Health Care in Rural Pennsylvania: Critical Issues Impacting Rural Health Status

Testimony Provided to the

Pennsylvania House of Representatives
Pennsylvania House Majority Committee

Hearing on Health Care Issues in Rural Pennsylvania

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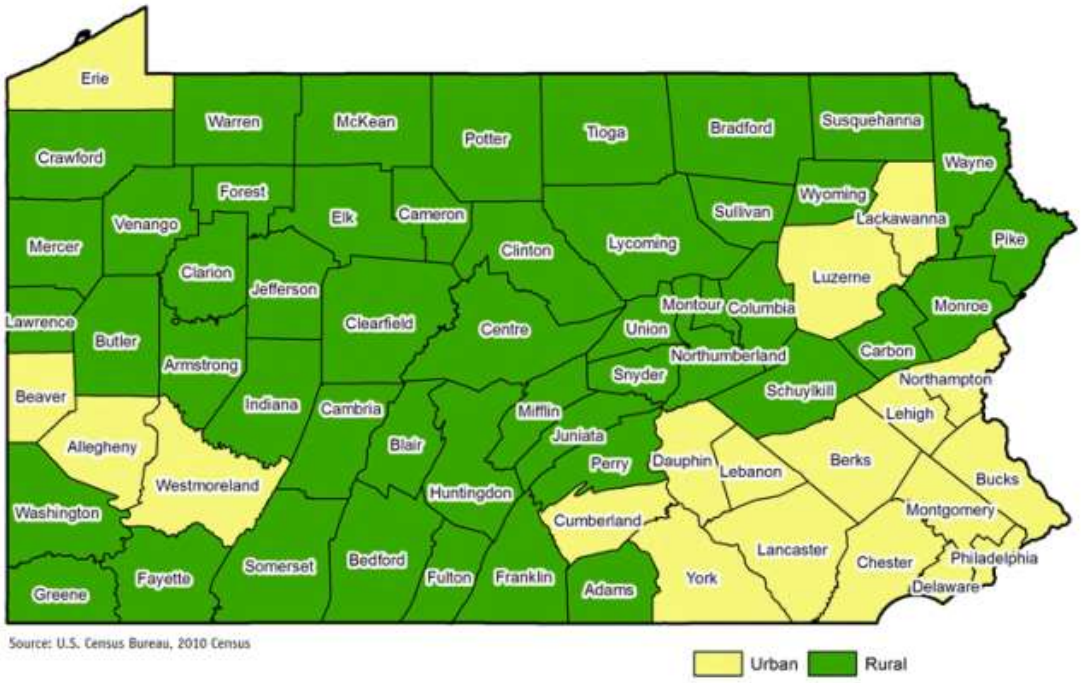
Good morning and thank you Representative Causer and Representative Rapp for the invitation to participate in the Pennsylvania House Majority Policy Committee's hearing entitled "Health Care Issues in Rural Pennsylvania." My name is Lisa Davis and I am the director of the Pennsylvania Office of Rural Health and an outreach associate professor of health policy and administration at Penn State. I am honored to provide this testimony on rural health issues in Pennsylvania to the Pennsylvania House Majority Committee and those present at this hearing.

The Pennsylvania Office of Rural Health is one of 50 state offices of rural health in the nation funded by a program administered by the Federal Office of Rural Health Policy in the U.S. Department of Health and Human Services. The state offices of rural health are federally mandated to serve as a source of coordination, technical assistance, and networking; to develop partnerships to advance rural health; and assist in the recruitment and retention of health care providers in rural areas of the state. PORH was formed in 1991 as a partnership between the federal government, the Commonwealth of Pennsylvania, and The Pennsylvania State University. PORH's initiatives focused on rural health policy, small rural hospitals and clinics, health care delivery systems, quality improvement, population health, rural public health, and agricultural safety and health. Since March 2020, significant effort has been directed to assisting rural health systems, providers, and communities in responding to the COVID-19 pandemic.

I. Introduction

Pennsylvania boasts the third largest rural population in the United States. Approximately 3.4 million of the state's 12.8 million residents (about 26 percent) live in rural communities (Center for Rural Pennsylvania, 2020a; Forrest and Lin, 2010). Of the state's 67 counties, 48 are considered to be rural (Center for Rural Pennsylvania, 2020). Figure 1 provides a map of Pennsylvania and delineates the rural and urban counties in the state.

Figure 1: Map of Rural and Urban Counties in Pennsylvania



Prepared by the Center for Rural Pennsylvania

Rural Pennsylvanians face numerous challenges in socioeconomics and health circumstances, and they are often left without the resources needed to address these challenges. Demographic, geographic, economic, and quality-of-life issues unique to rural areas can have a significant impact on the health status of rural Pennsylvanians. While these challenges do not necessarily coincide with easy solutions, rural Pennsylvanians explore solutions that improve their lifestyle without disrupting the sacred traditions of their small towns and communities. The following provides information on specific issues affecting rural Pennsylvania.

II. Demographics

Communities in rural Pennsylvania may be small, but their populations are unique. In 2019, only about a third of rural municipalities had populations greater than 2,000 people (U.S. Census Bureau, 2019).

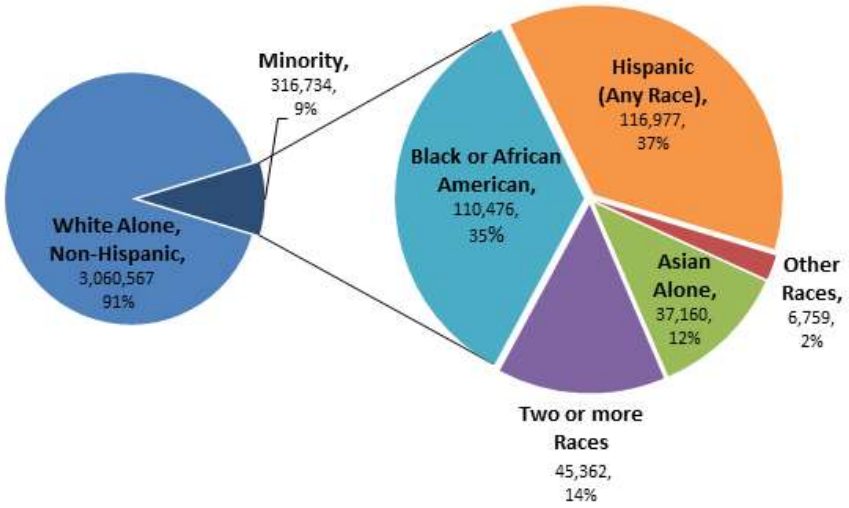
Pennsylvania's overall rural population numbers decreased between 2010 and 2019. Population projections predict a four percent population increase by 2040 due to in-migration where 56

percent of this increase will be from overseas and 44 percent from other areas of the state and country (Center for Rural Pennsylvania, 2014). Rural Pennsylvania's population also is growing older. According to 2020 U.S. Census data, senior citizens aged 65 or older comprised 21 percent of the rural population. Projections indicate that this number will increase to 58 percent by 2040 (Center for Rural Pennsylvania, 2020). High school graduation rates for 2018-2019 in rural areas were 91 percent compared to an urban graduation rate of 81 percent (Center for Rural Pennsylvania, 2020). However, fewer rural students aged 25 or older completed a bachelor's degree or higher.

III. Race and Ethnicity

Residents of rural Pennsylvania tend to be White (about 90 percent) and older, but demographics appear to be shifting with time. Migration to rural Pennsylvania from overseas locations and domestic urban areas, which tend to have much greater diversity, contributes to the growing racial and ethnic diversity in rural Pennsylvania. As shown in Figure 2, approximately nine percent of rural Pennsylvanians were part of a Black, Indigenous, and People of Color (BIPOC) group. This compares to 30 percent among urban Pennsylvanians.

Figure 2: Rural Pennsylvania Minority Population, 2019



U.S. Census Bureau

BIPOC populations tend to experience lower life expectancies, higher death rates, and higher infant and maternal mortality rates (Pennsylvania Department of Health, Office of Health Equity, 2019). Cultural competence has proven to be an important component in quality of care, by establishing environments that ensure understanding and safety for BIPOC patients.

IV. Health Status

Rural Pennsylvanians are more likely to have unmet heath needs and reduced access to health care than urban residents. They face health challenges, including high rates of obesity, infectious disease, death rates from cancer and cardiovascular disease, air pollution, and poor physical conditions (Pennsylvania Rural Health Association, 2016).

Table 1 provides data for select health care conditions in rural and urban counties in the state. Lyme disease, cancer, heart attack, heart disease, chronic obstructive pulmonary disease, influenza and pneumonia, and COVID-19 cases are higher in rural areas than in urban.

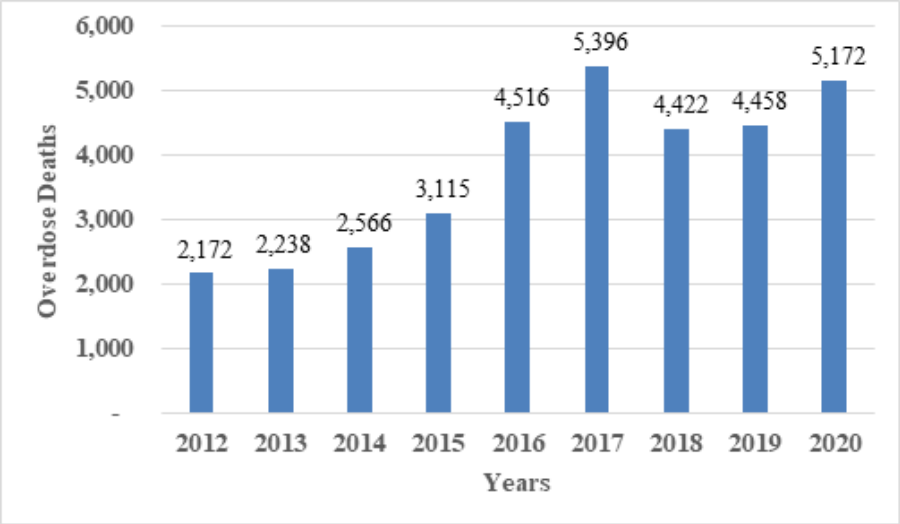
Table 1: Health Care Conditions by Rural and Urban Areas, 2020

Health Condition	Rural Rate/100,000	Urban Rate/100,000
Communicable Diseases		
Chickenpox, 2016-2018	5.8	4.7
Hepatitis B Chronic, 2016-2018	4.0	8.7
Lyme Disease, 2016-2018	160.8	60.8
Chlamydia, 2017-2019	266.8	532.4
Cancer Incidents (2015-2017)		
All Cancers Cases	649.8	596.4
Breast Cancer Cases	87.4	88.6
Hospitalization Discharged (2017-2019)		
Heart Attack	292.8	202.2
Heart Disease	1,405.0	1,231.4
Asthma	36.0	86.8
Diabetes Mellitus	210.7	228.8
Chronic Lower Respiratory Disease	298.4	310.9
Chronic Obstructive Pulmonary Disease	259.2	219.1
Influenza and Pneumonia	341.9	256.0

Pennsylvania Department of Health; Center for Rural Pennsylvania

In 2018, Pennsylvania had the fourth highest drug overdose mortality rate in the country at 36.1 per 100,000 population (Centers for Disease Control and Prevention, 2020). Six of the 10 counties with the highest overdose death rates in 2018 were rural (Substance Abuse and Mental Health Services Administration, 2019). The Centers of for Disease Control and Prevention (CDC) reported a 16 percent increase in Pennsylvania overdose deaths from 4,444 in 2019 to 5,172 deaths in 2020 (Associated Press, 2021; Ahmad et al., 2021). The COVID-19 pandemic caused isolation and depression that exacerbated issues for those in recovery and resulted in increases of drug and alcohol overdose (Vaughn, 2020). Figure 3 provides data on drug overdose deaths in Pennsylvania for the years 2012-2020.

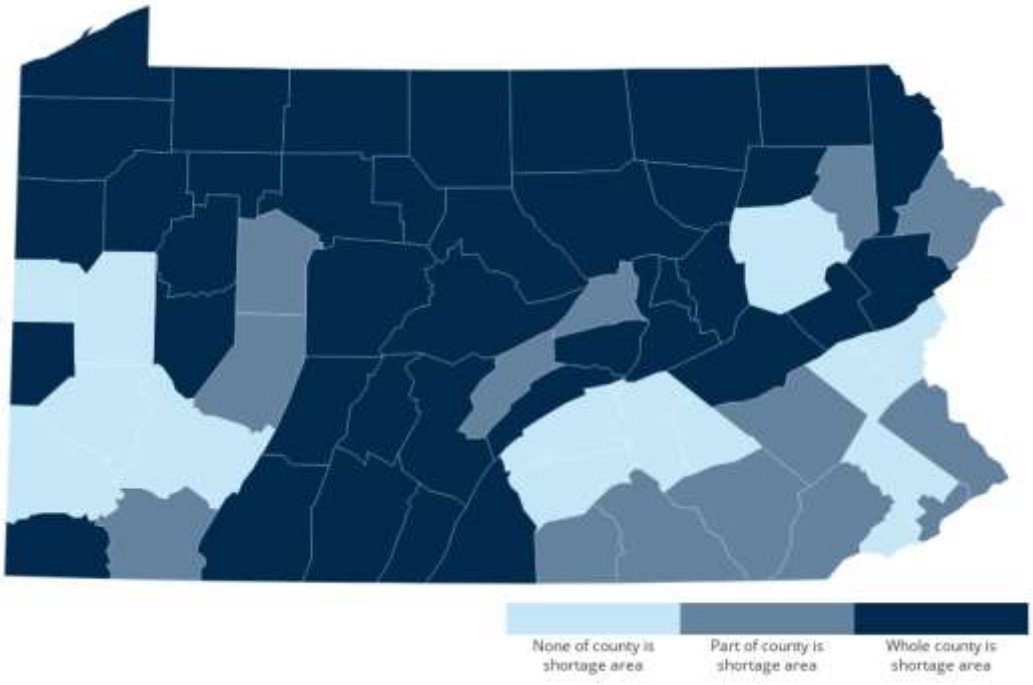
Figure 3: Drug Overdose Deaths in Pennsylvania, 2012-2020



Commonwealth of Pennsylvania, 2021; Associated Press, 2021

Figure 4 shows the federally designated Mental Health Professional Shortage Areas (HPSA) as of 2021. Note that the darker the shading, the more need is indicated. Access to psychiatrists and clinical psychologists per 100,000 population in rural areas is half of that in urban areas. Incentives need to be implemented to position these professionals in rural counties.

Figure 4: Mental Health Professional Shortage Areas (HPSA) by County, 2021



Rural Health Information Hub, 2021

The income level of rural Pennsylvanians is lower than in urban areas and the poverty rate of rural Pennsylvanians is higher. More residents received coverage through subsidies through the Health Insurance Marketplace; however, rural residents are enrolled at lower rates than urban residents. In an analysis of 2020 data, the Center for Rural Pennsylvania found that 76,973 rural Pennsylvania consumers selected a health insurance plan from the Health Insurance Marketplace for 2020, which accounted for only 23 percent of Pennsylvania residents enrolled in Marketplace plans. Rural Pennsylvanians rely more heavily on government-sponsored programs and public policies (Pennsylvania Rural Health Association, 2016) and are more likely to defer care because of higher out-of-pocket costs and a reduced ability to pay for care. As a result, rural residents suffer from more illnesses and conditions related to delayed care.

Improved medical care and prevention efforts have contributed to dramatic increases in life expectancy in the United States over the past century. They also produced a major shift in the leading causes of death for all age groups, including older adults, from infectious diseases and acute illnesses to chronic diseases and degenerative illnesses. Older adults may experience the effects of health disparities more dramatically and for longer periods than any other population

group (Centers for Disease Control and Prevention and Merck Company Foundation, 2007). This will have a significant influence on the health status of rural residents of Pennsylvania age 65 and over which is expected to grow by 58 percent by 2040.

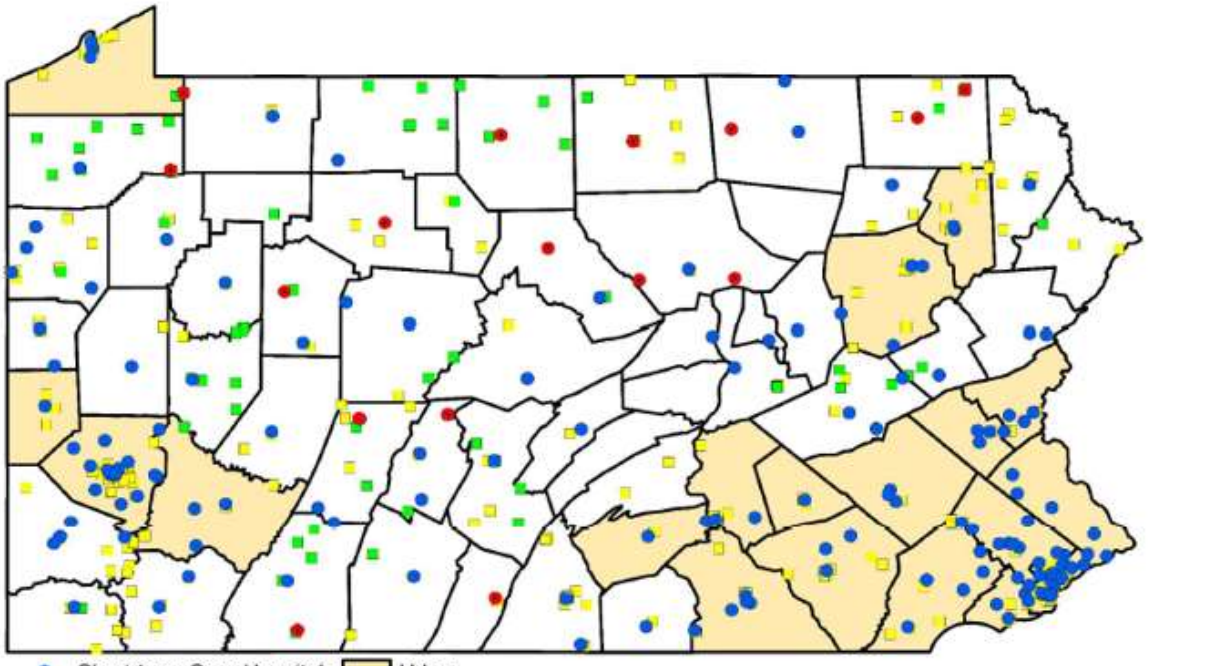
Mountainous terrain and winding roads create issues for rural health systems. Ready access to referral facilities and ambulance transportation is critical but has become especially significant when ice and snow make driving hazardous. Travel time to health care providers is generally longer in rural areas. Unlike the public transit systems that serve urban areas, public transportation is either sporadic or non-existent in rural Pennsylvania (Pennsylvania Rural Health Association, 2016).

V. Hospitals, Healthsystems, and Hospital Capacity

As of December 31, 2020, there were 139 Primary Care Health HPSAs, 119 Mental Health HPSAs, and 153 Dental HPSAs in Pennsylvania (Joint State Government Commission, 2015). There were HPSAs and Medically Underserved Areas (MUA) in 65 of Pennsylvania's 67 counties (Pennsylvania Rural Health Association, 2016), making it especially difficult for rural residents to access health care professionals for preventive or emergency care.

Pennsylvania has 148 general acute care hospitals. In 2018, rural Pennsylvania contained 66 general acute care hospitals, totaling 7,265 hospital beds—an average of 2.14 hospital beds for every 1,000 rural residents, compared to 2.54 beds per 1,000 urban residents (Center for Rural Pennsylvania, 2020). Approximately 65 Rural Health Clinics (RHC) and 273 Federally Qualified Health Centers (FQHC) sites are spread across Pennsylvania. There are 16 Federally designated Critical Access Hospitals (CAH) in the state, making it the tenth smallest CAH infrastructure in the country. Pennsylvania's CAHs were recognized in 2019 for the highest quality-reporting ranking in the country (Hospital and Healthsystem Association of Pennsylvania, 2019). Seven rural Pennsylvania counties have no hospitals (Center for Rural Pennsylvania, 2020). Figure 5 shows the dispersion of these facilities across the state's rural and urban counties and Table 2 identifies capacity for the state's acute care hospitals.

Figure 5: Health Care Facilities in Pennsylvania, 2020



	Rural	Urban
Short Term Hospital	54	92
Critical Access Hospital	16	1
Federally Qualified Health Center (FQHC)	130	161
Rural Health Clinic	67	2
Total	265	256
Facilities per 100,000 Residents	7.4	2.7

Health Resources and Services Administration; prepared by the Center for Rural Pennsylvania

Table 2: Pennsylvania Hospital Capacity Snapshot

	Pennsylvania Total	Rural	Rural %
Number of Hospitals	217	74	34%
Admissions	1,571,523	301,947	19%
Discharges	1,565,860	300,943	19%
Licensed Beds	39,978	8,323	21%
Staffed Beds	36,385	7,785	21%
Emergency Department Visits	6,170,092	1,515,724	25%
Outpatient Clinic Visits	13,942,242	2,877,080	21%

Hospital and Healthsystem Association of Pennsylvania

Pennsylvania has seen a series of mergers, consolidations, and affiliations as economies of scale and other factors push the health care industry toward larger systems and several systems are

gaining large geographic market shares. For example, UPMC, headquartered in southwestern Pennsylvania, has a lead market share in many rural and urban counties, while Geisinger, with headquarters in northcentral Pennsylvania, is the largest health care provider in several rural counties and in northeast portions of the state (PennLive, 2017, 2020). Other systems, such as Penn Highlands Healthcare own three of the state's CAHs.

In 2017, the Center for Medicare and Medicaid Innovation (CMMI) provided funding to the state to develop the Pennsylvania Rural Health Model (PARHM), which formally launched in 2019. The PARHM is an alternative payment model that addresses the financial challenges faced by rural hospitals by transitioning them from fee-for-service to global budget payments. This aligns incentives for providers to deliver value-based care and is an opportunity for rural hospitals to transform the care they deliver to better meet community health needs. Pennsylvania was the first state in the nation to design and implement a model such as this that is focused entirely on rural hospitals.

The legislatively-mandated Rural Health Redesign Center Authority (RHRCA) and the non-profit Rural Health Redesign Center Organization (RHRCO) were established in May 2020 to lead the continued development of the PARHM, in partnership with CMMI and the Pennsylvania Department of Health, to build solutions for rural hospitals and communities across the country that promote financial sustainability while improving the health of the populations in these communities. The RHRCA is developing a sustainable model for community-based care in Pennsylvania and across the country. As of December 2021, 18 rural hospitals, six commercial insurers (inclusive of Medicare and the state's Medicaid program), and one national payer are participating.

VI. Health Care Workforce

Although 27 percent of the state's residents live in rural counties, only 17 percent of physicians and 20 percent of dentists work in rural counties, indicating geographic maldistribution (Vick, Gagel, and Yerger, 2015). Rural areas of the state had one primary care physician per 1,387 residents in 2017, compared to one primary care physician per 775 urban residents (Center for Rural Pennsylvania, 2020). Two-thirds of Pennsylvania's primary care physicians practice in the

four most populated counties in the state, all of which are designated as urban (Pennsylvania Rural Health Association, 2016). Specialty services are even more difficult to access. Only one dentist practiced in rural areas for every 2,453 rural residents, compared to one dentist per 1,480 urban residents in 2017 (Center for Rural Pennsylvania, 2020). There are 30 psychiatric and substance abuse hospitals in urban areas; rural Pennsylvania contains only five such hospitals (Pennsylvania Rural Health Association, 2016). Pennsylvania's statewide average of mental health care practitioners was 179 per 100,000 people; however, data from three rural counties indicated a range of seven to 12 mental health providers per 100,000 residents (HAP, 2019).

The number of rural physicians and dentists nearing retirement age is larger than the number of physicians and dentists early in their careers. Twenty-seven percent of active physicians are age 60 or older, for which Pennsylvania is ranked 21st nationwide and 51 percent of practicing physicians in Pennsylvania are age 50 or older. In 2015, 30 percent of physicians practicing in rural counties anticipated leaving direct patient care in Pennsylvania in less than six years, compared to 26 percent in urban counties (Joint State Government Commission, 2015), leaving rural Pennsylvania in a critical position moving forward. Approximately 33.4 percent of active physicians who graduated from a medical school in Pennsylvania practice in Pennsylvania, 41.7 percent of active physicians who completed their residency in Pennsylvania practice in Pennsylvania, and 58.1 percent of active physicians who completed their medical education and residency in Pennsylvania practice in Pennsylvania.

Table 3 provides data for select health care providers in rural and urban counties in the state. All provider types, with the exception of physician assistants and licensed practical nurses, are significantly higher in urban areas.

Table 3: Health Care Providers by Rural and Urban, 2020

Provider Type	Rural Rate/100,000	Urban Rate/100,000
Dentist	42.5	70.6
Dental Hygienist	61.4	64.8
Physician and Surgeon	192.0	401.3
Physician Assistant	89.3	81.8
Certified Registered Nurse Practitioner	68.9	103.7
Certified Nurse-Midwife	3.0	3.3

Provider Type	Rural Rate/100,000	Urban Rate/100,000
Nurse		
Licensed Practical Nurse	590.7	324.4
Registered Nurse	1,342.4	1,523.9
Pharmacist	112.6	149.6
Behavioral Health Care Provider		
Psychologist	18.7	49.6
Clinical Social Worker	32.9	55.5
Marriage and Family Therapist	1.7	7.2
Professional Counselor	48.7	70.2
Social Worker	39.6	70.8
Behavior Specialist	25.1	25.6

Pennsylvania Department of State; Center for Rural Pennsylvania

Several policies and programs are addressing ongoing health care workforce shortages, specifically through recruitment and retention programs and efforts to change the urban-centric clinical education structure. These include scholarship programs and medical school recruiting efforts, rural residency training programs, placement of qualifying international medical students in medically underserved areas, student loan repayment programs, and "pipeline" programs that focus on school-based outreach on health professions. Research shows that students who have access to, and participate in, rural residency training programs are three times more likely to practice in rural areas when compared to their urban program-trained peers. Research also indicates that providers originally from a rural area are more likely to practice in a rural community after medical training, providing a possible pipeline program opportunity. However, only seven percent of family medicine residency programs are located in rural areas and only four percent of training programs in urban areas offer rural tracks (National Conference of State Legislators, n.d.).

One approach to address the increased demand for primary care providers in rural areas is to redefine the scope and standards of practice for practitioners other than physicians. Research shows that utilizing advanced practice practitioners increases access for those in underserved areas and generates greater overall levels of patient satisfaction. These practitioners, such as Physician Assistants and Certified Registered Nurse Practitioners, comprise 46 percent of providers at primary care facilities such as RHCs and FQHCs. Important considerations moving

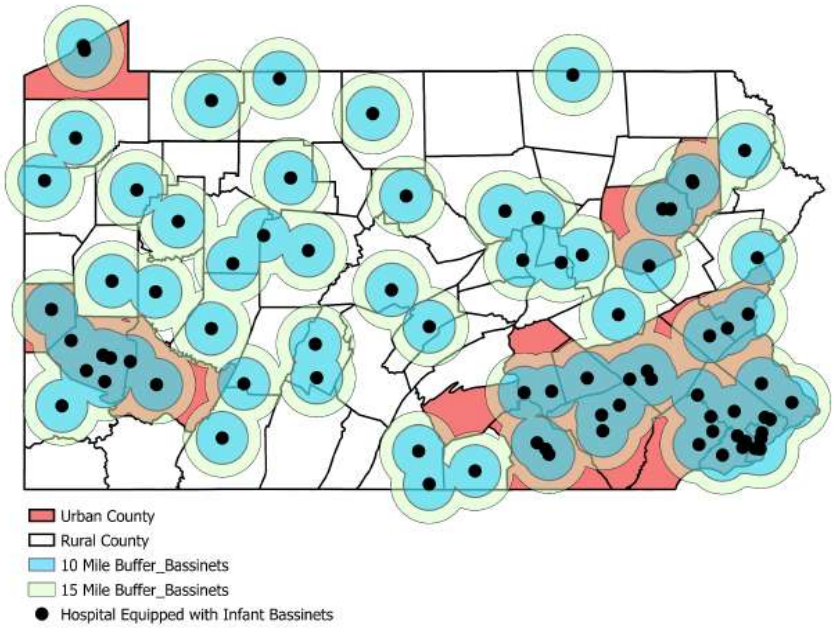
forward include altering the independent practice authority and prescription and dispensing authority of these providers to ensure they can provide comprehensive primary care for their rural patients and communities.

Another approach to consider for recruiting primary care providers in rural areas is to promote the unique characteristics of rural practice. This framework highlights the close-knit nature of rural communities, with the focus on community connection centered on schools, civic engagement, faith, and providing care to those living in the provider's own community.

VII. Rural Maternal and Prenatal Health

The maternal death rate is higher in rural regions of the country than in central parts of metropolitan areas (Carey, 2019). This disparity is due, in part, to the lack of primary care providers and other health care professionals available to pregnant women before, during, and after pregnancy (National Advisory Committee on Rural Health and Human Services, 2020). According to a survey of the members of the American Congress of Obstetricians and Gynecologists (ACOG), it is estimated that nationally, only six percent of the nation's obstetricians and gynecologists practice in rural areas (Maron, 2017). In Pennsylvania, 50 obstetric units closed between 2010 and 2017, most drastically impacting Western Pennsylvania (Hospital and Healthsystem Association of Pennsylvania, 2019), resulting in rural women being forced to travel long distances for maternal care and birth-related emergencies. These barriers to care have increased maternal health risks and death rates for rural women and can contribute to higher rates of postpartum depression. Figure 6 shows the location of hospitals in the state with infant bassinets by rural and urban county.

Figure 6: Pennsylvania Hospital with Infant Bassinets, By Rural/Urban County, 2019



Residents Living Within 10 miles of Hospital with Bassinets

Rural: 1.7 Million 51% of Rural Population

Urban: 8.3 Million 88% of Urban Population

Residents Living Within 15 miles of Hospital with Bassinets

Rural: 2.5 Million 73% of Rural Population

Urban: 9.1 Million 96% of Urban Population

Pennsylvania Department of Health; U.S. Census Bureau. Prepared by the Center for Rural Pennsylvania

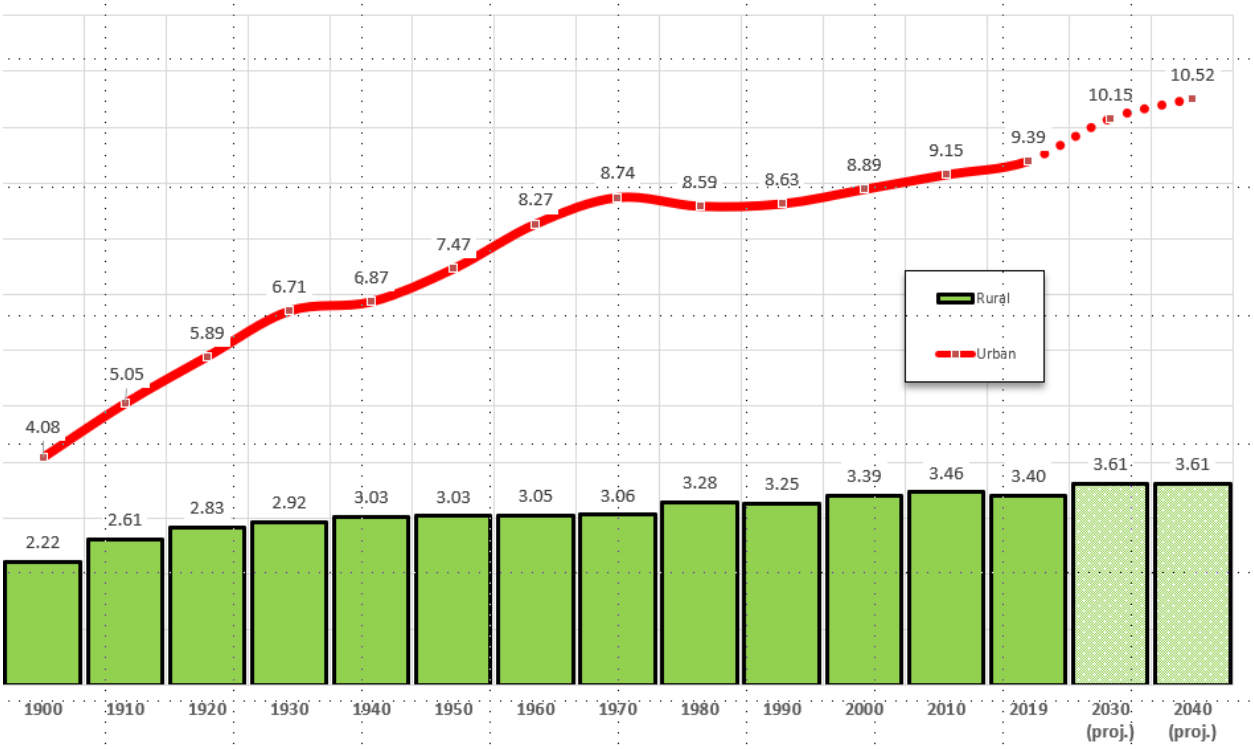
Telemedicine, birthing centers, and nurse-led clinics are a few methods that have been utilized to address rural maternal health disparities, but significant initiatives need to be implemented to reduce maternal mortality and poor health outcomes in rural regions throughout Pennsylvania and the entire nation.

VIII. The Rural Aging Population

The number of United States adults aged 65 and older is expected to double between 2020 and 2050 (Rural Health Information Hub(a), n.d.). Figure 7 provides estimates of Pennsylvania's projected 65+ population percent by county in 2040. As the Pennsylvania rural population continues to age, it is critical that infrastructure and support systems are in place to assist

residents as they age in their preferred location, whether in their own home, a high-quality facility or a combination of options. It is additionally important that advocacy for rural aging services and support continues to ensure that quality research and attention is given as this population continues to increase (Krout, n.d.). Utilizing technology to reach rural communities through telehealth and tele-monitoring, enhancing comprehensive and personalized services through investments in rural-specific research, and implementing community-based programs to reduce social isolation within rural populations should be fully explored (University of Illinois Chicago, 2021). The Pennsylvania Department of Aging has made great strides in ensuring that all rural residents and their caregivers have access to support programs and other resources, and through additional advocacy and funding can continue to expand these offerings.

Figure 7: Percent of County Population 65 Years Old and Older, 2040 (Projected)



Decennial Censuses, 2019, 5-year Average, American Community Survey, U.S. Census Bureau; Pennsylvania State Data Center. Prepared by the Center for Rural Pennsylvania

IX. Agricultural Health and Safety

Pennsylvania has a long history of success in its agricultural, food, and lumber industries, bolstered by its agricultural workforce and resources. These industries require support for the agricultural workforce to ensure their health and safety.

Agriculture is one of the most dangerous industries in the United States. Those who work in agriculture are exposed to chronic and acute health risks such as chemicals, high levels of dust, mold, and bacteria; falls from ladders, farm equipment, and grain bins; prolonged sun exposure; joint and ligament injuries; exposure to loud noises and sounds from machinery and equipment; stress from environmental factors; risk of heatstroke, frostbite or hypothermia; and risk of electrocution (Rural Health Information Hub, 2019). In addition to physical injuries, agricultural workers also are at risk of behavioral and mental health issues such as anxiety, depression, substance use, and death by suicide (Rural Health Information Hub, 2019).

Pennsylvania agriculture relies heavily on migrant and seasonal workers during various crop-harvesting seasons. There are various types of migrant and seasonal workers that perform different duties, and while these seasonal jobs contribute significantly to Pennsylvania's economy, migrant workers are provided no health insurance through their employers. Pennsylvania's Medicaid program cannot cover most of the health care costs for migrant workers but will cover emergency medical expenses if necessary (Pennsylvania Rural Health Association, 2016). Most full-time farmers are as likely as the general U.S. population to receive their health insurance through an outside employer, though insurance coverage rates do vary slightly across agricultural specialties (U.S. Department of Agriculture, 2019).

Many federal agencies focus on agricultural health and safety including the National Institute for Food and Agriculture (NIFA), the National Institute for Occupational Safety and Health (NIOSH), and the Occupational Safety and Health Administration (OSHA). These federal agencies provide various education, trainings, resources, and prevention projects to reduce and prevent agriculture-related injuries and deaths (Rural Health Information Hub, 2019). In addition to these federal resources, first responders and health care providers in rural areas where agriculture work is common must be trained and prepared to respond to and treat agricultural-

related injuries while also practicing caution as to avoid further injury or death from occurring (Rural Health Information Hub, 2019). It has also been recommended that mental health counselors understand agricultural issues and have ties to local resources that farmers can easily access to address any of their mental health needs (Grant, 2021). Those supports, together with programs at Penn State and other organizations in the state, can support the health and safety of one the state's most important sectors, agricultural production.

X. Rural Homelessness

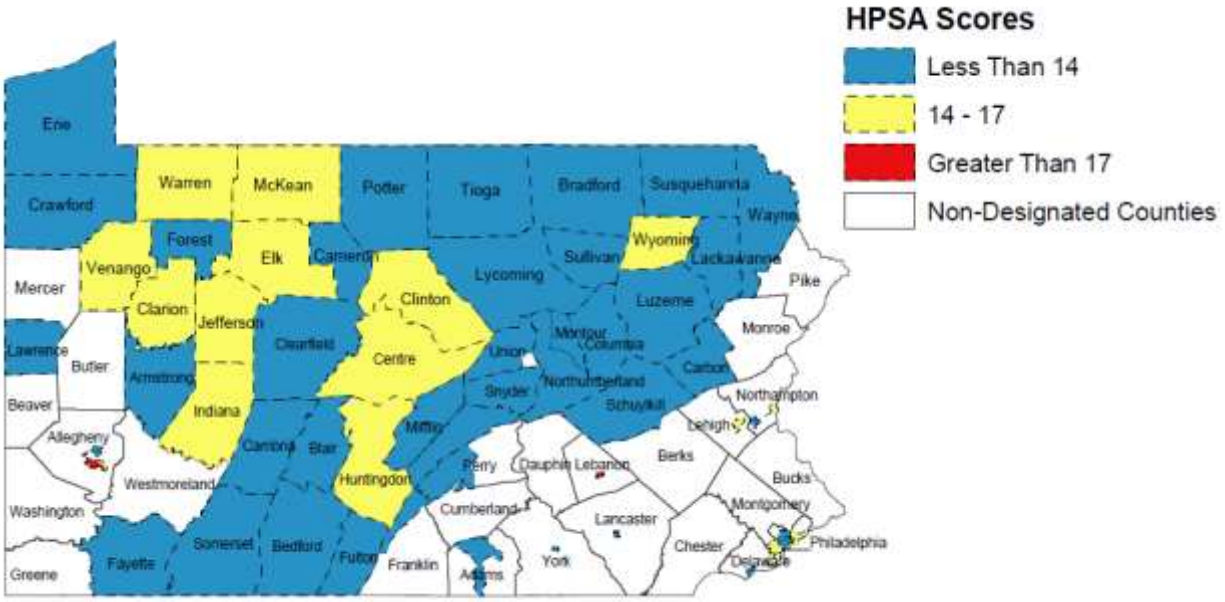
Research has found that homelessness in Pennsylvania rural areas has increased at greater rates than in urban areas in recent years (Feldhaus and Slone, 2015). This increase has been most dramatic for unsheltered homeless and homeless veterans (Feldhaus and Slone, 2015). A 2015 study found that among homeless individuals in rural Pennsylvania, nearly 24 percent had a disability, 27 percent experienced mental health challenges; 12 percent had a physical disability; and 10 percent had a chronic health condition (Feldhaus and Slone, 2015). Pennsylvania's rural homeless must overcome challenges related to the lack of public transportation in rural areas and the geographically dispersed employment opportunities, health care providers, and social services (Feldhaus and Slone, 2015). To better address rural homelessness in Pennsylvania, a strategy should be implemented to coordinate services and provide a rural focus on prevention.

XI. Oral Health

Rural populations struggle to access quality health care and oral health care is no exception. Pennsylvania faces disparities in dental health in certain regions of the state, resulting in areas where residents are underserved for oral health services. Figure 8 provides a state map of the federally designated Dental Health HPSAs. Note that a lower score indicates greater need. Lack of access to oral health services is a critical issue facing rural Pennsylvanians and can be linked to a number of negative health implications. A multifaceted approach is imperative toward improving rural oral health that would include addressing dental workforce distribution and the promotion of dental careers to high school students. Improvements also should include innovative models of care, including the utilization of certified public health dental hygiene practitioners (PHDHPs) and teledentistry (Pennsylvania Department of State, 2020). Finally, to

prevent dental disease in rural communities, it is vital to maintain and grow the number of rural water systems that provide optimally fluoridated water to their rural residents

Figure 8: Dental Health Professional Shortage Areas, July 2018



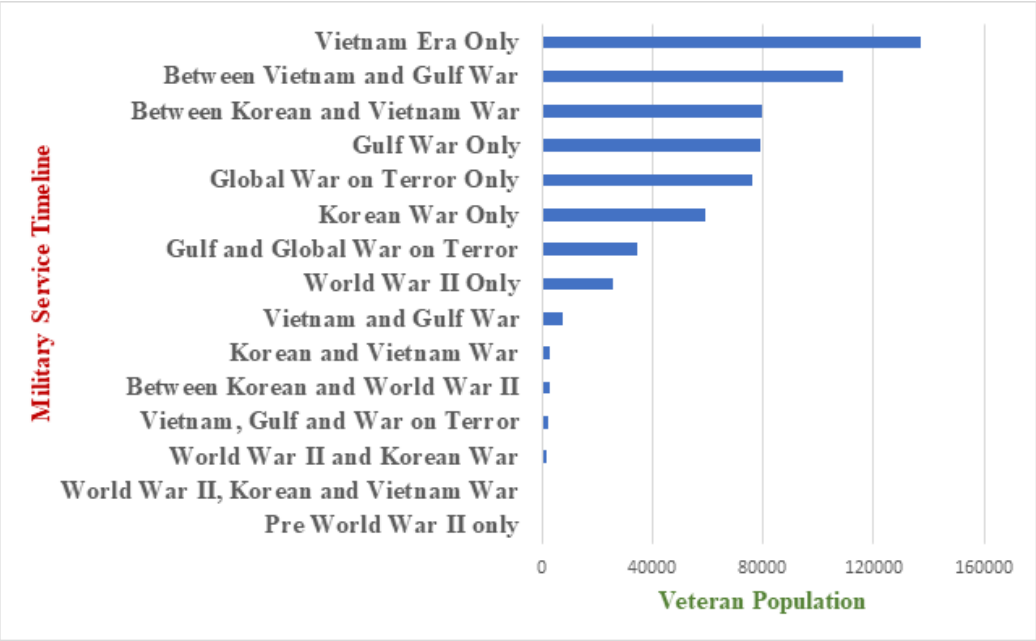
HRSA Data Warehouse, July 2018

VII. Veterans

Pennsylvania is home to the fifth largest veteran population in the country with over one third of Pennsylvania veterans residing in rural counties. Due to a variety of factors, in-state veterans by proportion increasingly reside in rural vice urban counties. This population is becoming older and experiences greater VA-rated disabilities over time. Access to medical health coverage depends on the veteran's status and location. The VHA is a beneficial option for many but requires a VHA priority code assignment to access the system. Located throughout the country, the VHA offers many of the same capabilities as managed care plans and, in many instances, is rated higher in quality than non-VHA care. Currently only 40 percent of Pennsylvania's veterans are able or choose to utilize VHA services. For rural Pennsylvania veterans, medical facility location access continues to be challenging; however, if high-speed Internet service is available, the combined use of telemedicine and home health may alleviate many transportation issues. The rural veteran populations in Pennsylvania who require closer observation and

support are those that have separated or are/were in a reserve status and do not have medical coverage of any type. Figure 9 provides detail on the type of service provided by Pennsylvania's veterans.

Figure 9: Pennsylvania Veteran Population Military Service Timelines



Center for Workforce Information and Analysis, 2020

VIII. Health Information Technology and Telehealth

The future of telehealth in Pennsylvania remains uncertain due to a lack of statewide regulations or guidelines governing the practice (Miller, 2020). While telehealth has proven to be beneficial for many Pennsylvania residents—especially rural populations, homebound patients, and individuals with transportation barriers—legislation regarding the practice continues to be proposed and debated (Miller, 2020). Despite the lack of government regulation, health care systems throughout the state independently integrate telehealth into their practices to continue to care for patients, especially those in rural areas that would otherwise lack access to services (Miller, 2020).

XIV. COVID-19 in McKean and Surrounding Counties

Data on COVID-19 incidence and vaccination rates are provided in the addendum.

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Addendum

McKean, Crawford, and Surrounding County
COVID-19 Data and Information

January 2022

I. COVID-19 Rural Urban Divide

With high death rates and low vaccination rates, rural Pennsylvania faces serious consequences from the COVID-19 pandemic, especially during a surge in cases associated with the Omicron variant. The cumulative death rate from COVID-19 is 1.3 times higher in rural Pennsylvania counties then urban counties. Nine of the 10 counties in the state with the lowest COVID-19 vaccination rates are rural (Pennsylvania Department of Health, 2021). COVID-19 vaccines are safe and effective at protecting against severe disease and death from the virus, including variants currently circulating (Centers for Disease Control and Prevention, 2022). Unvaccinated individuals are 5 times more likely to be infected with COVID-19, more than 10 times more likely to be hospitalized with COVID-19, and more than 10 times more likely to die from COVID-19 (Centers for Disease Control and Prevention, 2021). Low vaccination rates in rural areas put these communities at greatest risk, especially as rural hospitals continue to be overwhelmed with patients and experience staffing shortages, staff burnout, and lack of available beds.

II. Current COVID-19 Data for McKean, Crawford, and Surrounding Counties

Given the COVID-19 incidence, vaccination rates, availability of hospital beds and cumulative death rates, the situation in McKean, Crawford and surrounding counties (Cameron, Forest, Potter and Warren) is critical, as indicated by the data in Table 1. Data highlighted in red are considered abnormal given current averages across the state.

Table 1: COVID-19 Data for McKean, Crawford, and Surrounding Counties, January 2022

County	Incidence of COVID-19 (per 100,000 people)	Average New Cases Per Day during previous 7 days	Vaccination rate (age 10 and older, fully vaccinated)	Number of ICU Beds Available	Death rate (per 100,000 people)
Cameron	0-15,000	28.9	56%	No hospital	292
Crawford	>17,000-19,000	98.6	48%	1	293
Forest	>21,000	35.5	70%	No hospital	428
McKean	>15,000-17,000	37.6	44%	3	276
Potter	>15,000-17,000	33.7	36%	1	448
Warren	0-15,000	26.6	46%	0	439

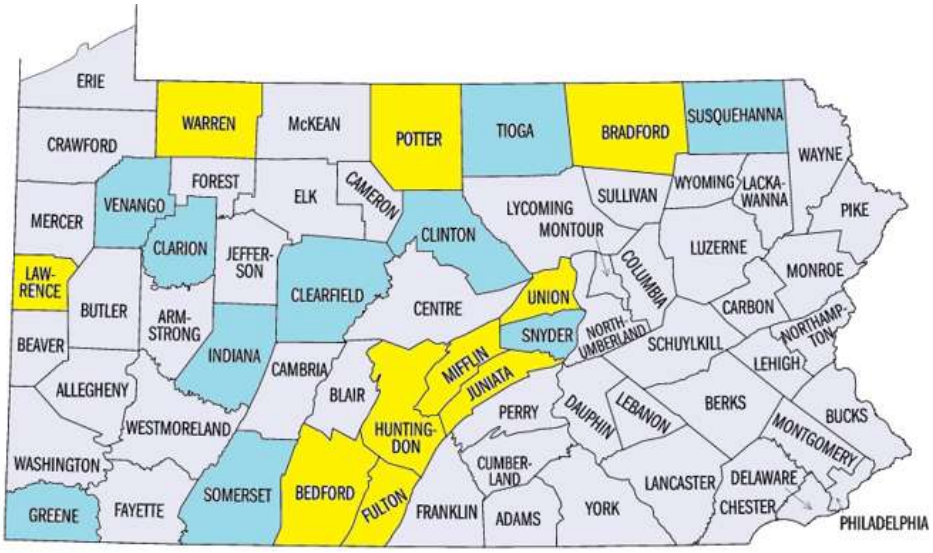
Pennsylvania Department of Health, 2021.

In summary, these rural counties have high rates of incidence (27-99 new cases per day), higher rates of death (five of six counties have a higher death rate than the average death rate in urban counties), low vaccination rates (five of six counties have lower vaccination rates than the statewide rate of 60 percent), and lack of available treatment options (i.e., only 5 ICU beds available across this six-county region).

III. Health Initiative for Rural Pennsylvania

Funded by the Centers for Disease Control and Prevention (CDC) and the Pennsylvania Department of Health, the Health Initiative for Rural Pennsylvania (HIRP) was established in 2021 at the Pennsylvania Office of Rural Health to reduce COVID-19 incidence and increase the vaccination rate in rural Pennsylvania. The program is compiling research, developing and implementing a rural specific education and outreach campaign, completing a community development process, and providing a learning collaborative in increase local collaboration and implementation of best practices. The community development process includes formation of cross-sector, county-specific COVID-19 Advisory Groups to engage key stakeholders in community needs assessments, problem identification and prioritization, and action planning and implementation in 20 rural counties. The targeted counties are identified in Figure 1. Yellow counties are considered at highest risk.

Figure 1: Health Initiative for Rural Pennsylvania Target Counties



These counties were determined to be at highest risk of COVID-19 based on a secondary analysis including data on COVID-19 incidence, hospitalizations, deaths, vaccination rates, age distribution, and health equity indicators. Given current resources, only two counties in the McKean County region are covered through this initiative.

IV. Rapid Community Assessments

In the fall of 2021, program staff completed a rapid community assessment process in 13 rural Pennsylvania counties to gather local attitudes, beliefs, and opinions regarding the pandemic and vaccine hesitancy. The sample included 69 participants. The most common reasons provided for vaccine hesitancy include:

- Mis/dis-information
- Perceived immunity from prior COVID-19 infection
- Politically charged/motivated
- "Wait and see" approach
- Expressions of freedom and personal choice
- Perceptions that this is an urban only issue
- Lack of reliable, consistent information
- Concerns about ingredients in the vaccines

V. Common Issues Across Rural High-Risk Counties

As part of the HIRP community development process, nine community needs assessments and five problem identification exercises have been completed thus far. Common issues across rural Pennsylvania counties include:

- High levels of vaccine hesitancy and low vaccination rates
- Mis/dis-information
- Lack of cohesive, reputable messaging and education
- Lack of equitable access to COVID-19 testing
- Decreased government involvement in mitigation
- Perceptions of herd immunity
- COVID-19 fatigue
- Perceptions that is it safer or more effective to get COVID-19 than to receive the vaccine
- Politics and faith
- Overwhelmed health care systems
- Unrealistic/uninformed perceptions of health care access
- Mixed perceptions and implementation of COVID-19 mitigation in schools, businesses, and faith-based organizations
- Lack of positive local voices and overriding negativity
- Sick people are not staying home
- Inconsistent/challenging to navigate data sources

VI. Recommendations

Many rural counties lack organized local or collective efforts to address the pandemic. While the federal vaccine mandates for certain health care organizations and large businesses will apply to Pennsylvania, it is unclear if these mandates will be implemented and to what degree of success. Additional mitigation efforts required by the Governor as Public Health Orders are currently lifted. The responsibility is on local groups, organizations, and grassroots efforts to address the pandemic and keep residents safe. Since rural counties tend to experience different issues and problems, a "one size fits all approach" is unlikely to be successful. This link provides access to COVID-19 evidenced-based interventions that may be helpful: HIRP Evidenced Based Practices for COVID-19 Reduction.

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