Kronkosky Charitable Foundation

Research Brief

Rural Healthcare

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In Texas, 177 of the state's 254 counties, or 70%, are classified as rural (Texas State Office of Rural Heath [TSORH], 2012). "The White House Office of Management and Budget defines nonmetro (rural) areas as any county that is not part of or adjacent to an urban core area of at least 50,000 people" (National Advisory Committee on Rural Health and Human Services, 2017). Rural American populations face a variety of economic, cultural, social, educational, and political disparities which reduce the ability to live a healthy life. As a result, the need for all types of health care services in rural areas continues to grow (National Rural Health Association [NRHA], 2017).

TABLE 1 COMPARISON OF RURAL AND URBAN UNITED STATES

	Rural	Urban
Demographic Data		
Population	19%	81%
65+ years	18%	12%
White ethnicity	82%	45%
Poverty rate	22%	16%
Health status fair/poor	20%	16%
Availability of health care		
Physicians (per 10,000)	13	31
Medical specialists (per 100,000)	30	263
Insurance/Government support		
Medicare (dual-eligible)	30%	70%
Medicare without drug coverage	43%	27%
Medicaid	16%	13%

(NRHA, 2017; United States Department of Agriculture Economic Research Service [USDA], 2017a)

RURAL HEALTHCARE PRIORITIES

The greatest health care needs of rural populations were researched for the *Rural Healthy People 2020* Project, a companion for the national objectives outlined in *Healthy People 2020*. "The goal of *Rural Healthy People 2020*, as it was with *Rural Healthy People 2010*, is to serve as a guide and benchmark for updating and translating the current state of rural health priorities and disparities, and serve as a roadmap for updating federal and state leaders on rural health priorities identified through the national Rural Healthy People 2020 survey" (Bolin, et al., 2015a, p.ii). A total of 20 current rural health priorities were identified and ranked as the highest priorities in rural health care. In order of importance, the ten top-ranked rural health priorities are listed below, along with supporting statistics and information.

1. Access to Health Care

Selected as the top rural health priority by over 75% of respondents to the national survey, this focus area highlights three issues:

a. Access to quality health insurance

Approximately 29 million Americans were without health insurance in 2015 (Kaiser Family Foundation [KFF], n.d.a). 12% of nonelderly rural Americans do not have health insurance, compared to 11% of those living in large metropolitan areas. Texas currently retains the highest rate in the country of people without insurance at 17.7% overall, but 21% of those in rural areas are uninsured (KFF, 2016). "Individuals living in rural areas are less likely to be employed and more likely to be low-income than individuals living in other areas. Individuals in rural areas also face significant barriers to accessing care, including provider shortages, recent closures of rural hospitals, and long

travel distances to providers" (Foutz, Artiga, and Garfield, 2017, p.1).

b. Access to primary care

In nearly every specialty, there are fewer medical professionals throughout rural America compared to professionals in urban areas. While approximately 20% of Americans live in rural areas, only 11% percent of physicians practice in rural America (Bolin, et al., 2015a). Common reasons health care providers choose not to practice in rural areas include lower pay in the face of increasing student debt, the perception that family practice is a less intellectual pursuit, isolation from other professionals, difficulty of meeting spouse's needs (employment and education), and less time off of the job (American Academy of Family Physicians, 2014). Another concern is the aging of the medical profession, particularly in rural areas.

Approximately 28% of rural primary care providers are nearing retirement age, compared to 26% of urban providers. In the most remote rural regions, the rate jumps to 29%. Additionally, the youngest primary care providers are choosing to work in urban settings more often than rural ones (Fordyce, Doescher, and Skillman, 2013).

Like the rest of the country, rural Texas is experiencing severe shortages in all areas of health care, especially primary, mental health, and dental health care. Texas has 432 designated Health Professional Shortage Areas (HPSAs) for primary care alone. That number includes 70 whole counties with inadequate health resources, one of which is Bandera County. Bexar County has four Medically Underserved Areas (MUAs) designations related to geographical areas and population groups (Health Resources and Services Administration [HRSA], 2017; KFF 2017).

c. Access to emergency medical services

There is a critical need for emergency medical services in rural regions. Injuries obtained in rural areas have a tendency to be more severe than those in urban areas. For example, 51% of traffic fatalities occurred in rural areas even though only 19% of the U.S. population lived in rural areas in 2015 (National Highway Traffic Safety Administration, 2017). With the aging of rural populations, it is expected that there will be an increase in demand for EMS services. With sparse populations and fewer tax dollars to fund EMS programs, the cost of EMS services is high. "Most rural communities rely heavily on volunteer emergency medical technicians (EMTs), since low call volume makes it cost-prohibitive to operate with paid personnel" (Rural Health Information Hub [RHIhub], 2016b).

A 2006-2007 national survey of emergency medical services agencies (Freeman, Slifkin, & Patterson, 2008) provides statistics comparing rural and urban emergency medical services (Table 2).

TABLE 2 COMPARISON OF RURAL AND URBAN EMERGENCY MEDICAL SERVICES

	Rural	Urban
Median square miles covered	150	47
Median number of people served	4,992	15,500
Affiliation (%)		
Freestanding	49.8	34.5
Fire department	38.0	55.9
Hospital	10.0	4.6
Police department or other public safety	2.2	5.0
Provided services (%)		
Emergency	96.1	94.8
Non-emergency	53.9	36.7
Inter-facility transfer	46.3	25.6
First responder (non-transporting)	13.5	14.6
Vehicles used (%)		
Ambulance	89.2	81.5
Helicopter	4.5	6.8
Aircraft	1.1	0.9
Off road vehicle	12.2	9.4
Boat	9.2	11.5
Staff compensation (%)		
All volunteer	48.6	30.0
Salaried/Hourly	25.3	37.0
Volunteer and paid	26.1	33.0
Certification (%)		
Basic	21.5	15.1
Paramedics/Intermediate level	78.6	84.9

(Freeman, Slifkin, & Patterson, 2008)

2. Nutrition and obesity

Obesity is associated with many other health problems, including heart disease, stroke, high blood pressure, high cholesterol, diabetes,

pregnancy complications, and a variety of cancers. Research finds higher rates of obesity in adults (40% rural vs. 33% general) and children (25% rural vs. 22% general) living in rural areas than those in urban areas. Individuals in rural areas often lack nutrition education and exercise facilities, while at the same time have increased calorie consumption and inactivity. Rural populations also have reduced access to preventive care, long distances to grocery stores that stock healthy food, and higher prices of healthy foods that prevent families and schools from providing nutritious meals (Bolin, et al., 2015a).

3. Diabetes mellitus

The current health care system struggles to effectively prevent, diagnose, and manage diabetes in rural populations. Ethnic background, socio-economic status, and lifestyle choices appear to be the factors most associated with diabetes. While diabetes affects Americans living in all areas, diabetes cases are 17% higher in rural areas, likely because of the factors described. Care of rural residents with diabetes is complicated because patients are less likely to visit their physicians to receive care, including diagnostic tests, prescriptions, and preventative care. Rural populations are also more likely to suffer from diabetes-related complications. "A higher proportion of rural persons with T2DM have retinopathy associated with diabetes compared to urban persons with T2DM, 25.8 percent vs 22 percent" (Bolin, et al., 2015a, p.43).

4. Mental health and mental disorders

"It is estimated that over 46 percent of adults in the U.S. will develop a mental illness at some point during their lifetime" (Bolin, et al., 2015a, p.56). In rural areas, adults are more likely to report their mental health as fair or poor as compared to urban adults. Unfortunately, there is a shortage of mental health providers in rural areas (Table 3), and thus primary care physicians are often responsible for diagnosing and treating mental health disorders for which they are not specifically trained.

TABLE 3 PERCENT OF U.S. COUNTIES WITHOUT MENTAL HEALTH PROVIDERS

	Metropolitan	Micropolitan	Rural
Psychiatrists	27%	35%	80%
Psychologists	19%	19%	61%
Psychiatric Nurse Practitioners	42%	60%	91%
Counselors	6%	6%	24%
Social Workers	9%	11%	35%

(Larson, Patterson, Garberson and Andrilla, 2016)

There are 412 total mental health care HPSA designated areas in Texas. 202 were designated as whole county HPSAs for mental health (including Bandera County). Bexar County has two mental health HSPAs (HRSA, 2017, KFF, 2017).

It has also been reported that people living in rural communities are less likely than their urban counterparts to seek mental health treatment for a variety of reasons including:

- Concerns that confidentiality and anonymity are harder to maintain in rural areas
- Inherent value of independence and self-reliance
- Long distance and travel time to mental health specialty care
- Economic burden of taking off work to receive treatment
- Cost prohibitive, even with insurance

(Bolin, et al., 2015a)

5. Substance abuse

While drug abuse rates are similar for urban and rural areas, dependence on alcohol is higher in rural areas. "In 2015, about 7.7 million people aged 12 to 20 reported drinking alcohol in the past month, including 5.1 million who reported binge alcohol use and 1.3 million who reported heavy alcohol use" (Center for Behavioral Health Statistics and Quality, 2016, p.19). While there are few studies which compare urban and rural substance use, one found that "rates of lifetime and current alcohol, tobacco, and cannabis use were significantly higher among rural students compared to urban students" (Bolin, et al., 2015a, p.74).

It is estimated that 21.7 million people aged 12 or older needed substance use treatment in 2015 but only 2.3 million received treatment at a specialty facility (Center for Behavioral Health

Statistics and Quality, 2016). Over 82% of rural residents live in a county without a detoxification service provider and more than half of rural detox providers serve a 100 mile radius (Maine Rural Health Research Center, 2009). Barriers to substance abuse care in rural regions include social stigma for receiving care, geographical isolation, and the inability to pay due to lack of or not enough health insurance.

6. Heart Disease and stroke

"Heart Disease (including Coronary Heart Disease, Hypertension, and Stroke) remains to be the No. 1 cause of death in the US" (American Heart Association [AHA], 2017). Stroke is the number five cause of death, and a leading cause of preventable disability in the United States (AHA, 2016). Rural populations are especially susceptible to heart disease due to behaviors such as smoking, drinking, obesity, and living a sedentary lifestyle (Bolin, et al., 2015a).

Common barriers for rural populations in the recovery from heart related conditions include long travel distances for care, fewer medical screening services, and a lack of medical staff.

7. Physical Activity and health

In the 21st century, there are fewer individuals working in farming, agriculture, and other professions that require physical labor. Labor-saving equipment also contributes to less physical activity. Studies have found that "rural Americans are even less likely to engage in recommended levels of physical activity then their urban counterparts" (Bolin, et Al., 2015a, p. 97). While over 80% of Americans do not get enough exercise, "living in a rural area is thought to provide more of a challenge to physical activity adherence due to factors such as limited resources, increased distance or limited access to facilities, and neighborhood characteristics" (Bolin, et al., 2015a, p. 95).

8. Older Adults

The over 65 population in rural areas of the U.S. is higher than in other areas of the country. Seniors make up 18.6% of rural populations and 14.1% of the general population (RHIhub, 2016a). The number of older adults in rural areas is expected to nearly double by 2020. Additionally, "older adults in rural areas have lower incomes, and higher poverty rates than those residing in urban and metropolitan areas" (Bolin, et al., 2015a, p. 107). Numerous studies have shown that seniors living in rural areas are at higher risk than their urban counterparts for:

- Lack of access to medical/dental care
- Poor nutrition
- Obesity
- Depression, including suicide

(Bolin, et al., 2015a)

9. Maternal, infant, and child health

Research conflicts as to if and why pregnant women in rural areas have higher perinatal mortality rates. It is believed that higher poverty rates, minority status, young age, few years of education, and lack of access to prenatal care may lead to poorer birth outcomes for rural women (Bolin, et al., 2015a).

10. Tobacco use

Rates of cigarette and smokeless tobacco use are the highest in rural America. For example, use of smokeless tobacco was 7.1% in rural areas versus 2.1% in large metropolitan areas. Cigarette smoking is also more common in rural areas, which also affects children. Secondhand smoke inhalation is associated with higher rates of sudden infant death syndrome, asthma, bronchitis, and pneumonia in young children (Bolin, et al., 2015a).

ORAL HEALTH

Coming in at number 13 in *Rural Healthy People 2020*, oral care in rural areas is hindered by geographic isolation, lack of transportation, lack of fluoridated water, poverty stricken areas, and low Medicaid reimbursement (Bolin, et al.,2015b). The elderly lose dental insurance when they retire, and Medicare does not pay for routine care (RHIhub, 2017).

The federal Dental HPSA designation identifies areas as having a shortage of dental providers on the basis of a population to general practice dentist ratio of 3,000:1. Of 309 HPSA dental designations in Texas, Bexar County has three MUAs (HRSA, 2017; KFF 2017).

Similar to the situation in primary medical care, the aging of the dental professional work force is also a concern. In rural regions, 42% of dentists are older than 55, compared to 38% in urban regions (Rural Health Research Center, 2009).

Available Rural Healthcare Resources

The American Hospital Association (2017) indicates that rural hospitals serve approximately 57 million people, many of whom receive Medicare benefits. In Texas, 3 million people live in an area with a rural designation (USDA, 2017b). Of those people, over 1 million rely on public insurance: 16% are on Medicare; 39% receive Medicaid, and 1% have VA health benefits (U.S. Census Bureau, 2017). There are 649 hospitals in Texas, 144 of which are located in rural areas (Texas Hospital Association, 2017; TSORH, 2017).

Number of Hospitals located in rural TX counties

49 Counties → 0 hospitals
115 Counties → 1 hospital
13 Counties → 2 or more hospitals
(TSORH, 2017)

There are generally three types of government-supported facilities that serve as safety-net health care providers for rural populations. These include Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), and Critical Access Hospitals (CAH).

Rural Health Clinics (RHC)

The RHC program began in 1977 as a method to improve accessibility to health care for Medicaid and Medicare recipients living in rural areas and to increase the supply of health care providers to underserved areas. To qualify as a RHC, a facility must be located in a rural area according to Census Bureau standards and be considered either a Medically Underserved Area (MUA) or a Health Professional Shortage Area (HPSA) (Medicare Learning Network, 2017b). Currently, Bandera, and Bexar counties are considered an MUA and/or HPSA in various categories as mentioned previously (HRSA, 2017). RHC's must also provide or access certain standards of care for emergency, diagnostic, laboratory, and specialty care. A facility cannot be deemed both an RHC and a FQHC (Medicare Learning Network, 2017b). Texas currently retains 299 RHC's throughout the state of which two are in the San Antonio metropolitan statistical area, both in New Braunfels (Centers for Medicare & Medicaid Services [CMS], 2016).

Federally Qualified Healthcare Centers (FQHC)
FQHC's began in 1991 and are not exclusive to rural areas. They are any qualified public or private non-profit health care center that receives grants under Section 330 of the Public Service Act as well as various tribal organizations. FQHC's can be community health centers, public housing centers, and other programs that serve populations such as migrants, Indians, or the homeless. Patients who receive Medicare and attend these facilities qualify to receive a wide variety of preventative medical and social service care (Medicare Learning Network, 2017a). In 2016 there were 73 FQHCs throughout Texas that operated over 300 sites (Texas Department of State Health Services [DSHS], 2016). In the San Antonio and New Braunfels area, CentroMed operates 13 sites and CommuniCare Health Centers operates 10 sites (CentroMed, n.d.; CommuniCare, 2017).

Critical Access Hospitals (CAH)

CAH is another designation given exclusively to some rural community hospitals. To be considered a CAH, a hospital must be located in a rural region more than 35 miles from the nearest hospital/CAH, or more than 15 miles from the nearest hospital in mountainous areas or places that utilize secondary roads. CAH's must also provide 24 hour emergency care, have 25 or fewer inpatient/swing beds (but can also have a mental health wing with an additional 10 beds), and maintain an average hospital stay of 96 hours or less (Rural Assistance Center, 2016). There are 81 CAH's throughout the state of Texas but none are designated within the KCF counties of interest (Flex Monitoring Team, 2017).

REFERENCES

American Academy of Family Physicians (AAFP). (2014). *Rural practice, keeping physicians in (Position Paper).* Retrieved from http://www.aafp.org/about/policies/all/rural-practice-paper.html

American Heart Association. (2016). *Impact of stroke (stroke statistics)*. Retrieved from http://www.strokeassociation.org/STROKEORG/AboutStroke/Impact-of-Stroke-Stroke-statistics_UCM_310728_Article.jsp#.WQzZWdy1v3g

American Heart Association. (2017). *Heart disease and stroke statistics 2017 at-a-glance.* Retrieved from http://professional.heart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_491265.pdf

American Hospital Association. (2017). Rural health care. Retrieved from http://www.aha.org/aha_app/issues/Rural-Health-Care/index.jsp

Bolin, J., Bellamy, G., Ferdinand, A., Kash, B., Helduser, J., eds. (2015a). *Rural healthy people 2020; Volume 1*. Retrieved from https://srph.tamhsc.edu/srhrc/rhp2020.html

Bolin, J., Bellamy, G., Ferdinand, A., Kash, B., Helduser, J., eds. (2015b). *Rural healthy people 2020; Volume 2*. Retrieved from https://srph.tamhsc.edu/srhrc/rhp2020.html

Center for Behavioral Health Statistics and Quality. 2016. *Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health (HHS Publication No. SMA 16-4984, NSDUH Series H-51).* Retrieved from https://www.samhsa.gov/data/sites/default/files/NSDUH-FFR1-2015/NSDUH-FFR1-2015/NSDUH-FFR1-2015.pdf

Centers for Medicare & Medicaid Services (CMS). (2016). *Name and address listing for rural health clinic based on current survey.* Retrieved from https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/rhclistbyprovidername.pdf

CentroMed. (n.d.). *Locations*. Retrieved May 10, 2017, from http://centromedsa.com/locations/

CommuniCare Health Centers. (2017). *Locations*. Retrieved from http://www.communicaresa.org/locations.php

Flex Monitoring Team. 2017. *Critical access hospital locations*. Retrieved from http://www.flexmonitoring.org/data/critical-access-hospital-locations/

Foutz, J., Artiga, S., and Garfield, R. (2017). *The Role of Medicaid in rural America.* Retrieved from http://kff.org/medicaid/issue-brief/the-role-of-medicaid-in-rural-america/

Fordyce, M., Doescher, M., and Skillment, S. (2013). *The Aging of the rural primary care physician workforce: Will some locations be more affected than others?* Retrieved from http://depts.washington.edu/uwrhrc/uploads/RHRC_FR127_Fordyce.pdf

Freeman, V., Slifkin, R., & Patterson, D. (2008). *Rural-urban differences in characteristics of local EMS agencies.* Retrieved from http://www.shepscenter.unc.edu/rural/pubs/finding_brief/FB84.pdf

Health Resources and Services Administration (HRSA). (2017). *Designated health professional shortage areas (HPSA) statistics.* Retrieved from http://hpsafind.hrsa.gov/HPSASearch.aspx

Kaiser Family Foundation (KFF). (n.d.a). *Health insurance coverage of the total population.* Retrieved from http://kff.org/other/state-indicator/total-population/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Uninsured%22,%22sort%22:%22desc%22%7D

Kaiser Family Foundation (KFF). (2016). *Key facts about the uninsured population*. Retrieved from http://files.kff.org/attachment/Fact-Sheet-Key-Facts-about-the-Uninsured-Population

Kaiser Family Foundation (KFF). (2017). *Providers & service use: Health professional shortage areas.* Retrieved from http://kff.org/state-category/providers-service-use/health-professional-shortage-areas/

Larson, E., Patterson, D., Garberson, L., and Andrilla, C. (2016). *Supply and distribution of the behavioral health workforce in rural America*. Retrieved from http://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2016/09/RHRC_DB160_Larson.pdf

Maine Rural Health Research Center. (2009). *Few and far away: Detoxification services in rural areas.* Retrieved from http://muskie.usm.maine.edu/Publications/rural/pb41/Rural-Detox-Brief.pdf

Medicare Learning Network. (2017a). *Federally qualified health center fact sheet.* Retrieved from https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/fqhcfactsheet.pdf

Medicare Learning Network. (2017b). *Rural health clinic fact sheet*. Retrieved from https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/RuralHlthClinfctsht.pdf

National Advisory Committee on Rural Health and Human Services. (2017). *Social determinants of health*. Retrieved from https://www.hrsa.gov/advisorycommittees/rural/publications/nac_brief_social_determinants_health.pdf

National Highway Traffic Safety Administration. (2017). *Traffic safety facts: Rural/urban comparison of traffic fatalities*. Retrieved from https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812393

National Rural Health Association (NRHA). (2017). *About rural health care.* Retrieved from https://www.ruralhealthweb.org/about-nrha/about-rural-health-care

Rural Assistance Center (RAC). (2016). *Critical access hospitals (CAHs)*. Retrieved from https://www.ruralhealthinfo.org/topics/critical-access-hospitals#how-many

Rural Health Information Hub (RHIhub). (2016a). *Rural aging.* Retrieved from https://www.ruralhealthinfo.org/topics/aging

Rural Health Information Hub (RHIhub). (2016b). *Rural emergency medical services (EMS) and trauma*. Retrieved from https://www.ruralhealthinfo.org/topics/emergency-medical-services

Rural Health Research Center (RHRC). (2009). *The crisis in rural dentistry*. Retrieved from http://depts.washington.edu/uwrhrc/uploads/Rural_Dentists_PB_2009.pdf

Texas Department of State Health Services (DSHS). (2016). *Texas primary care office: Federally qualified health centers.* Retrieved from http://dshs.texas.gov/chpr/FQHCmain.shtm

Texas Hospital Association. (2017). *Texas hospitals*. Retrieved from https://www.tha.org/Services/Consumer-Information/Hospital-Information

Texas State Office of Rural Heath (TSORH). (2012). *Texas county designations*. Retrieved from http://www.texasagriculture.gov/Portals/0/forms/ER/Rural-Metro%20Counties.pdf

Texas State Office of Rural Heath (TSORH). (2017). *Rural hospitals*. Retrieved from http://www.texasagriculture.gov/Portals/0/forms/ER/RuralHealth/Rural Hospitals 2017.pdf

U.S. Census Bureau. (2017). *Public health insurance coverage by type: 2011-2015 American Community Survey 5-year estimate: Table S2704*. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S2704&prodType=table

United States Department of Agriculture Economic Research Service (USDA). (2017a). *Geography of poverty*. Retrieved from https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/geography-of-poverty/

United States Department of Agriculture Economic Research Service (USDA). (2017b). *State fact sheet: Texas*. Retrieved from http://data.ers.usda.gov/reports.aspx?StateFIPS=48&StateName=Texas&ID=17854#Pfb0ab09b0c5a48dab7e6584450ffad5b_2_39iT0