exclusively to osteopathic physicians. The AOA has remained outside of the certification debate and the number of AOA certified DO's was over 39,000 (American Osteopathic Association Department of Publication, 1995) in 1995.

AOBEM: The American Osteopathic Board of Emergency Medicine was established in 1980 and confers certification only to osteopathic physicians who have completed osteopathic medical schools. Some allopathic physicians have petitioned the board to take the specialty examination. To date, all

requests have been denied (Public Document, 1990; American Osteopathic Board of Emergency Medicine, 1995).

BCEM: The Board Certification in Emergency Medicine is an Osteopathic certifying body in emergency medicine that began in 1987. The examination has been offered to allopathic physicians seeking emergency medicine board certification since 1992. The AAPS sponsors this examination and has fought from the beginning for its candidates to receive the same recognition as those who are ABEM certified.

SAEM: The Society for Academic Emergency Medicine began in 1998 with the merging of the Society of Teachers in Emergency Medicine (STEM) and the University Association of Emergency Medicine (UAEM). The focus of this organization is on academic research and development within the specialty. This organization works closely with ACEP and CORD and has representation in several influential organizations. It is also a "parent body" of ABEM and forwards a list of nominees for four positions on the Board.

Promotora Training as a Preparation for Entry into the Work Force

Lorenza Zuñiga
Project Associate
Office of Border Health
Texas Tech University
Health Sciences Center
El Paso, Texas

Guadalupe Ramos
Practicing Promotora
Kellogg Community Partnership Clinic
Fabens, Texas

Darryl M. Williams, M.D.
Director
Office of Border Health
Texas Tech University
Health Sciences Center
El Paso, Texas

Abstract

In the United States, the *promotora* movement has focused on the training of individuals, usually women, to provide volunteer services within the community. These services include liaison with clinics, home visits, and activities tied to the goals of the organization providing the training. An unanticipated benefit of the training has been the preparation of women for the workforce as they acquire marketable skills through volunteer activities. At least 21 have been able to obtain employment as a result of this program. Trained *promotoras* interact with medical, education, and social service professionals as they work with a target population in their communities, providing a bridge to a better future.

Introduction

During the last decade there has been a growing interest in the use of trained laypersons drawn from the local community as outreach workers for health care facilities and other service agencies. This interest has been particularly acute along the United States-Mexico border where the training and organization of these lay workers has been patterned after the so-called *promotores de salud* of Mexico. The Mexican counterparts are trained to provide basic disease prevention services as well as some health care

activities including wound care and midwifery. In the United States, the role of the *promotora* has been more sharply restricted, but these individuals still provide considerable amounts of health-related advice, and they are often charged with the responsibility of monitoring the health and well-being of their community and its inhabitants (Williams, 1997). The debt that the United States program owes to Mexico is reflected in the fact that along the entire border region of Texas, New Mexico, Arizona, and California these workers are referred to as *promotoras(es)*. In contrast to Mexico where all *promotoras* are volunteers, there is usually a two-tiered system within the United States where paid individuals work for service agencies, and volunteers are recruited to work within the community under the direction of the paid *promotoras*. In most cases, the individual agencies develop their own curriculum and training schedule for individuals recruited to their program. The plan usually is that some individuals will progress into further training in order to assume paid positions within the organization while others will serve as the cadre of volunteer agents for the agency. Of course, one of the limitations of such a scheme is that the number of paid positions available within the organization is limited, especially when turnover is low. The volunteers often feel very good about the service they are providing to their communities, but within the *colonias* where family finances are often very restricted and responsibilities to children are often very great, volunteerism is a luxury that is difficult to justify and to afford.

The purpose of this report is to describe a single curriculum for *promotoras* and to identify an unexpected outcome of this training for volunteerism.

METHODS

The Community Partnership is a cooperative effort between the School of Medicine of the Texas Tech University Health Sciences Center and the College of Health Sciences of the University of Texas at El Paso. It has operated for the past nine years as part of a national initiative sponsored by the W. K. Kellogg Foundation. The partnership operates four clinics in the rural areas of El Paso County for the purposes of providing an educational experience for medical and nursing trainees in an ambulatory-care and interdisciplinary environment. The clinics provide health care services to low-income residents of *colonias* and small communities. As part of these services, the program has offered training for *promotoras* on a recurring basis during the entire course of its operation. Over the years, curriculum and format have varied somewhat, but the general program has remained constant. Participants have been recruited from individuals who have received services in the clinics or who have expressed an interest in volunteering. Although the

Table 1. Characteristics of Women Completing a Course for Promotoras de Salud

Completed Program	Married	Mothers	High School Education	Worked Outside Home	Monolingual Spanish	Employed
72	72 (100%)	72 (100%)	20 (27.8%)	0 (0%)	43 (59.7%)	21 (29.2%)

program is open to both men and women, virtually all of the participants have been women. Classes are held in local schools or at the clinic sites. These sessions last for one-half day, usually before noon, so that the participants will be able to return to their homes before their children return from school. There are 22 separate sessions during the workweek, and the total program lasts for about 12 weeks. Topics in the curriculum include: (1) self esteem, (2) organizational methods, (3) simple finances, (4) planning, and (5) basic health care. At the end of the course, a graduation ceremony is held, and the participants are given certificates of completion. Subsequently they are encouraged to participate in volunteer activities sponsored by the clinics, and they are also encouraged to become involved in other community activities including school-based activities, church-sponsored programs, and programs that they themselves might develop. Each clinic employs one or two of these individuals who conduct home visits for patients who may be having particular problems with medications or following instructions. The clinic *promotoras* may also conduct community surveys and health care education campaigns as well as provide nursing assistance and interpretation services during clinic hours. These individuals are drawn from the graduates of the training program, but since attrition has been low, vacancies occur only infrequently. Thus, we have assumed that there are few paid opportunities for graduate *promotoras*.

RESULTS

During the past nine years, several courses for residents of the *colonias* of El Paso County have been provided. The results of these training courses are shown in Table 1. As of July 1, 1999, 97 individuals have participated in the program, and 72 have completed the full training program. All of the participants were married at the time of their participation and all had children at home. Only a minority of the women had completed a high school education (27.8%) and none of them had worked outside of the home before beginning the program. Following completion of the course over one-fourth of the women had obtained jobs outside of the home. Employment included clerical jobs for three individuals, one individual working as parent liaison representative within the schools, one individual working as a custodian, and a number employed as classroom aides within the local schools. At least one individual had registered for classes in the community college, and others were contemplating additional training and educational experiences.

DISCUSSION

Community health workers have played an increasing role in the provision of health care services in many settings. They are an important part of the health care system of third world countries (Adamolekun, Mielke, & Ball, 1999) and rural regions of more advanced nations (Anderson, Harris, & McCosker, 1997). In the United States, these individuals have worked within rural and inner city settings to provide important outreach education (Parker, Schulz, Israel, & Hollis, 1998; Sennott-Miller, May, & Miller, 1998). Their effectiveness in the management of chronic illnesses such as diabetes and hypertension has been demonstrated (Corkery et al., 1997; Gerber & Stewart, 1998). Along the entire United States-Mexico border, there is interest in the use of trained lay workers in the provision of health-related

services to the residents of low-income communities, especially the *colonias* and inner-city barrios. These workers are being used in clinics, community centers, hospitals and other health-oriented organizations to identify individuals in need of care, to participate in the follow-up care of pregnant women and persons with chronic illnesses, and to assist in clinic activities. More recently, these *promotoras* have played an important role in enlisting participation in the government-sponsored Children's Health Insurance Program (CHIP). In all of these activities, the *promotora* has been closely tied to a sponsoring organization following participation in a training program organized by that agency (Sharp, 1998).

While these activities are recognized to benefit the organization, the individual and the community, there are additional benefits that have not been previously identified. One of those is the preparation of individuals for entry into the job market. Many of the women who reside in the *colonias* have never worked outside of the home even though they may have wished to do so. The barriers to obtaining work are many and include: cultural and family concerns, distances from the job market, language skills, self-confidence, and low educational achievement. This study demonstrates that some of these barriers can be overcome sufficiently to permit an individual receiving training in a relatively restricted curriculum to work outside the home and gain some sense of achievement. While the main thrust of the *promotora* movement will continue to be the development of a unified curriculum, recognized certification and meaningful job market for practicing *promotoras*, there should also be increased effort to prepare participants for opportunities in other career pathways. Such efforts can only serve to improve the social and economic future for these women and their families (Williams, 1997).

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Issues in Studying Health-Related Hardiness and Use of Services Among Older Rural Adults

Jeanine K. Niemoller, R.N.C., M.S.
Administrator
Extended Care Facility
Ivinson Memorial Hospital
Laramie, Wyoming

Bette A. Ide, R.N., Ph.D.
Associate Professor
College of Nursing
University of North Dakota
Grand Forks, North Dakota

Elizabeth G. Nichols, R.N., D.N.Sc.
Dean
College of Nursing
University of North Dakota
Grand Forks, North Dakota

Abstract

A pilot study to explore the relationship between Health-Related Hardiness and the use of services among 20 older rural adults identified a number of factors to be considered when conducting research with elderly rural subjects. Health-Related Hardiness scores tended to be moderate, positively correlated with the use of total and delivered services and negatively correlated with the use of outpatient services, including health maintenance and preventive services. The low Health-Related Hardiness group had higher total and delivered service use but lower outpatient service use than did the high-rated group. The results suggested that if resources are available, they will be used. While these study findings were inconclusive in good part due to the small sample size, several important theoretical and methodological issues were identified. Most importantly, the results generated questions about the applicability of the concept of Health-Related Hardiness, the measurement of service use, and the use of complicated Likert-type tools and lengthy survey techniques with older adults.

ISSUES IN STUDYING HEALTH-RELATED HARDINESS AND USE OF SERVICES AMONG OLDER RURAL ADULTS

Effective health care delivery depends on the availability of appropriate services and proper use of these services. Providing appropriate services is often difficult due to inconclusive research regarding the health care needs of persons in rural settings. This pilot study addresses relationships between overall health, functioning, and Health-Related Hardiness and the use of services in a sample of rural dwelling older adults.

Use of health services by elders has been found to be most strongly related to need (Branch, Jette, Evashwick, Polansky, & Diehr, 1981; Evashwick, Rowe, Diehr, & Branch, 1984), activities of daily living and poor nutrition (Wolinsky, Coe, Miller, & Pendergrast, 1985). Bartlome, Bartlome, and Bradham's (1992) study of service use by rural elders identified a lower level of perceived health and distance from health care as predictors of service use. Authors disagree whether or not rural elders are disadvantaged in regard to access to services (Dwyer, Lee, & Coward, 1990; Krout, 1989; Krout, 1997) and recommend further study of life conditions and responses to health problems.

Health perceptions have been found to be important determinants of ambulatory health care utilization (Connelly, Philbrick, Smith, Kaiser, & Wymer, 1989), participation in health promotion activities (Riffle, Yoho, & Sams, 1989; Speake, Cowart, & Pellett, 1989), and mortality (Idler & Kasl, 1991; Mossey & Shapiro, 1982). Older studies of self-perceived health also found it to be a valid and reliable indicator of health status among older adults (Ferraro, 1980; Kaplan & Commancho, 1983; Linn & Linn, 1980; Mossey & Shapiro, 1982) although studies found little evidence of physical illness in many patients who perceived themselves as ill (Barsky, 1981; Davies & Ware, 1981). A critical component of subjective health perceptions has been found to be functional health (Idler & Kasl, 1991; Lichtenstein & Thomas, 1987). This may be where actual need is demonstrated and the older adult looks for and accepts assistance.

The concept of Health-Related Hardiness is based on the early work of Kobasa (1979) who saw it as a personality construct comprised of the concepts of control, commitment, and challenge. Hardiness has been likened to adequacy (Magnani, 1990), internal motivation (Maddi & Kobasa, 1981; Pollock, 1989), and self-confidence (Holahan & Moos, 1985). Early studies of hardiness have been criticized for inconsistent findings, theoretical ambiguity, limitations in study samples, psychometric properties, and a propensity to tap maladjustment (Bigbee, 1991; Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987; Wagnild & Young, 1991). The few studies of hardiness in rural populations have used either Kobasa's scale (Lee, 1983, 1991, 1993; Smith, 1990) or the Family Hardiness Index (Carson et al., 1993; Carson, Araquistain, Ide, Quoss, & Weigel, 1994; Dunkin, Holzwarth, & Stratton, 1993; McCubbin & Thompson, 1991). An important factor that is seldom addressed in studies or critiques, but needs to be considered when interpreting findings, is whether the particular hardiness scale used is individually focused as with Kobasa's scale or Pollock's Health-Related Hardiness Scale (Pollock & Duffy, 1990) or focused on the family, as is the case of the Family Hardiness Index of McCubbin and colleagues (McCubbin & Thompson, 1991).

Dunkin et al.'s (1993) study of 206 elders found that, on all subscales of the Family Hardiness Index, respondents had scores above the numerical average but the investigators also noted higher control and hardi-

ness mean scores among the nonrural (defined as living in a community of greater than 2,500 population) in their sample. Lee (1983) identified endurance, strength, boldness and control as critical attributes of hardiness. She also stated that individuals in rural areas with cancer needed to be tougher, or more self-reliant and independent than urban individuals. Using Kobasa's scale, Smith (1990) found higher levels of hardiness to be related to life satisfaction in older rural adults, and Lee (1991) later found higher levels of hardiness to be related to fewer life changes and higher socioeconomic status. In a 1993 study, Lee stated that she found no difference in levels of hardiness in a sample of rural, urban, and frontier elders. Carson and colleagues (Carson et al., 1993, 1994) found those members of Idaho farm and ranch families who had lower levels of family hardiness to be at greater risk for illness and relational problems and those with higher levels to report higher levels of quality of life.

Hardiness is believed to influence illness outcomes by mediating the impact of stressful life events (Tartasky, 1993), helping a person to stay healthy by buffering negative stimuli and influencing perceptions of the stressor. Thus, the person is assisted in choosing coping strategies and the support that they need to survive (Fink, 1995; Henkle, 1994; Lawler & Schmeid, 1992; Schmeid & Lawler, 1986). The study of the concept of hardiness as a health-promoting factor is congruent with the literature on both elders and rural people, in which the value of independent functioning is a recurring theme (Ehrlich, 1985, Dunkin et al.,1990) and with the small body of literature that has found personality variables, especially measures of mastery and control, to be important predictors of health (Folkman, Lazarus, Gruen, & DeLongis, 1986). Here, again, the type of hardiness measure used may be influencing findings. Using Kobasa's scale, Lee (1991) stated that the buffering hypothesis was not supported in her study of 162 rural adults. Family hardiness and its components have been found to be important mediators in regard to family caregiving (Henkle, 1994) and between stress and family wellness (Fink, 1995) and illnesses (Carson et al., 1993). Nicholas (1993) found Health-Related Hardiness (Pollock & Duffy, 1990) to be associated with perceived health status and self-care patterns in small town older adults.

The Health-Related Hardiness Scale (HRHS)(Pollock & Duffy, 1990) measures the presence and not the absence of the components of hardiness and has been found to have stronger relationships with health and the use of resources than the original scales. The HRHS adds the component of involvement in health promotion. Although Pollock defines the three components of health related hardiness as control (the use of ego to appraise, interpret, and make decisions), commitment (involvement in health activities that are appropriate to the health stressors), and challenge (reappraisal of health stressors as a beneficial opportunity), she sees commitment and challenge as closely related dimensions. Commitment to adjust to a health stressor is also a challenge. Health-Related Hardiness has been found to be related to physiological and psychological adaptation to chronic illness, specifically to individuals' perceptions of how the illness affected them (Pollock, 1989), to problem solving ability in persons with chronic obstructive lung disease (Narsavage & Weaver, 1994), health promoting behaviors in older adults (Buenting, 1990; Jones, 1991), and compliance in older adults with diabetes (Ross, 1991). The current study tests differences in use of services in a sample of rural elders according to high and low levels of Health-Related Hardiness, functional health, and self-reported health.

METHODS

The study was a pilot for a larger study of factors relating to elder health care in rural areas. Data were gathered through interviews with a convenience sample of 20 adults aged 65 and over recruited from the Senior Center and local churches and through calls for participation in the local newspaper and church newsletters.

Self-reported health was measured by a single item on a Likert scale ranging from poor to excellent (Schaie & Leino, 1988). For analysis the scores were grouped into 1 = Excellent/Very Good, 2 = Good, and 3 = Fair/Poor. Functional health was measured by 12 items from Stewart and Ware's (1992) scale, according to how often assistance was needed with a task or activity (none, sometimes, or frequently). The authors found an alpha coefficient of 0.92 in their tests; the alpha coefficient was 0.91 in this study. The mean functional health score was 21.75 (SD = 7.05) on a scale from 12-36. After dividing the scores into thirds, the low and high thirds were used to determine low and high functional health (or disability).

Use of health services was measured by the number of health related services used; 12 were listed and eight added for a total of 20. Three summed measures of services used were developed: Total services (20), which also included social services; delivered services (8) (meals on wheels, home health aide, etc.); and out-patient services (8) (public health, physician, physical therapy, etc.). The alpha coefficient for the total services scale was 0.50. Health-Related Hardiness was measured by Pollock's Health-Related Hardiness Scale (Pollock, 1990). Thirty-four items relating to important health beliefs are rated on a six-level Likert scale from strongly disagree to strongly agree. The sample tended to fall into the middle range on the HRHS; possible scores ranged from 34 to 204 but the sample's range of scores was 76 to 142. The mean score for Health-Related Hardiness was 121.05 (SD = 14.64). The alpha coefficient for the scale was 0.73. After dividing the scores into thirds, the low and high thirds were used to determine low and high hardiness levels.

Respondents were Caucasian, financially stable, rural elderly persons who resided in a community of 26,000 in a rural/frontier state. They ranged in age from 66 to 91 (mean age 78). Fifteen were female and five male; eight lived with their spouse, nine lived alone, two lived with relatives, and one lived in assisted living. Most of these individuals were long term residents of the community, having lived there a mean of 38 years (range = 5 to 91 years). Thirty-five percent had lived in the same home for most of those years. Seventy-five percent of the respondents reported an annual income of below $20,000, despite the fact that the mean education level for the sample was in the category of some college education. Over half the participants owned and operated a vehicle, and all could obtain health care within 30 minutes. Three quarters of the sample rated their health as good or very good, although they had multiple medical diagnoses and chronic impairments.

RESULTS AND DISCUSSION

Neither availability nor cost of services were identified as problems. The most frequently used services were homemaker service (8), Senior Center (8), physician (7), home health (7), personal attendant (5), Meals on Wheels (5), and home health aide (4). Correlations between Health-Related Hardiness and the health service use scores were not significant. As expected, the low Health-Related Hardiness group had higher total and

delivered service use but lower outpatient service use than did the high-rated group. The differences in hardiness levels for delivered service use, outpatient service use and total service use were not significant. The highest means for total and delivered services were for those who rated their health as good, and those with the lowest levels of self-rated health used the fewest outpatient services; however, these differences were not statistically significant (One way ANOVA: $F= 0.235, p=0.793$).

This study raised far more questions than it answered. The self-reported level of health was consistent with the commonly held belief that rural dwellers assess health in terms of ability to carry out important functions, rather than absence of disease and disability. Respondents saw themselves in good health, a global concept described by them as the ability to "get around and do things" and be "active" rather than the narrower theoretical meanings frequently found in the research literature (Smith, 1981). The participants in this study rated their health more highly than would a health professional; they focused on functional abilities in the context of their own lives and aspirations, not those of the general community. These individuals used those resources that were available to achieve their desired level of independence, or if they could not achieve that, perhaps developed expectations consistent with their abilities. This suggests that if resources are available, they will be used, but if not the individual will manage. This approach makes the assessment of resource needs more difficult, as individuals may not recognize a need other than one that is being filled.

The meaning of levels of health for rural elders warrants further study, as does further exploration of Health-Related Hardiness and resilience as mediating factors in service use among the rural elderly. The expectation that rural elders would demonstrate a high level of Health-Related Hardiness was not borne out. Perhaps, for this group of individuals who were relatively well educated, health-related services were as important to their continued functioning as were internal characteristics such as hardiness. That participants in the group with high HRHS scores used more delivered services and fewer outpatient or preventive services can be seen as conceptually consistent with prior studies of the mitigating effect of Health-Related Hardiness. Individuals with higher HRHS scores manage the normal stresses of life; however, the magnitude of the disabilities of some of these individuals was probably beyond that level of coping.

The HRHS was not particularly diagnostic in this admittedly small sample. The scores were middle range and not indicative of high levels of hardiness in individuals who were living independently with multiple medical diagnoses and chronic impairments. The ability to remain independent in the face of multiple impairments may be more related to family hardiness than to individual hardiness or to a more complex concept such as resilience. The relationship between individual characteristics, family characteristics, and functioning also warrants further exploration. It was obvious that these individuals used the available services that they needed to obtain a satisfactory level of health, which was defined by them in terms of every day functioning.

The study pointed out the need to develop a measure of service use that is specific and can be used to measure services across a continuum. Previous studies have used limited measures of service use, usually physician visits, hospital days, or home care visits. There are many services available in the community, both formal and informal. The services listed in the instrument were primarily delivered care services. Seven out of eight of those added by respondents were out-patient

services, half being health maintenance and half educational or preventive. In this era of change in health care and the focus on cost containment, it is important to study the use of the range of services to determine whether costs are simply shifting from more traditional services (covered by third party payment) to newer services whose costs are patient or community borne. It is also important to determine whether preventive and educational services are cost effective in rural areas — the delivery of these services may be as labor intensive and expensive as is the delivery of care services due to low population density and geographic constraints.

Other measurement issues generated by this study included the respondents' difficulty with the Likert scale as a response system. As we have noted in other studies with older adults, particularly studies of patient satisfaction with care and quality of life (Biggs, 1995; Hebert, 1995; Ide, 1994), elderly respondents have trouble differentiating amongst the range of options on Likert-type scales. Frequently, they ask for the opportunity to use yes or no responses rather than the gradations of the Likert scale. In addition, although the interviewer used reminder cards and had to review each tool and its responses several times, the varying response formats from different tools are often confusing for them. Those with hearing problems and short attention spans also have a difficult time as interviews progress. It is probable that long surveys fatigue older participants and thus affect the validity of responses.

The participants offered a great deal of qualitative information about their lives and health. While more difficult to analyze, and often seen as "softer," this approach may provide more opportunity for expression, comments, and clarification of information and so potentially richer information to bring to the policy-making table.

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The Borders Without Boundaries Project: Introducing Health Profession Students to Border Health Concerns and Practices

Barbara D. Adams, M.S.A.
Instructor
Department of Family Medicine
UNT Health Science Center
Fort Worth, Texas

Claudia Coggin, M.S., C.H.E.S.
Instructor
Department of Public Health & Preventative Medicine
UNT Health Science Center
Fort Worth, Texas

Robert J. Hastings, M.A.
Associate Director
Office of Border Health
Texas Tech Health Sciences Center
El Paso, Texas

Henri Migala, M.P.H., M.A.
Director
Program Office (North Central Division - East Texas Area Health Education Center)
UNT Health Science Center
Fort Worth, Texas

Muriel Marshall, D.O., M.P.H., Dr.P.H.
Associate Professor
Departments of Family Medicine and Public Health & Preventative Medicine
UNT Health Science Center
Fort Worth, Texas

Abstract

As part of a larger effort to develop culturally competent health care professionals, health profession students visited the Texas-Mexico border area to learn about health care concerns and practices from the people who live and work there. Through first-hand exploration students gained an understanding of the influence of culture and other issues involved in providing health care in a multicultural environment. This article will describe the field experience, its impact on students, and the educational model used.

Introduction

The Texas-Mexico border region is a living laboratory that can provide future health care professionals multiple experiences that stimulate awareness of the influence of culture on health care. To this end, the Department of Family Medicine, Texas College of Osteopathic Medicine, the Master in Public Health Program in the Graduate School of Biomedical Sciences at the University of North Texas Health Science Center at Fort Worth (UNTHSC), and the Office of Border Health at Texas Tech Health Sciences Center in El Paso collaborated to create the "Borders Without Boundaries" project. This project, sponsored by the Health Education Training Alliance of West Texas, was developed to continue the Department of Family Medicine's

initiative to provide medical students with enrichment activities that would introduce them to border and rural health issues early in their education. Such community-based border activities were first conducted in 1995 and 1996 with the assistance of the Lower Rio Grande Area Health Education Center. As a result of this early experience, the need to expand the project to include other health profession students became evident, and in 1997 UNTHSC's Master of Public Health Program joined this collaborative effort.

The complex factors that constitute border health form the context for the health profession students' learning experience. Border health is more than treating illnesses. It is a combination of health status, demographics, geography, language, culture, sociology, and economics. Currently about 19 million people live in Texas. However, the Texas population is increasing at a rate roughly twice that of the nation and this growth trend is likely to continue. Between 1990 and 2030, the Hispanic population is expected to increase by 250%, the Black population by 60%, and the category of Other by 648%. Nearly 90% of the projected growth in the Texas population will be related to growth in minority population groups. By 2030, minorities will make up 63% of the state's population (Texas Statewide Health Coordinating Council, 1998). By 2010 the border region is projected to have 2.8 million residents with 88.4% Hispanic and 9.1% white (University of Texas System Border Health Coordination Office, 1998).

The geographic isolation of the border is key to the complexity of border health. Population clusters are scattered along the length of the border and surrounded by rural and frontier (less than seven people per square mile) regions. This isolation makes transportation a critical factor in regional development and affects access to many services for residents. Health care provider maldistribution also limits access to care.

In addition to geography, cultural, linguistic, and lifestyle differences impact on health status of border residents. Border residents are bilingual and sometimes monolingual, speaking only Spanish. About 59% of the population speak Spanish at home, 19.7% speak English only, and 20.6% speak other languages. One of every four persons who speak Spanish at home does not speak English well (Texas Statewide Health Coordinating Council, 1998).

The border economy is based on agriculture, ranching, tourism, and the twin plant or "maquila" industry. These industries are characterized by low wages and high part-time or seasonal employment. Increasing mechanization has also resulted in the loss of jobs and high turnover among twin plant workers (Twin Plant News, 1999).

Although twin-plant industries are a significant economic element, because they bring immense growth to the area, unemployment is still approximately 8% higher in the border counties than in the rest of the state. Poverty rates indicate that 35.8% of border county residents lived below poverty level in 1990 compared to 18.1% of the state's resident (Texas Statewide Health Coordinating Council, 1998). In addition, college degrees are held by 8.6% of the border population while 13.9% of the state population holds degrees. Hispanics, in particular, are underrepresented among college graduates with approximately 5% holding bachelor's degrees in the state and in the border counties, compared to 16.1% and 17.7% of non-Hispanics, respectively. Only 2.3% of Hispanics in the state and 2.2% in the border area hold graduate or professional degrees compared to 7.6% and 8.9% of non-Hispanics (Texas Statewide Health Coordinating Council, 1998).

Environmental concerns that are a part of border health come in the form of *colonias*, unincorporated settlements that lack the

infrastructure to support public water supplies and waste facilities. More than 750,000 border residents live in such communities. Construction is unregulated and is done with one load of materials at a time with no credit and over-time. New laws have halted further *colonia* development, but there are an estimated 156 *colonias* already in existence in El Paso county alone. Of these, 151 are designated "economically distressed areas" by the Texas Water Development Board and are awaiting access to public water and waste treatment (Sharp, 1998).

With this context in mind, the goals established for this project were to:

1) Provide a community health education experience by exposing students to health care in rural and urban multicultural populations, and
2) Broaden the understanding and awareness of health profession students regarding border health care concerns and practices.

METHODS

During 1997 and 1998, eighteen single or dual degree Doctor of Osteopathy (DO) and Master of Public Health (MPH) students completed a four-day intensive community-based trip to El Paso, Texas and the surrounding areas. In 1997, five students, three in the DO program and two in the MPH program, participated. In 1998, thirteen students participated: six DO students, four dual degree DO/MPH students, and three MPH students. Students were advised of this opportunity through classes, student organizations, and program offices. All students participated in the field trip on an extracurricular basis. Learning objectives and required readings varied slightly among the different type students. All students were given readings relating to border health and were required to write a paper addressing objectives specific to their discipline (See Figure 1).

The trip was designed to allow students to explore the interrelationships of a multicultural community, medical care, and public health. The Office of Border Health at Texas Tech Health Sciences Center was responsible for organizing and coordinating the activities conducted during the field experience. In addition, throughout the trip, a Texas Tech faculty member knowledgeable about the area and border issues acted as a guide. A variety of activities were included, but essentially the model used had three elements:

- presentation and lectures,
- community-based site visits, and
- small group discussion.

The presentations and lectures during the first two days of the trip focused on describing border health issues and the basic principles of cultural sensitivity. These sessions were designed to provide students with a context for what they would see and learn during the community-based visits.

The community-based visits varied from year to year, but included excursions to:

- *Colonias*, the under-developed, unincorporated residential neighborhoods lacking standard United States amenities such as running water or paved roads,
- Clinics and agencies that provide health care and educational services to multicultural under-served populations,
- Border area businesses such as pharmacies or herb merchants that provide health care services unique to the local cultural milieu.

Students also met *promotoras*, community lay health workers, who discussed the key roles they play in fostering better health within the Hispanic community.

Finally, faculty participants facilitated daily discussion sessions to encourage students' assimilation of and insights about their experiences.

RESULTS AND DISCUSSION

The researchers utilized both quantitative and qualitative methodologies to evaluate the project's impact on students. This was not a random sample as the student self-selected to go on the trip. For the 1997 experience students completed only a post-test. Students (n=8) who participated in the 1998 field

Figure 1. Student Learning Objectives

Learning Objective	DO Student	MPH Student
Define three characteristics unique to *colonias* and discuss their impact on health care.	X	X
Discuss the role of the *promotora* as a health education specialist and a health care resource for a 1) community member, 2) clinician, and 3) public health department.	X	X
Discuss what a clinician can do in a border community (or any other ethnic community) that would address the primary health care needs of that community and make their services more accessible.	X	
Discuss how community, social, and cultural dynamics impact on the health of an individual, a family, and the community.	X	X
Discuss the relationship between public health, clinical care utilization, and community needs.		X
Identify and discuss public health resources used in a border community to address the public health needs of the community and to increase the access to services.		X
Identify and discuss the obstacles to a clinician's efficacy in an under-served (ethnic) community.	X	

trip were given a pre- and post-test to determine any change in attitudes (See Figure 2). A five-point Likert scale was used in the responses of the six questions. The Sign Test was chosen to test to determine statistically significant differences between the responses of the pre- and post-test because of the two independent samples with ordinal data.

In addition to the Likert scale questions, students were also asked to list border health issues. On the post-test four open-ended questions were included to investigate the students' perceptions of border health problems. These were:

1. What are the major health problems (public and/or clinical) found in the West Texas border region?
2. What was the most important thing you learned from participating in this experience?
3. How has your perception of border health changed due to this experience?
4. This experience was valuable to me because...

Of the six Likert scale questions, a statistically significant difference ($p=0.05$) between the pre- and post-test was observed for the question about immunizations (See Figure 2, Question 6). At the conclusion of the experience students understood that immunization is an important border health issue.

Based on the 1998 evaluation, there was a significant increase from pre- to post-test in the students' capacity to list border health issues. On the pre-test the students listed a total of 27 different issues, but on the post-test they listed a total of 47 issues, a 75% increase. This demonstrated an increase in their understanding of the complexity of border health. In the literature major specific border health problems that often appear are Tuberculosis (Warner, 1991), STD/HIV/AIDS (Warner, 1991), lack of immunizations (Turner & Hooks, 1997), and Hepatitis A (Redlinger, O'Rourke, & VanDerslice, 1997). Also mentioned are the public health environmental issues of clean water and air quality (Power & Byrd, 1998). Students included these specific conditions on both the pre- and post-tests, matching the issues outlined in the literature. This reflects an increase in awareness of issues relevant to border health. It also appeared by their extended responses that they began to realize the role that poverty, environmental conditions, education, and culture play in the health and well being of a population.

The responses from both the 1997 and 1998 project participants to the four open-ended questions revealed an awakening to the breadth and complexity of border health issues. Students were asked, "What are the major health problems (public and/or clinical) found in the West Texas border region?" Lack of adequate health service, access to care, utilities, sanitation, potable water, and education were listed repeatedly. In addition, students mentioned self-medication, infectious diseases, folk medicine, and communication as significant problems.

Responses to "What was the most important thing you learned from participating in this experience?" focused on the value of learning first-hand about border health issues. These future health care professionals' responses also indicated that they began to understand the value of empowering communities from the inside out rather than from the outside in. Comments revealed a genuine appreciation for the culture and for the individuals working proactively to create change in their communities. One student summed it up succinctly: "Border health issues are easy to dismiss when considering it as a "national" issue. However, once one comes to see the issues and hear them from the people who suffer, one is better able to

understand the circumstances with a better scope toward the magnitude of the problem."

Students were also asked, "How has your perception of border health changed due to this experience?" Responses indicate that this experience changed perceptions in three major ways. Students not only perceived the existence of border health as a dynamic set of factors, but also began to understand it as a set of complex and serious problems. They perceived that border health is a local, state, and national problem not just a Mexico problem and finally that empowering people from within the community is an important means to addressing these problems.

The question "This experience was

Figure 2. Pre- and Post-test Items

Item	Pre-test	Post-test
1. Health issues along the Texas border are more of a Mexico issue than a Texas issue.	X	X
2. A person's cultural beliefs are important to the outcome of a medical treatment.	X	X
3. Mexico has an official health department similar to the public health department in Texas.	X	X
4. Border health is a term that refers only to the Texas-Mexico geographical border.	X	X
5. *Colonias* are neighborhoods planned by a developer.	X	X
6. Since Mexico has a border with the United States, no immunizations are recommended for travel.	X	X
7 - 12. List six (6) border health issues.	X	X
13. What are the major health problems (public and/or clinical) found in the West Texas border region?		X
14. What was the most important thing you learned from participating in this experience?		X
15. How has your perception of border health changed due to this experience?		X
16. This experience was valuable to me because....		X

** The "X" indicates what test included the item.*

valuable to me because" required participants to indicate their personal value of the project. Selected student quotes best illustrate this qualitative aspect of the field experience. Some examples include the following:

- "As a future physician and public health professional, it has allowed me to adapt and understand my mental training for my future work."
- "It opened my eyes to how much can be accomplished by cooperatively working with community members instead of imposing pre-formed ideas of what a community needs and wants."
- "I was impressed by the enthusiasm and sincerity of the individuals that we met during this trip and am much more optimistic about the possibility of proactively and effectively creating change and ameliorating problems along the border."

CONCLUSION

One of the project goals was to broaden students' knowledge and change perceptions of border health issues. Evaluation results and student comments show a change in attitude, increased knowledge of border health issues, and awakening to the fact that health care and public health must partner to achieve a healthy community. This experience introduced these students to qualitative aspects of health care and reinforced the osteopathic philosophy of viewing the patient as a whole person including family and community.

This project was also a learning experience for every collaborator involved in the endeavor. It was quickly realized that the education model utilized—lecture, community site visits, and group discussion—could be replicated anywhere with any type of students. The key to the success of this model, however, is to have someone within each institution and/or department who coordinates and guides the experiences. Someone who knows the communities and the issues within those communities is needed to facilitate students with the connections between the knowledge base and the experiential base.

This project evolved from 1997 to 1998. From information obtained in the 1997 post-experience evaluation, the activities for 1998 were refined to a more community-oriented approach of visits to organizations serving a multicultural population. The inter- and intra-institutional collaboration proved to be a valuable element in this endeavor since it allowed the involved parties to generate ideas from several disciplines' perspectives and to pool resources to create the project.

To develop a health care system that addresses the health needs of the whole person within the context of family and community, health care professionals must be educated about how racial, ethnic, and cultural idiosyncrasies can affect behavior, lifestyle, health status, and access to health care. Although it may not be possible, in the near future at least, for the Texas health care system to reflect the racial and ethnic patterns of the state, there is increasing demand for the health care workforce to be more culturally competent and diversified. Health educators must take a leading role in helping to prepare the future health care workforce to be knowledgeable and sensitive with regard to the various cultures, customs, and health beliefs they will regularly encounter while providing health services to our population.

The border has been called a region with growth, but not prosperity. With more than 55.5 million border crossings occurring annually through Texas border cities, there is no real boundary between the United States and Mexico. Thus, the heathcare problems in

border areas become totally relevant to those of rural and under-served areas of Texas. More than anywhere else in Texas the border region is an ideal location for students to experience the influence of culture on the health and well-being of an individual, a family, and a community.

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Acanthosis Nigricans in Youth: A Type 2 Diabetes Marker

Paul Villas, D.Ed., C.H.E.S.
Executive Director
Texas-Mexico Border Health Coordination Office
University of Texas- Pan American
Edinburg, Texas

David Salazar
Health Education Director
Texas-Mexico Border Health Coordination Office
University of Texas- Pan American
Edinburg, Texas

Doreen D. Garza, M.P.H.
Assistant Director
Texas-Mexico Border Health Coordination Office
University of Texas- Pan American
Edinburg, Texas

Evangelina T. Villagomez, R.N., M.S.N.
Diabetes Specialty Representative
Bayer Corporation
San Antonio, Texas

Teresa Lightner, M.D.
Professor of Internal Medicine
Valley Diagnostic Clinic
Harlingen, Texas

Abstract

This study examined the association between acanthosis nigricans markings on the neck region of Mexican-American sixth-grade students and glucose and insulin levels, obesity, hypertension and hyperlipidemia. Acanthosis nigricans is a skin marker associated with hyperinsulinemia, indicative of insulin resistance and the propensity to develop Type 2 diabetes. The physical appearance is characterized by light brown-black, velvety, rough, or thickened areas on the surface of specific body regions, usually the neck and axillae. Two hundred forty-one sixth grade students were examined during a required scoliosis screening and 48 were identified with acanthosis nigricans markings on the neck region. Data were collected from 34 sixth-grade students. Descriptive mean scores indicated a positive relationship between acanthosis nigricans markers and exiting conditions that signaled the potential for future health problems. The presentation of the skin marker in this study was more common than in previously reported studies of Mexican-American children with diabetes risk and suggested that the condition can be used as a predictor of future consequential medical circumstances.

INTRODUCTION

Acanthosis nigricans (AN), a hyperkeratinization of the skin, is a cutaneous marker associated with such systemic disorders as hyperinsulinemia and insulin-resistance and may serve as a risk factor for Type 2 diabetes (Gilkinson & Stuart, 1992; Shwartz, 1994; Stuart et al., 1998). Insulin-resistance and compensatory hyperinsulinemia are linked to obesity, hypertension, hyperlipidemia, stroke and cardiovascular disease. These disorders ultimately result in pancreatic exhaustion, which leads to Type 2 diabetes (Stuart, Pate, & Peters, 1989; Gilkinson & Stuart, 1992; Shwartz, 1994; Bao, Srinivagan, & Berenson, 1996; Odeleye, Courtem, Pettitt, & Ravvssin, 1997; Stuart et al., 1998). The condition frequently manifests itself on the nape and sides of the neck, but it is also found on the axillae, elbows, knuckles, knees, and groin area (Shwartz, 1994).

The rising number of youth-onset Type 2 diabetes cases has heightened new interest in the public health sphere, particularly in cases where AN has been present at the time of diagnosis (Knowler, Pettitt, Savage, & Bennett, 1981; Pinas-Hamiel et al., 1996; Scott, Smith, Cradock, & Pihoker, 1997). Hispanic, Native-American, and African-American populations are genetically predisposed to higher insulin levels and concomitantly have a higher prevalence for these lesions (Reaven, 1988; Stuart, Smith, Gilkinson, Shaheb, & Stahn,1994; Stuart et al., 1989). Mexican-American children are the focus of this investigation. In a school based survey of adolescents with AN, Mexican-Americans accounted for 6% of the total (Stuart, 1989). However, the association between insulin-resistance, hyperinsulinemia, and AN as a risk factor for Type 2 diabetes in Mexican-American children is not well documented.

The Rio Grande Valley (RGV) in Texas is a unique demographic area where Mexican-Americans account for 87% of the population and where 48% of the population is under the age of 25. A recent survey from the Texas-Mexico Border Diabetes Registry reported that the RGV has a diabetes prevalence rate of 21.4% (Villas, 1999). Since the development of AN markers is more prominent during pre-puberty and the start of puberty, Mexican-American sixth grade students from an elementary school were selected to be screened for AN markings. Sixth grade students were also selected because the AN screenings were to be conducted in conjunction with state required scoliosis screenings. The children were also evaluated for hypertension, hyperlipidemia, and body mass index.

The RGV's high diabetes prevalence rate was the impetus to determine the extent of the diabetes health related problems in youth, hyperinsulinemia, hyperlipidemia, and diabetes to determine the prevalence of AN in the Rio Grande Valley and understand the degree of influence of its concomitant factors.

METHODS

Sample: Data were collected from 241 Mexican-American sixth grade students that attended elementary school in the RGV. Both male (n=115) and female (n=126) students were included in the initial screening. Of these, forty-eight students were identified with AN markings during a required scoliosis screening. The parents of students with the identifiable AN markings were informed of their child's condition and the possible health implications associated with AN. The parents were informed that glucose and insulin-screening tests were planned for children with AN markings. Parents who wished to have their child participate in the screening were instructed to inform the school nurse. At

least one parent or guardian needed to accompany the student and be present during the screening. On the day of the scheduled screening, 34 students were present with their parents or guardians for the procedure. A local hospital assisted with the screening and employed an approved standardized protocol. Parents and guardians of the children who were screened were informed of the procedure and were required to read and sign all proper documentation. Prior to the screenings the children were measured for body mass index and blood pressure. Blood pressure measurements were taken in accordance to normative blood pressure data in children and adolescents based on recommendations from the National High Blood Pressure Education Program Coordinating Committee (Pediatrics, 1996).

Procedure: Clinical staff from a local hospital conducted the screenings. Fasting blood samples were collected from 34 sixth grade students early in the morning of the screening followed by another blood screening two hours later after consuming 75gm of a concentrated glucose drink. Screenings were completed in three-and-a-half hours.

Blood samples were analyzed in the hospital's laboratory. The glucose parameters employed to determine blood-glucose concentrations ranged from 70-115 mg/dl (fasting) and 70-140 mg/dl (two-hour). Fasting insulin parameters employed ranged from 5-10mU/ml and for two hours the range was 20-30mU/ml. Body mass index was calculated using the student's height and weight to determine obesity (Green, 1994). Blood cholesterol parameters ranged from 0-180mg/. Descriptive data analyses were accomplished utilizing SPSS procedures.

RESULTS

Forty-eight (20%) students from a sixth grade population of 241 were identified with AN markings. Thirty-four participated in the fasting and two-hour glucose and insulin screening protocol. Data were collected and analyzed using percentages and central tendencies.

The fasting glucose tests determined all students to be classified with normal glucose levels. The two-hour glucose test determined three students (9%) had elevated blood glucose levels that classified them as having impaired glucose tolerance (Figure 1).

The fasting insulin test determined 20 children (59%) with elevated insulin levels. The two-hour insulin test determined 25 (74%) with elevated blood insulin levels (Figure 2).

Body mass index results indicated that all of the children with acanthosis nigricans were within ranges that could lead to obesity-related complications (Figure 3).

Indeed, cholesterol results determined that 20 (59%) children had elevated cholesterol levels (Figure 4). Blood pressure results showed that 8 (24%) of the children had abnormal blood pressure readings (Figure 5).

The current study supports an earlier association between AN markers, hyperinsulinemia, and obesity (Stuart et al., 1989). Twenty-nine of the 34 students screened were determined obese utilizing body-mass-index scales and 20 of them also had elevated cholesterol levels. A children's cholesterol scale developed by the American Health Association was employed.

DISCUSSION/RECOMMENDATIONS

Children in the present study with AN markings had elevated insulin levels, hypertension, hyperlipdemia, and were obese.

Figure 1. Results for Children with Acanthosis Nigricans After Administering a 75-gram Glucose Challenge – Two-hour Glucose.

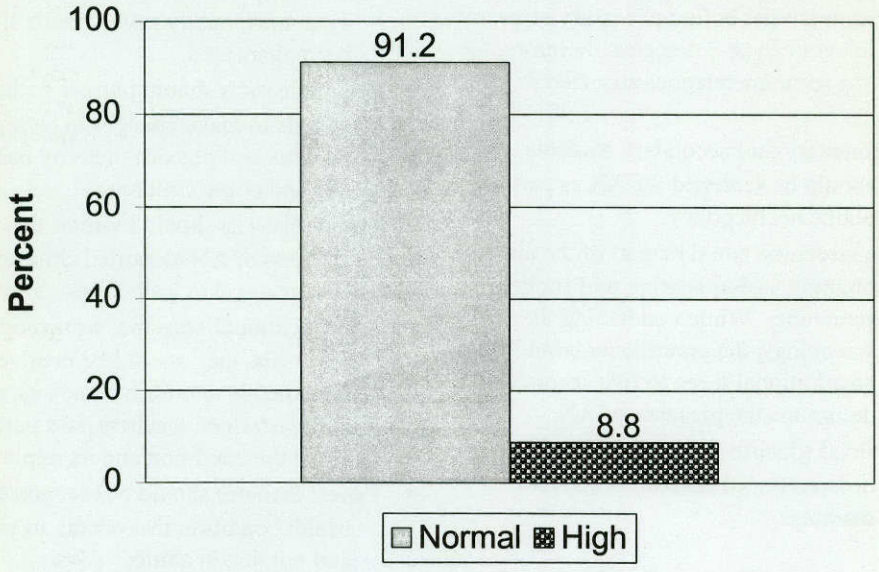
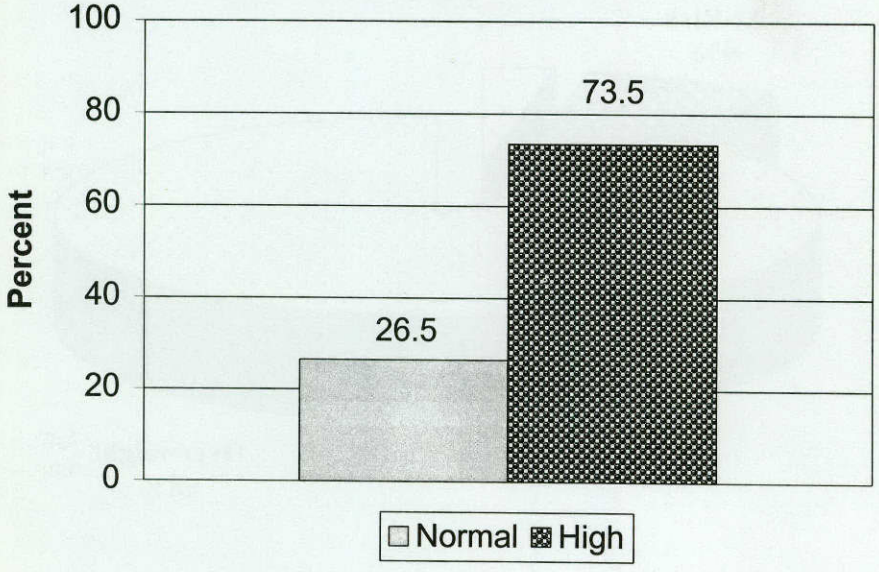


Figure 2. Results for Children with Acanthosis Nigricans After Administering a 75-gram Glucose Challenge – Two-hour Insulin.



Since hyperinsulinemia indicates insulin resistance, the prognosis of developing Type 2 diabetes in the study population is evident. The identification of insulin resistance in a population is vital before necessary steps are taken to avoid Type 2 diabetes; therefore, the following recommendations are offered:

- Elementary and secondary students should be screened for AN as part of a public health policy.
- The screening could be part of the already ongoing vision/hearing and scoliosis screening. While conducting the said screenings, the practitioner would take an additional three to five seconds to determine the presence of AN.
- A blood glucose and insulin test should be ordered for all students with AN markings.
- Since no pharmacological intervention is currently available or recommended, a lifestyle change, which reduces obesity rates, implements exercise, and encourages nutritionally sound meals should be implemented.
- School districts should partner with parents to make changes in eating patterns and physical activity habits of AN and obese children.
- School districts should monitor the progress of AN identified children for changes in skin lesions and fat loss.
- AN educational sessions, workshops, symposia, etc., should be conducted periodically to inform clinicians, school administrators, teachers, and parents about the condition and its implications.
- Type 2 diabetes should be recognized as a health condition that occurs in youth and not just in adults.

Figure 3. Results for Children with Acanthosis Nigricans Measured for Body-mass Index.

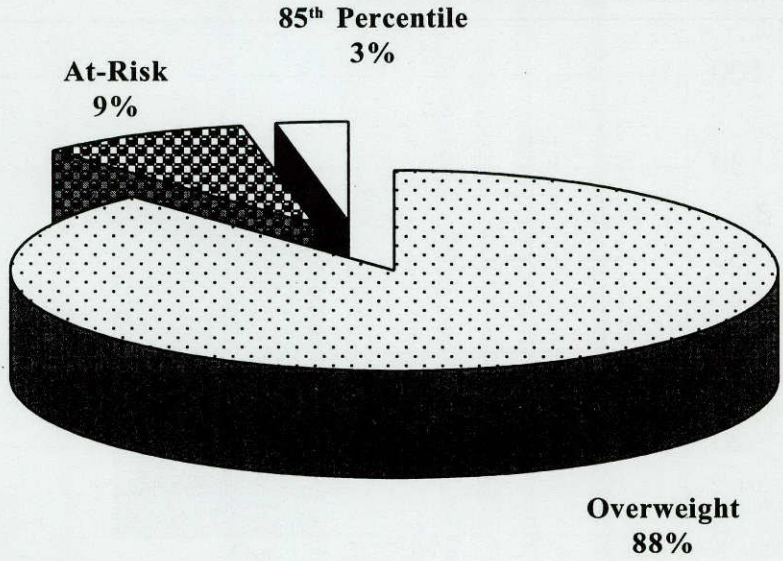


Figure 4. Cholesterol Results for Children with Acanthosis Nigricans.

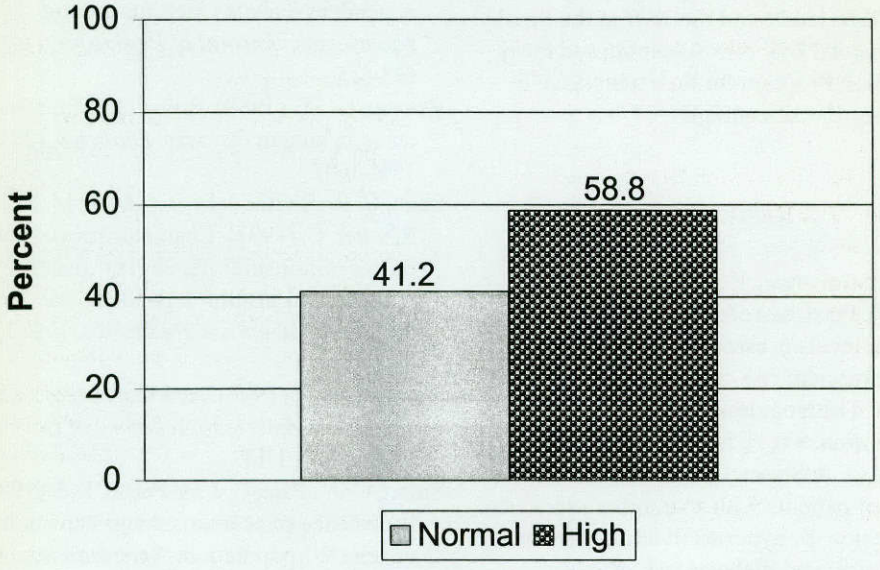
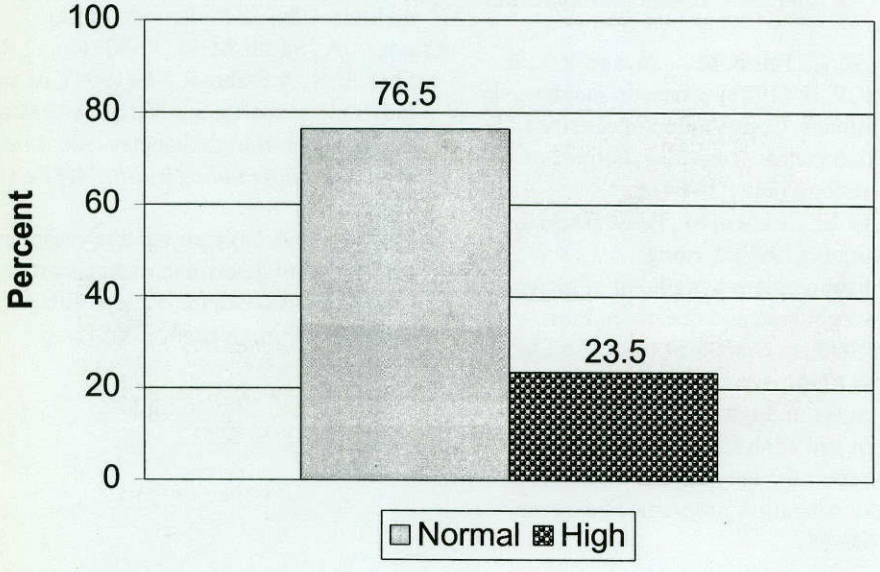


Figure 5. Blood Pressure Results for Children with Acanthosis Nigricans.



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