Improving Health in Hard-to-Reach Communities Texas Medicine February 2018

Demonstration Models of Public Health Delivery in Rural East and West Texas Communities

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The health impact pyramid offers a framework for considering the relative significance of socioeconomic determinants of health and for prioritizing interventions that may be effective in improving health outcomes in hard-to-reach and rural populations. Barriers to health care delivery in rural settings are outlined with examples provided. Demonstration projects in East and West Texas are reviewed. Those programs reach unique populations such as agricultural and migrant workers and those with mental illness by using innovative approaches, such as the use of specially trained community health workers and telehealth and telemedicine. Having a health impact on hard-to-reach groups and rural populations is largely a function of overcoming numerous barriers. Adopting a population health approach that engages the community in overcoming those barriers is likely to be more effective in producing improved health outcomes.

Introduction

In the wake of Hurricane Harvey and the devastation to life and property wrought on the Texas Gulf Coast and the Houston area, the implications for health will be felt far and wide. As in disaster-free periods, however, there may be relative differences experienced by more rural and hard-to-reach communities compared with urban areas. The reasons have little to do with the natural history of disease, but more so with the circumstances that characterize rural living and that alter risk and may influence this natural history.

Understanding the health impact pyramid in normal times, in times of disaster, and in times of recovery provides a framework for recognizing that interventions of a public health nature often reach broader segments of society with less individual effort and maximum possible sustained benefit.[1]

In this special issue of *Texas Medicine*, acknowledging that this health impact pyramid helps to prioritize the application of intervention resources in health care delivery that stresses the relative effectiveness of addressing socioeconomic determinants or factors in promoting individual decisionmaking is useful. In turn, healthy decisionmaking offers long-lasting protection, often very different from clinical interventions and health education and counseling. More specifically, the latter require more intensive individual effort and have less population impact.[1] The tension or dynamic between those who argue for clinical care versus public health interventions is certainly not new.[2] Increasingly, it is becoming clear that a prevention paradigm more fully integrated with traditional health care offers a greater yield in terms of health outcomes.

Background

In the context of rural environments, there are significant health care barriers that characterize these settings.[3,4] Table 1 provides a partial list of some of these obstacles. Foremost are socioeconomic factors that make it difficult for people living in rural settings to secure access to information and services for health protection, health improvement, and general care. Financially, the residents are poorer with greater unemployment and lack of health care insurance coverage. Diet and nutrition contribute to chronic disease (such as diabetes) and pose challenges due to cost and lack of proximity to health care resources. A second major underpinning in rural settings is limited access, often due to a limited health care workforce that is not multidisciplinary and lacks breadth and depth. Absence of transportation resources and distance limit access and create isolation, as does the absence of technology (high-speed internet). Trust and confidence in the health care community also may be more difficult to establish. Other difficult-to-reach groups such as migrant workers, those with mental illness, and prisoners may experience some of the same obstacles.

Northeast Texas is a good example, based not only on being one of the state's largest rural populations but also on the disease burden in this region. County health rankings[5] and the Regional Health Plan (RHP) 1 for 28 counties in Northeast Texas (under the Texas 1115 Medicaid Transformation Waiver) suggest that Northeast Texas is older, poorer, and less educated compared with the rest of the state. The region also has a suicide rate 65 percent

higher than the rest of the state.[6] In a similar vein, while characterizing this region as a "51st state," Northeast Texas ranks 45th or worse in mortality compared with other states in the United States for a number of the highest causes of death (e.g., it ranks 51st for stroke).[7]

What Is Population Health, and How May It Be Improved in Difficult-to-Reach and Rural Settings?

Population health is a term that means many things. To some, it refers to software tools that automatically compile information from electronic health records pointing to clinical quality measures on a provider's patient population. An example might be the proportion of a practitioner's patients who have good "control" on risk factors such as blood pressure, lipids, hemoglobin A1c levels, and appropriate vaccinations. For others, population health is an approach that leads to improved health of an entire cohort (a neighborhood, a work sector or group, a census track, a county, or even a region or state) that is accomplished by reducing health inequities among groups of people (the homeless, low income, elderly, those with chronic disease, workers, or ethnic or cultural minorities). Whenever we read the term "population health," we ought to remember that to those who pay for care, it likely means "assessing the health care needs of a specific population and making health care decisions for the population as a whole rather than for individuals."[8]

Population health entails a holistic effort. It will take a multidismultiiciplinary, multi-stakeholder approach of compromise and consensus-building to establish priorities and distribute resources in an equitable and affordable manner. That does not diminish the role of medicine or clinical care, but makes for a shared responsibility to produce an outcome that is valuable to society. It implies that we will rely on the evidence base produced by sound research methods, combined with the adoption of best practices, to develop new ways that could transform health delivery and outcomes. It will be important to critically evaluate what we do to determine if we are making progress. Population health is a team sport — the team may be led by doctors or other health care professionals, but all stakeholders play an important role. Policymakers and decisionmakers must join in, and they must agree that action needs to be taken on a comprehensive array of determinants of health if we are to positively impact many of the factors that affect population health outcomes. An innovative approach also will be required to identify new opportunities and targets for intervention, particulary in rural settings and for hard-to-reach populations.

For example, where transportation represents an access barrier, there could be a myriad of effective solutions at influencing health outcomes — solutions such as travel vouchers, mobile clinics, and telemedicine to bring care to those in need. The response to Hurricane Harvey is and will continue to be a dramatic example of how this is true. It is essential to realize that new systems of care, those that serve populations, will need to have multiple points of entry — workplaces, schools, malls, and churches, not just hospitals or clinics. Communication technology and new members of the health care workforce, such as

community health workers, will have to be integrated into this effort to help meet the need for overall coordination of care through better care navigation, information sharing, and patient education.

The health of individuals and groups is a combined result of their own health practices and the impact of the physical and social environments in which they live, work, pray, and play. There is an interaction among people and their surroundings. Settings, consisting of places and things, have a physical and psychological impact on people's health. To enjoy optimal health, people need opportunities to meet their physical, mental, social, and spiritual needs. Health care, health protection, and disease-prevention initiatives complement health promotion. Comprehensive approaches will include a strategic mix of the different possibilities for action. All of this action must engage the community — they must decide what will be included and what will be supported by their actions. Meaningful participation in the development and operationalization of policies and programs is essential for communities to influence the decisions that affect their health. Our job is to join them in that effort and to be the leaders helping them find workable solutions.

Many models engender these ideas. What follows are some demonstrations of how this is being accomplished in rural areas and among hard-to-reach communities of East and West Texas.

East Texas and UT Health Northeast

The Northeast Texas Center for Rural Community Health
In December 2011, Texas received federal approval of the 1115 Medicaid Transformation Waiver, which would allow the state to expand Medicaid managed care while at the same time preserve hospital funding under a new methodology.[9] This waiver also provides funding to conduct demonstration projects intended to improve health and quality while reducing cost (The Triple Aim). By its very name and intent, the waiver and these Delivery System Reform Incentive Payment (DSRIP) projects were designed to be transformative to the health care of Texans. Public and private hospitals, as well as mental health authorities and public health departments, partnered in new ways to achieve greater access to care for Medicaid, low-income, and uninsured patients while maintaining these three aims.

The University of Texas Health Science Center at Tyler (UTHSCT) was chosen as the anchor for Region 1 to coordinate the development of a health improvement plan designed to achieve the goals of The Triple Aim. As a university medical center, the University Physician Associates (UPA) of UTHSCT served as the performing provider for many of these projects across the region in collaboration with other major hospitals and numerous other stakeholders. The Northeast Texas Center for Rural Community Health, approved by the UT System, was established as the home for developing these DSRIP projects in keeping with the requirements of the waiver and based upon best practices and scientific evidence. Working together to improve health care, the mission of the center was to initiate and engage in activities that support community health in a manner intended to improve the health and

quality of life of the area's rural population. Table 2 summarizes some of these DSRIP demonstration projects along with several other projects that now come under the direction of the center.

Southwest Center for Agricultural Health, Injury Prevention, and Education
In many specialty areas of medical practice, little attention is given to the special needs of nonurban populations. Small employers (e.g., those with fewer than 100 employees) are not unique to rural communities. However, rural communities often lack the infrastructure for developing and sustaining a preventive approach to occupational disease and injury, particularly for specific work sectors such as agriculture and construction where the hired and/or migrant workforce may constitute the majority of employees.

"The Southwest Center for Agricultural Health, Injury Prevention, and Education was created in late 1995 at the University of Texas Health Northeast to serve Arkansas, Louisiana, New Mexico, Oklahoma, and Texas as part of a program initiative of the National Institute for Occupational Safety and Health (NIOSH). The initiative established a network of centers, funded on a competitive basis, to conduct programs of research, prevention, intervention, education, and outreach designed to reduce occupational injuries and diseases among agricultural workers and their families."[10] The Southwest Center leverages a network of strategic partners that represent the diversity of the workforce and range of agricultural production in the region while supporting research that leads to action to improve the health and safety of the agricultural community. This includes reaching unique and vulnerable workers throughout the region, such as Hispanic migrant and seasonal workers and Vietnamese commercial fishermen, focusing on regional concerns and sustainable interventions.

West Texas and Texas Tech University Health Sciences Center (TTUHSC)
The F. Marie Hall Institute for Rural and Community Health at TTUHSC is the primary liaison with communities across a 108-county service area with the mission of improving the health of West Texans. The institute develops and coordinates a wide range of community projects that include "assisting with the creation and implementation of sound rural health policies; focusing on health education and health workforce development (West Texas Area Health Education Center [AHEC]); sponsoring and conducting applied research and policy analysis; and improving the health of communities through innovative research, health education, and health care service delivery."[11]

A Role for Community Health Workers (CHWs) in Mental Health Care Delivery

Dramatic changes have occurred in mental health treatment during the past decade, including more community-based care, greater integration with primary care, and much more reliance on midlevel providers. Nevertheless, an unmet need for treatment remains greatest in traditionally underserved groups, including the elderly, racial-ethnic minorities, those with

low incomes, those without health insurance, and residents of rural areas. Some have posited that using CHWs holds promise for bridging the gap between mainstream mental health care and the community's health.

The Texas Department of State Health Services identifies the CHW or promotora as "a trusted member, and has a close understanding of, the ethnicity, language, socio-economic status, and life experiences of the community served."[12] The Bureau of Labor Statistics has outlined potential roles for the CHW (Table 3).[13]

The American Public Health Association's classification best defines a CHW as "a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served."[14] While CHWs have varying roles and titles, they have been documented since the 1950s as effective in many cultural and health settings and addressing many difficult health issues. A recent Commonwealth Fund publication suggested that CHWs can transform mental health care as a disruptive innovation that leads to system improvements, as they are easily integrated into care teams and workflows, and bring the community needs to the conversation.[15] The National Council for Behavioral Health in a recent report lists using CHWs as a best practice because they can make services more culturally responsive "to educate patients, identify resources, provide case management, support care coordination activities, and become part of an individual's support network."

CHWs who are prepared to understand behavioral health (mental illness and addiction disorders, mental health systems and navigation, and interventions such as mental health first aid) become "initiator level providers" who advocate for and bring the needs of the people in their communities to the care systems. They also expand the responsiveness of these systems to better serve their communities. TTUHSC bridges the gap with new training programs for CHWs in behavioral health inclusive of competencies in telehealth.

TTUHSC Telemedicine/Telehealth

TTUHSC, through the TexLA Telehealth Resources Center, provides technical assistance and resources to telehealth programs in Texas and Louisiana. This includes guidance for telehealth planning, implementation, management, and sustainability. The center provides national webinar series, telehealth training videos, and telemedicine workshops. Additionally, TTUHSC provides telemedicine support for correctional managed care populations in West Texas as well as for psychiatric services provided to secondary-school students screened for and identified with risk-based behaviors.

Conclusion

Having a health impact on hard-to-reach groups and rural populations is largely a function of overcoming numerous barriers that may exist not only in receiving traditional medical services, but also in terms of health promotion and health protection. Approaching these communities with a population health framework that recognizes the significance of

socioeconomic determinants and the opportunities for innovative intervention that emphasize the role of engagement by the target audience is important in determining effectiveness. Many ongoing demonstration projects in both East and West Texas characterize this approach as have been illustrated here.

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Table 1. Barriers to Health Care Delivery in Rural Settings

- Workforce shortages
- Lower socioeconomic status
- Reliance on supplemental food programs
- Transportation difficulties
- Tobacco use among rural youth
- Limited high-speed internet access
- Lack of insurance and higher rates of unemployment
- Health inequities — vehicle crash-related fatalities, injury related deaths, burden of chronic disease, youth suicide
- Lesser access to preventive and disease detection services
- Communication concerns and lack of confidence in quality and confidentiality

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Table 2. Several Projects Directed by the Northeast Texas Center for Rural Community Health

- Implementation of a patient-centered medical home delivery model at multiple sites across the region
- Behavioral health integration into primary care using validated screening measures for depression as a platform for implementation, and co-location of clinical psychology with primary care for direct referrals
- Expansion of palliative and supportive care services, both inpatient and outpatient with multidisciplinary teams
- Training and deployment of community health workers and patient services coordinators in novel settings, including chronic disease settings and behavioral health, with emphasis on pre-visit planning;
- Colon cancer screening in populations with health disparities combining waiver resources to reach disparate populations in nontraditional settings (e.g., churches) and Cancer Prevention & Research Institute of Texas (CPRIT) grant funding to support colonoscopy and fecal immunochemical test (FIT)
- Access to mobile care services for pediatric asthma in school settings

- Referral of chronic disease patients and children for dental preventive services in collaboration with an academic dental hygiene program
- Pairing registered nurses with low-income, first-time mothers to improve prenatal care and child development (nurse-family partnership)
- Collaborating with the Texas Health Improvement Network and the Episcopal Health Foundation to conduct a community needs assessment and to map health care resources available within a multicounty area

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Table 3. Potential Roles for the Community Health Worker[13]

- Assist individuals and communities to adopt healthy behaviors
- Conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health
- Provide information on available resources, provide social support and informal counseling, advocate for individuals and community health needs, and provide services such as first aid and blood pressure screening
- Collect data to help identify community health needs

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