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HEALTH CARE ACCESS IN THE HEARTLAND: HOW TO IMPROVE SERVICES IN RURAL AMERICA

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Chief Program Officer and Executive Director of Heartland Summit

Angie Cooper leads Heartland Summit and Heartland Forward's programming efforts. The Heartland Summit is the flagship convening of Heartland Forward, a Bentonville, AR-based "think and do" tank focused on advancing economic performance and opportunity in the center of the country. As Chief Program Officer, Angie is focused on turning Heartland Forward's research into action, creating new partnerships, leading on policy solutions, and serving as a resource for Heartland communities.

For more than 16 years, Angie worked in international and domestic public policy and government affairs for Walmart Stores, Inc., most recently as Senior Director of Global Public Policy. Angie also worked in various departments within Walmart including: Merchandising, Public Affairs, State and Local Government Relations and the Walmart Foundation.

While at Walmart, Angie served as Walmart's Chair of the Women's Resource Council (WRC). The WRC is a group of women and men who cultivate an inclusive environment and act as a forum to connect, develop and advocate for their members. Angie has also served on the board for the Asian Pacific American Institute for Congressional Studies (APAICS) and the American Council of Young Political Leaders (ACYPL). Angie currently serves on the board as chair for Common Threads, a nonprofit organization that provides hands-on, cooking and nutrition education to children, parents and educators in under-resourced communities.

Angie is a native of Oklahoma and a graduate of Oklahoma State University.

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Elizabeth Dombowsky is a Data Science Intern at Heartland Forward. Elizabeth conducts data analysis and develops statistical models for the Research and Programs side of Heartland Forward. She is currently studying her Master of Science in Data Science from Regis University and is currently located in Bentonville, Arkansas.

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Originally from West Tennessee, Aury joined Heartland Forward as the Program Director for Human Capital and Workforce Development. Most recently, Aury served as a Program Manager for the Delta Regional Authority (DRA). At DRA, Aury oversaw multiple workforce development programs, including a partnership with the U.S. Department of Labor Employment and Training Administration. Aury also served as the agency's governmental affairs liaison and research director. He holds a Bachelor of Arts in Political Science from the University of Tennessee at Martin, a master's degree in City and Regional Planning with a focus in economic development from the University of Memphis, and a Master of Science in Applied Economics and Statistics from Clemson University. He is currently pursuing his doctorate in Public Policy with a focus in regional economic development from Clemson University. Aury is a graduate of the University of Memphis Herff College of Engineering's Freight Transportation Leadership Academy and the Harvard Kennedy School's Executive Leadership program. Originally from Union City, TN, Aury, his wife Sarah, son Jameson, and daughter Zadie currently reside in Bentonville, Arkansas.

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Kashfia Kamal

Research Intern

Kashfia Kamal is a research intern for Heartland Forward working with the research team performing applied research and data analysis measuring the economic impact of various national policy changes to the United States. There is particular emphasis placed on the heartland states and ways to ensure overall development and economic prosperity.

Kashfia graduated with master's in Applied Economics from the University of Cincinnati (UC), focusing on Econometrics and Quantitative Economics. While at UC, she worked as a Kautz Scholar Graduate Research Assistant at the UC Economics Center, contributing to projects concentrating on the Economic Impact analysis of African American Businesses, affordable housing, behavioral and mental health, hospice services, and Ohio unemployment and labor force participation trend analysis and more. Her final individual research paper conducted an empirical study on the impacting factors of the inflation rate in the US over the past five years.

In addition to her masters, she holds a bachelor's degree in Business Administration concentrating in Corporate Finance and Human Resource Management. She has worked as an institutional banking analyst in Standard Chartered Bank, Dhaka, Bangladesh. In this role, Kashfia worked with multiple global financial institutions including Shenzhen & Shanghai stock exchange (SZSE) and participated as an SZSE custodian during its strategic acquisition of a 25% stake in the Dhaka Stock Exchange (DSE).

Minoli Ratnatunga

Fellow

Minoli Ratnatunga is an economist dedicated to helping communities prosper. Her work at think tanks, non-profits, and public institutions aims to inform and improve decision-making. Minoli is an Executive Advisor at Star Insights, a strategic advisory firm based in Los Angeles.

As the director of regional economics research at the Milken Institute, a think tank in Santa Monica, she led a team examining the role of innovation and human capital in regional growth. Through her research, she has developed a deep understanding of the best practices that have aided economic competitiveness. Minoli has spoken with media and policymakers in cities around the country to help local communities understand and use her work.

In her role as a FUSE Corps Executive Fellow with Los Angeles County, Minoli researched and wrote a comprehensive needs assessment for the Area Agency on Aging based on extensive qualitative stakeholder input. By building a deep understanding of the challenges faced by the community, her work helps foster more strategic and impactful policy choices at the agency.

In Pennsylvania, Minoli worked to improve the quality of life and regional competitiveness of greater Pittsburgh at the Allegheny Conference on Community Development, a civic leadership organization. Her policy research addressed a variety of issues affecting the local economy, including business taxes, transit and transportation funding, electricity markets and energy policy. To create positive change, this work required building coalitions of key stakeholders, engaging with elected officials, and distilling research into clear and informative briefs. Minoli also led the economic impact practice, conducting in-depth studies of strategic industries for external clients.

Minoli holds a bachelor's degree in Philosophy and Economics from the London School of Economics, and a Master of Science in Public Policy and Management from Carnegie Mellon University.

Maria Rodriguez-Alcala

Program Director
Health and Wellness

Maria Rodriguez-Alcala applies a holistic approach to health and wellness and takes a proactive angle aiming to balance the reactive model that still dominates in the Heartland. She previously worked for University of Missouri as a researcher, instructor and, more recently, as a field faculty in Extension. She also worked in Sao Paulo, Brazil for Icone - an applied economics-based think tank and Washington State University. Her multi-disciplinary background, combined with her international, statewide and, more recently, local community-level experiences, allows Maria to bring unique tools to the table to help change the approach on how to improve health in the mid-states.
When compared to the coast states and other developed economies, it is clear to her that innovative ideas and strategic partnerships are needed. She has a B.S. in applied economics from Texas A&M University, M.S. in applied economics from University of Missouri, and a PhD in Sustainable Development from University of Missouri. When asked about why she chose to stay in the Heartland, she says that after living for many years in Missouri, hiking in the Ozarks, and building relationships at the community level, her heart belongs here.

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Dave Shideler

Chief Research Officer

David Shideler serves as the chief research officer for Heartland Forward's research team which includes visiting senior fellows Richard Florida and Maryann Feldman. With a mission to help improve the economic performance in the heartland and change the narrative of the middle of the country, the original research efforts focus on four key pillars: innovation and entrepreneurship, human capital, health and wellness and regional competitiveness.

Shideler joined Heartland Forward after more than a decade at Oklahoma State University, serving as a professor and Community and Economic Development Specialist in the Department of Agricultural Economics. In these roles, he oversaw projects in community and rural development and small business development, and published peer-reviewed research articles on the economic impacts of internet access, incentive programs, and local food production.

Shideler holds a Ph.D. in Agricultural, Environmental and Development Economics and an M.A. in Economics from the Ohio State University, an M.S. in Agricultural Economics from the Pennsylvania State University, and a B.S. in Community and Rural Development from Clemson University.

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Julie Trivitt

Senior Economist
Human Capital and Workforce Development

Julie Trivitt joined Heartland Forward from the University of Arkansas where she was a faculty member in both the Economics and Education Reform departments for eight years. She published several academic articles on the economics of education and education finance. She has lived in the Heartland her entire life and is excited to join the team working to advance economic opportunities for the middle of the nation.

She has a PhD and MS in Economics from the University of Arkansas. Her bachelor's degree is also in Economics and was earned at Missouri State University. She aspires to be an herb gardener, a cruise director, and a librarian.

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ABOUT HEARTLAND FORWARD

Heartland Forward's mission is to improve economic performance in the center of the United States by advocating for fact-based solutions to foster job creation, knowledge-based and inclusive growth and improved health outcomes. We conduct independent, data-driven research to facilitate action-oriented discussion and impactful policy recommendations.

The views expressed in this report are solely those of Heartland Forward.

EXECUTIVE SUMMARY

Rural America's workforce has faced a number of challenges over the last 15 years that has reduced its economic activity. Illness and a lack of adequate, accessible health care, people leaving the labor force prematurely due to poorly controlled chronic disease or injuries, or the need to care for ill or elderly family members all contribute to the lost productivity of the rural workforce. The result is lower economic performance and quality of life for rural residents.

Heartland Forward, using a mixed methods approach, combined secondary data analysis of county demographics and health data with 12 focus groups in 6 states (Arkansas, Kansas, Kentucky, Missouri, Oklahoma and Tennessee) and expert interviews to better understand health care access in these rural communities, especially in light of emergency rules and policies meant to extend access and protect the health care workforce. Our findings include:

- Rural health care providers find the complexities of insurance and payment systems overwhelming, and they often lack support for processing claims and receiving payments. This impacts their willingness to accept insurance and the scope of services they choose to provide, further limiting access to care for some patients and second-best treatment options that are determined based upon cost and not patient health.
- Most providers found telehealth services to be an acceptable way of delivering health care and were using telehealth to its full capacity in many states due to executive orders during the pandemic. Many providers have now adopted these practices:
    - Using multiple modes of remote care (e.g., voice-only and asynchronous technologies), especially given the lack of adequate broadband connectivity, but also due to patient capacity and cultural sensitivities.
    - There is a need for education and digital literacy to increase patients' and providers' comfort levels and ability to effectively use telehealth services.
    - Providers see telehealth most useful for mental health and specialty care (e.g., consulting with a specialist via telehealth from the primary care physician's office), especially when considering social determinants of health such as transportation. Thus, providers accept telehealth as a complement to traditional care practices.
- Recruiting health care workers to rural areas is difficult, particularly for the most highly trained individuals. Health care professionals tend to receive lower wages and salaries in rural areas than elsewhere, and they often desire amenities unavailable in rural places. Training additional health care providers is challenging due to the lack of qualified educators.
- Access to health care is also limited because of complexities created by licensure requirements and scopes of practice that vary by state.

Below are several recommendations to modernize state health care policy and increase health care access in rural communities:

- Increasing transparency on pricing and costs by providers and insurers and using more community health care workers can allow us to build a system that is affordable and less complex, one of the main issues we heard from our focus groups.
- Expanding access to telehealth by lowering barriers for providers and patients and improving standardization across states will allow more communities—particularly those in rural areas—to seek the care they need.
- Creating more robust pipelines to the medical field and modernizing occupational licensure and scope of practice will increase the supply of the medical workforce to meet the growing demand of care across the nation.

INTRODUCTION

Good physical and mental health is an important economic development and a quality-of-life issue for rural America. It is key to having a happier and more productive community and workforce, which, in turn, leads to a higher gross regional product (GRP), reducing the strain on state budgets related to overall health care spending.

All of these things require collaboration, diligence and expertise from medical providers at all levels, along with economic development professionals, federal, state and local policymakers, philanthropists, business and industry leaders, patients, and many others within a community.

Some say the lack of collaboration across all of these stakeholders is why many communities, specifically rural heartland communities, perform poorly in terms of standard health measures, such as obesity rates and the prevalence of major chronic illnesses (e.g., heart disease, diabetes and certain types of cancer), as well as overall health and well-being.

Simply stated, access, affordability and adaptability are all areas in which states and communities can focus to create equitable quality health services for their residents.

The Rural Health Care project examines health care access and applies a social determinants of health (SDOH) lens that highlights the effects on rural communities—particularly women, low-income families and people of color—where health inequity is greater than the majority of the population.

The study highlights six states (Arkansas, Kansas, Kentucky, Missouri, Oklahoma and Tennessee) and provides insight into how new and different types of care delivery and corresponding policy changes health care services could be useful in addressing rural health care access issues.

This report addresses the following opportunities for rural communities and includes analysis of quantitative data by county and policies in each state that impact preventive care and chronic-disease management.

Items studied include:

- Affordability and complexity of the health system
    - Health deserts
    - Social determinants of health opportunities
- Telehealth expansion
- Health care workforce
    - Provider scope of practice
    - State occupational licensing requirements
    - Health care workforce advancements
- Policy modernization needed

The data is complemented by feedback from focus groups conducted in rural communities: health care providers, economic development representatives, social service providers or anyone connected to an area's health care workforce and access.

Get county-specific data from the dashboard and policy tools at **https://healthyheartland.org**

ABOUT THE REGION

To contextualize the complexities of the states we studied and the quality of care of the counties within them, we look to the County Health Rankings[1] developed by the University of Wisconsin Population Health Institute. It compares counties within each state and provides insight into residents' lifespans and how healthy they are while alive. The counties are classified by population as metro, nonmetro or nonmetro completely rural.

Nonmetro counties[2] across the project's six-state region have a significantly lower average county health outcomes ranking (57th) than metro counties[3] (35th). A breakout of nonmetro counties highlights even lower average rankings for completely rural counties[4] across the region (60th).

FIGURE 1: AVERAGE COUNTY HEALTH RANKING BY COUNTY TYPE

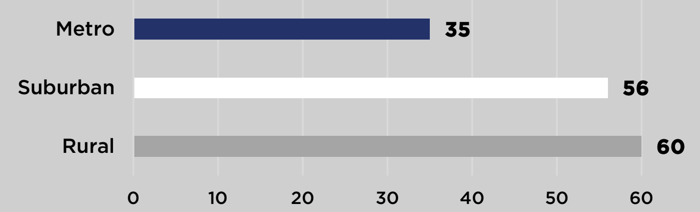
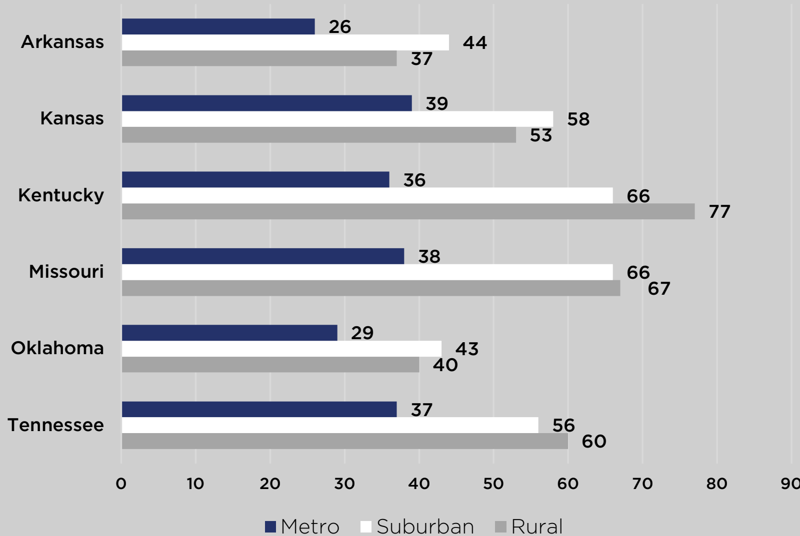


FIGURE 2: STATE BREAKDOWN OF AVERAGE COUNTY HEALTH RANKING BY COUNTY TYPE

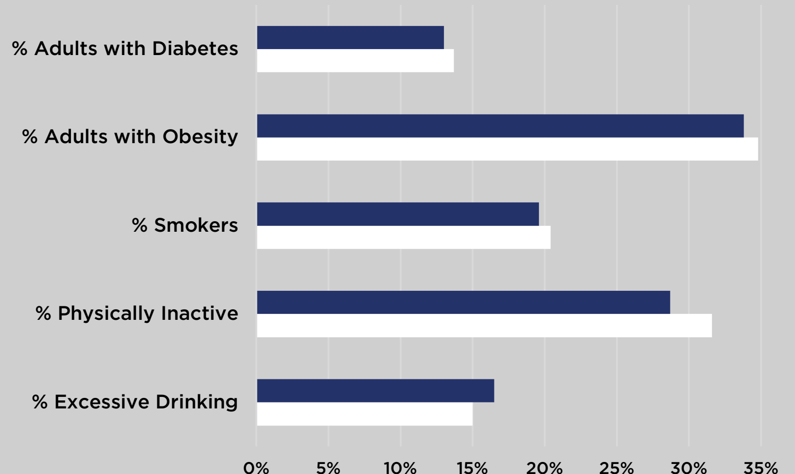


Average county health outcome rankings for nonmetro counties are significantly lower in all states; however, the outcome for the most rural counties is not universal across the study area. In Arkansas, Kansas and Oklahoma, particularly rural counties outperform their nonmetro counterparts (i.e., longer life expectancy and better health while alive). While these states may provide insight into how the most rural areas can achieve better health, it remains important to better understand the overarching difference in health outcomes for nonmetro counties overall.

The lower rankings for nonmetro counties spotlight the shorter lives and diminished health of those living outside of metropolitan areas. The lower rankings reflect the real health consequences for residents of nonmetro counties, including higher rates of premature death. Rural residents also experience a higher average number of physically and mentally unhealthy days each year, as well as greater rates of preventable hospitalization.

This is further reinforced when one considers health care outcomes and high-risk behaviors. Nonmetro counties have more adults with chronic health conditions or who engage in risky behaviors, with the exception of excessive drinking.

FIGURE 3: AVERAGE PREVALENCE OF HEALTH RISK FACTORS BY COUNTY TYPE



With limited financial resources and health care workforce constraints, many regions in the heartland struggle to improve the health of their residents.

ADDITIONAL DETAILS ON HOW THE WORK WAS CONDUCTED

The lens of social determinants of health (SDOH) traditionally considers environmental conditions, including where people are "born, live, learn, work, play, worship and age."[5]

In the six states we studied, access to health care is limited: 25% of counties have a ratio of population to primary care physicians that is more than double that of the U.S. average.

In addition, Kansas and Tennessee lack expanded Medicaid coverage (Arkansas and Kentucky adopted these policies in 2014; Missouri and Oklahoma followed suit in 2021).

Similarities across these states allow for the comparison of health outcomes from variations in state-level health policy. Furthermore, the timing of this study allows us to observe how temporary changes to health care policy due to the COVID-19 pandemic impacted health outcomes and expanded access to medical treatments that were otherwise not available to residents.

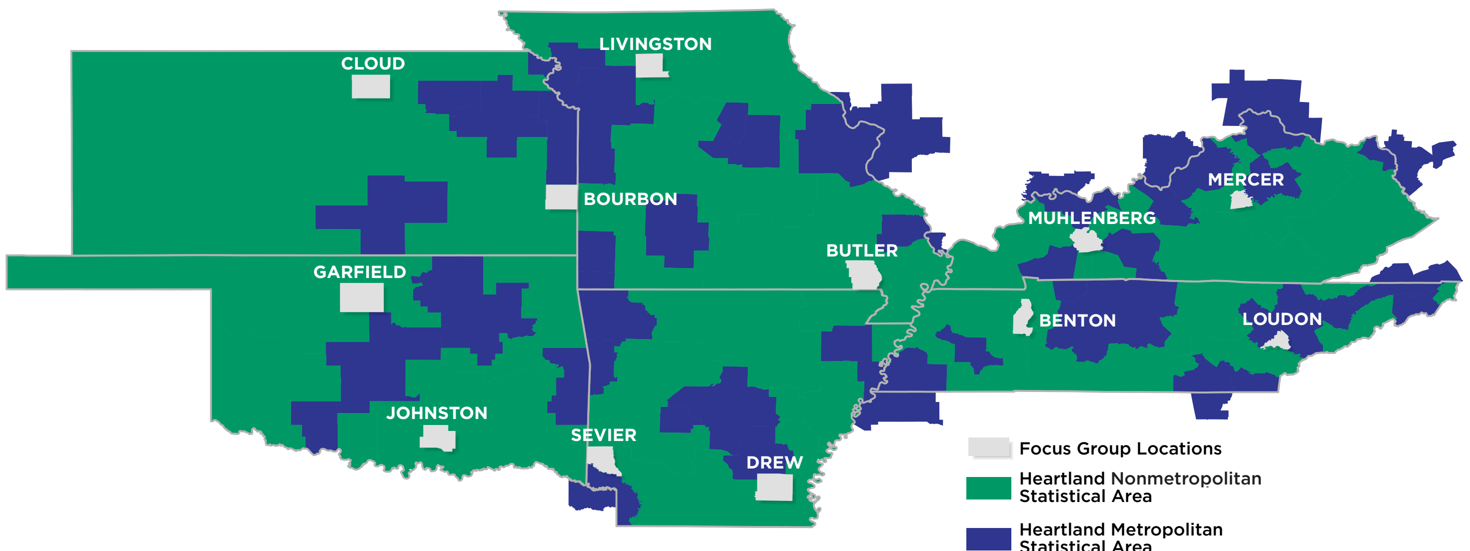
To evaluate how differences in policies across states or changes to health care regulations impacted health outcomes, we analyzed demographics, health indicators, health risk factors and health care access metrics to understand how counties might benefit from new and updated health care services resulting from less-restrictive policies enacted during the pandemic.

To look deeper into the realities of rural health care, the research team conducted 12 in-person focus groups across the six-state study area—two in each state. The focus group locations were:

- AR: Monticello (Drew County) and De Queen (Sevier County)
- KS: Ft. Scott (Bourbon County) and Concordia (Cloud County)
- KY: Harrodsburg (Mercer County) and Greenville (Muhlenberg County)
- MO: Poplar Bluff (Butler County) and Chillicothe (Livingston County)
- OK: Tishomingo (Johnston County) and Enid (Garfield County)
- TN: Camden (Benton County) and Lenoir City (Loudon County)

These are highlighted in gray in Figure 4.

FIGURE 4: STUDY REGION HIGHLIGHTING METRO, NONMETRO AND FOCUS GROUP LOCATIONS



Heartland Forward partnered with local organizations to recruit focus group participants. Heartland Forward provided outreach materials and helped identify the best local subject matter experts. Potential participants were contacted via direct email and phone calls. The recruitment strategy yielded 132 unique participants with an average of 11 participants per focus group.

Focus group participation included health care professionals (including public health), along with experts in economic development, workforce development or education. Participants offered perspectives from their own personal experiences or what they interpreted based on their interactions with patients or their organization's target population. Therefore, it should be noted that patients didn't participate in the focus groups, so the findings are not representative of patients in these communities.

To corroborate and provide additional context from the 12 focus groups, 11 interviews were held with local, regional and national subject matter experts. These videoconference interviews were also semistructured with open-ended questions, then were recorded and coded using the same focus group coding rubric.

For all the topics studied and listed above, we provide evidence from secondary data, focus groups and expert interviews that not only help to understand the secondary data, but point to specific barriers faced and innovations developed that impact health care access, adoptability and affordability. Finally, each section ends with implications for policy on the related topic, while our conclusion provides policy recommendations and actions that would enhance well-being in rural communities.

KEY FINDINGS

Our key take-aways from our analysis fall into three major categories: affordability, telehealth and health care workforce. Low insurance reimbursement or the inability of patients to pay the out-of-pocket expenses impacts providers' profitability. The COVID-19 pandemic demonstrated the usefulness of telehealth in delivering health care, though many of the factors which facilitated the use of telehealth were temporary; if these executive orders are not replaced by legislative action or extended, then removal of these provisions will leave many with reduced access to health care services. Lastly, we learned that the rural health care workforce faces shortages and struggles like other industries, but state regulation of health care occupations and lack of incentives to move from practitioner to educator uniquely heightens these challenges.

Rural health care providers find the complexities of insurance and payment systems overwhelming, and they often lack support for processing claims and receiving payments. Two factors are driving this: an increasing share of rural patients are on Medicaid, which does not adequately reimburse providers for services, and the patients themselves are less able to pay the out-of-pocket portion for services rendered. This impacts their willingness to accept insurance and the scope of services they choose to provide, further limiting access to care for some patients and second-best treatment options that are determined based upon cost and not patient health. Making health care affordable, then, is critical to increasing rural accessibility.

Technology does help increase access to health care, and we learned that most providers found telehealth services to be an acceptable way of delivering health care. Based upon household access to broadband, households were more likely to have access to broadband than to public health centers in rural counties. Telehealth can help to fill this access gap. During the COVID-19 pandemic, providers used telehealth to its full capacity in many states due to executive orders during the pandemic. However, much of the flexibility given to providers via telehealth is not permanent, so that pre-COVID restrictions could likely reduce access to health care unless state legislatures act to make permanent these changes, such as flexibility in modes of remote care (e.g., voice-only and asynchronous technologies), additional education and digital literacy to increase patients' and providers' comfort levels and ability to effectively use telehealth services. Providers see telehealth most useful for mental health and specialty care (e.g., consulting with a specialist via telehealth from the primary care physician's office), especially when considering social determinants of health such as transportation. Thus, providers accept telehealth as a complement to traditional care practices.

We also learned that rural health care access is limited by the available labor pool in many locations. Recruiting health care workers to rural areas is difficult, particularly for the most highly training individuals. Health care professionals tend to receive lower wages and salaries in rural areas than elsewhere, and they often desire amenities unavailable in rural places. Training additional health care providers is challenging due to the lack of qualified educators; educational institutions struggle to find experienced individuals willing to teach the next generation of health care workers, especially when educational wages and salaries often meant reduced income.

A variety of other issues arose during our focus groups, interviews and analysis. We opted to address affordability, telehealth and health care workforce deeply, as these represent some of the more pressing issues facing health care access currently. Additional issues are identified in the What's Next section of the report and represent opportunities for future research.

TOOLS AND RESOURCES

Heartland Forward created an atlas with educational elements that address the above needs while also highlighting the economic benefits to states and rural communities.

The dashboard provides a summary assessment of key health-related metrics.

- State -and county- level data (when available) on demography, socio-economic status, measures of health outcomes
- Type of health insurance (Medicare, Medicaid, etc.)
- Measures of social assistance programs used
- Measures of health deserts and availability of certain types of health care workforce

POLICY RECOMMENDATIONS AND WHAT'S NEXT

The report also focuses on how state and local policymakers can modernize existing policy and provide innovative solutions to the health challenges that rural communities experience. We suggest policies across three major categories: affordability and complexity; telehealth; and the health care workforce. We conclude with what is next for researchers and practitioners to consider.

While assessing additional causes and concerns, some of which Heartland Forward looks forward to studying further, we believe it is paramount to establish partnerships with policymakers, community leaders, health care professionals and patients – to take action. Some areas for piloting new initiatives and trying to solve for these very important issues, include but are not limited to:

- Health care economics and impacts to state budgets
- Price transparency
- Health care debt
- Transportation
- Access to healthy food
- Other social determinants of health issues
- Patient feedback

POLICY RECOMMENDATIONS

Policy Areas	Policy Levers	Federal Action	State & Local Action	Health Care Experts (i.e., physicians, health clinics, payers)	Community leaders (i.e. philanthropy, economic development)
AFFORDABILITY + COMPLEXITY	1 Increase transparency on pricing and coverage by enforcing Center for Medicare & Medicaid Services (CMS) rules requiring hospitals to post "standard charges" for hospital items and services. Insurers should provide patients with out-of-pocket costs and negotiated pricing information that is understandable to consumers	●		●	●
	2 Expand access to Community Healthcare Workers, who serve as a resource to patients, through expanded coverage and reimbursement under public and private payers	●	●	●	●
TELEHEALTH	1 Implement the Uniform Law Commission model telehealth bill for standardization across states		●	●	
	2 Require that Medicaid and private payers provide reimbursement for telehealth services, allowing audio-only and asynchronous technology as telehealth services and eliminate that an in-person visit prior to telehealth coverage is required		●	●	
	3 Expand services eligible for Medicare coverage furnished in federally qualified health centers (FQHCs) and rural health clinics (RHCs)	●	●	●	
	4 Lower barriers for new telehealth providers to enter the market and educate health care professionals on best practices. For example, providing state-developed training resources and state incentives for telehealth-related investments in equipment, staff and training	●	●	●	●
	5 Lower barriers for patients to participate in telehealth by increasing access to high-speed internet. (For example: making use of funding and programs like broadband infrastructure dollars (BEAD) and Digital Equity Broadband funds)	●	●	●	●
	6 Expand/require Medicaid and private payer coverage of smart phones, tablets and broadband for patients and providers in medically underserved communities	●	●	●	●
	7 Promote and educate health care professionals on best practices related to telehealth usage	●	●	●	●
	8 Expand services eligible for Medicare coverage in federally qualified health centers and rural health clinics	●		●	
	9 Establish DEA registration process for the prescription of controlled substances	●			
WORKFORCE: OCCUPATIONAL LICENSURE	1 Promote cross-state initiatives that align licensing and scope of practice, increase coordination accross regulatory boards within each state and conduct statewide reviews of occupational licensing regulations for healthcare professionals to better align with HCPs' training and education and promote greater care coordination		●	●	●
	2 Increase license portability and streamline licensing processes across states		●		
	3 Develop a streamlined process for providers to request a licensure waiver in order to become an interstate provider		●	●	

Policy Areas	Policy Levers	Federal Action	State & Local Action	Health Care Experts (i.e., physicians, health clinics, payers)	Community leaders (i.e. philanthropy, economic development)
WORKFORCE: LABOR SUPPLY	1 Create pipelines into the medical profession through internship and apprenticeship programs to expose young adults to the field and provide training while helping perform some lower-level tasks	●	●	●	●
	2 Open opportunities into more fields within the medical profession through increasing funding to National Health Service Corps (NHSC) Loan Forgiveness program and expanding to additional professions beyond medical, dental and mental/behavioral health. Increase funding for Substance Abuse and Mental Health Services (SAMHSA) programs to strengthen the behavioral health workforce	●	●	●	●
	3 Recruit professionals in rural communities to the medical profession by expanding Center for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA) grants to support health care job development, training and placement in rural and tribal communities for maternal and child public health workers, community health workers and other paraprofessionals	●	●	●	●
	4 Increase funding for programs to cover up-front costs of adopting labor-saving technologies (For example: make available capital infrastructure grants or loans that providers can use to modify service lines or improve structural or patient safety)	●	●	●	
	5 Increase access to dental, hearing and vision services and related items for children and adults in rural communities by expanding Medicare, Medicaid and commercial payer coverage	●	●	●	●
	6 Modernize regulations to ensure health care professionals can practice at the top of their license according to their training and education	●	●		
WORKFORCE: SCOPE OF PRACTICE (SOP)	1 Allow non-physicians to practice at the top of their license (i.e. pharmacists, technicians, PAs, dietitians)		●	●	
	2 Join cross-state initiatives and compacts to align licensing and scope of practice for providers to offer health care services in states that are part of the multi-state compact		●	●	
	3 Increase coordination across regulatory boards within each state to align scope of practice and licensing requirements		●	●	
	4 Conduct statewide reviews through Executive Orders and Task Forces to make permanent the temporarily granted scope of practice expansions		●		
	5 Coordinate and educate patients on scope of practice opportunities to enhance health care access for underserved areas		●	●	●

AFFORDABILITY AND COMPLEXITY

U.S. health care is a complicated system of agents that includes policymakers, regulatory agencies, patients, health care providers, outpatient procedures and services like lab work and X-rays, inpatient hospital respite care, prescriptions and over-the-counter medications. Adding to the complexity of this system is how health care gets paid for—a confusing mix of out-of-pocket expenses and, if the patient has insurance, deductibles, co-pays and discounts, along with in- and out-of-network details.

Our analysis demonstrates that the rural parts of our study area are disadvantaged by this complexity. When it comes to accessibility, the socioeconomic context of rural communities needs to be looked at through the lens of social determinants of health.

Rural communities in the six states we studied have a significant population of low-income, elderly and diverse residents. Arkansas and Tennessee have above average Black populations, while Oklahoma has a significant Native American population. Throughout the region, the Hispanic population is growing, and there are other cultural and ethnic populations in the region, such as established Amish and Mennonite populations and an increasing number of refugees from different countries.

These realities, coupled with low levels of health literacy and an acute shortage of health care resources that worsened since the pandemic, pose challenges on accessing a complex health care system.

Rural populations are one of the populations that we really focus on, as well as communities of color and low-income populations. There's a great deal of intersectionality across those three groups. I will also say, understanding that rural America is a really, really diverse place in some of the research and listening that we've done, In addition to cost and access, we've had folks talk about bias, discrimination and respect that add to the burden of going to seek care.

— Kristin Wikelius, chief program officer, US of Care

FOCUS GROUP FEEDBACK

In the focus groups, concerns were shared repeatedly about sizable and growing low-income and elderly populations. Despite Medicaid expansion in four states (Arkansas, Oklahoma, Missouri and Kentucky), participants expressed concerns that growing shares of hospital and clinic patients are expanding in rural communities and that health care bills often go unpaid and Medicaid reimbursement rates are low. Even health care providers and experts have a difficult time managing the complexities for payment reimbursement. If this is this case, patients struggle even more.

So, you almost have to hire somebody just to do that (file Medicaid claims) and be very proficient in filling [out] those forms. These are governmental forms—if they are not filled correctly, then you don't get paid, and so you have to refile it. That's some of the frustration that the staff has with billing.

— Maria Sallie Poepsel, current fellow, and former board member, of the American Association of Nurse Anesthesiology (AANA)

Because of this, many providers decline to take Medicaid. For instance, dentists were often cited as a high-need service in rural communities, however, due to variable coverage and low reimbursement rates, dentists often do not accept Medicaid patients. While dental services are a required service for most Medicaid-eligible individuals under the age of 21, as a required component of the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit, states may elect to provide dental services to their adult Medicaid-eligible population or, elect not to provide dental services at all, as part of its Medicaid program. While most states provide at least emergency dental services for adults, less than half of the states provide comprehensive dental care. There are no minimum requirements for adult dental coverage.[6] **With limited Medicaid coverage** for next-level dental care like root canals and crowns many Medicaid-enrolled adults end up having teeth removed rather than repaired because extraction is cheaper, according to one Dentist participating in a focus group.

Physicians go to medical school. They don't go to navigating federal policy and regulation school. So, going back to a rural community to practice and serve Medicaid and Medicare patients is challenging. They do not have the policy and human resources experts on their teams to help navigate the system. Changing regulations, billing and coding practices—those operational things—larger systems have people at the ready to pivot anytime policies change, whereas your independent providers usually do not.

— Jacy Warrell, Executive Director, Rural Health Association of Tennessee.

Comments also were made about patients not understanding insurance eligibility, the private health exchange and Medicare enrollment processes, and how changes in employment or location impacted insurance options. These issues are exacerbated for self-employed patients. It was said that many opt to remain uninsured and avoid medical care until their health is already greatly compromised. Perceptions of confusion around where certain benefits could be used, such as veterans' benefits or tribal health care, also were cited.

We heard in several focus groups that even people with employer-based insurance are increasingly shunning care, even when they have some knowledge of how to navigate the health care system. **Ultimately, the lack of cost transparency and an anxiety factor are seen as major barriers to patients getting needed care.** It was also said that patients sometime assume the doctor will want to run labs and additional procedures to increase their revenue, leaving the patient with unexpected and large bills. We were told that this distrust is reinforced by the lack of transparency of health care bills—not only are they difficult to understand, but the lack of price transparency leads to complicated arithmetic to compute the final bill amount.

Simply put, people are opting out of preventive care or needed treatments because they're uncertain of the number of bills that will follow, an unpredictable total value or even being sued if they can't pay their bills. Patients just do not want to deal with the anxiety of uncertainty regarding their health care. The failure to use preventive care results in excess use of the ER, urgent care and ambulance services.

I don't know how to audit all my medical bills, and I'm just stuck with whatever amount you tell me that I need to pay. Research on transparency and health care billing would help because there are a lot of people that don't get the health care they need and are so stressed out because of that. Being able to say, "This is what you need to pay today." A year down the road, or whatever, I learn I didn't get the bill for a procedure, or I didn't know the insurance wasn't going to pay. So, I think health care is the biggest stressor for any community, but even more so when you look at rural communities and diverse communities.

— Susie Marks, state director, Arkansas Nurses Association

We also heard in the focus groups that this avoidance of preventive health care intersects with a common rural culture of "tough folks" (e.g., the pain will go away in time) or "independent nature" that, when combined with limited health literacy, exacerbates the reluctance to seek health care. "Why do people need to access care when they are healthy?" is a common refrain providers heard and overlaps with the fear of accessing such a system.

In all of the research we've done—and this is true not just for people in rural areas, but across the board—costs are the absolute biggest issue that people identify as their concern in terms of accessing care. And one of the things that we also find people talk about is they lack certainty around their costs. So, it's not even just how their plan is structured, for example, or what their out-of-pocket costs might be, or how much they might owe on their deduction. But this feeling of uncertainty—having no idea [that] if I go to the doctor, will it be free, or I might pay $1,000. I have no idea. That feeling of uncertainty really is a big issue [that] really comes out often with people.

— Kristin Wikelius, chief program officer, US of Care

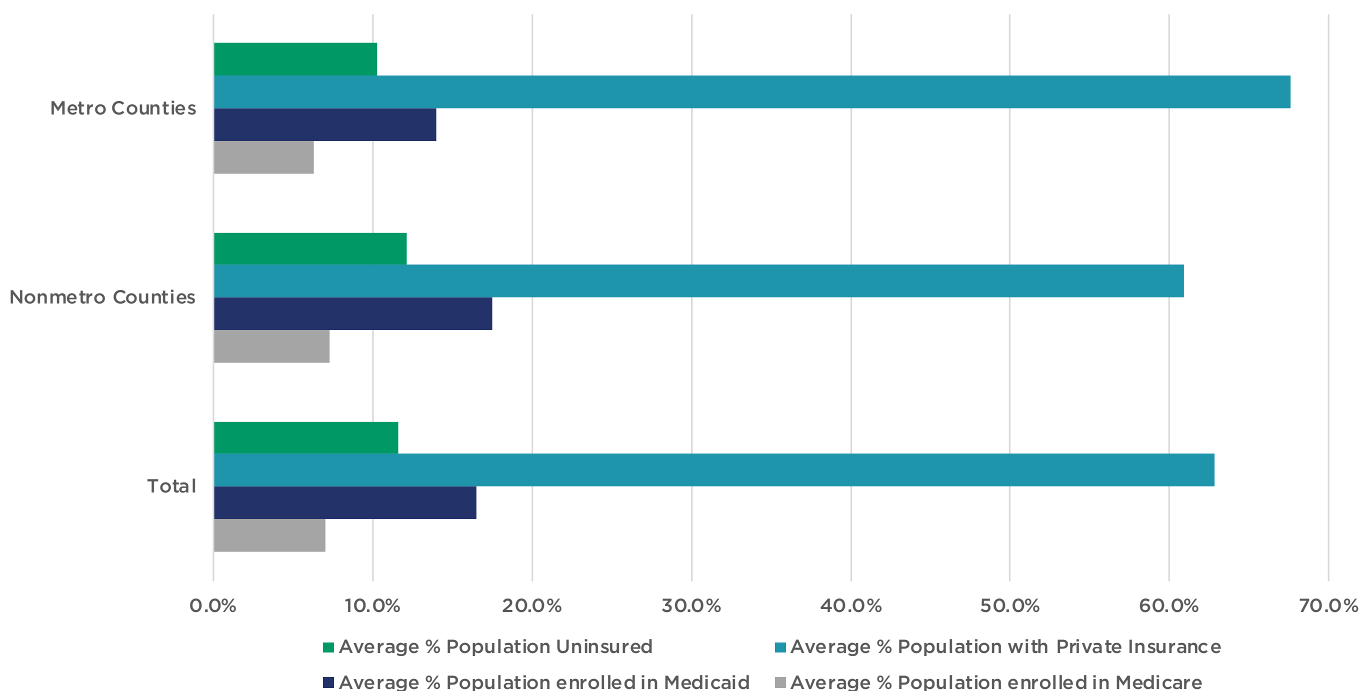
We must provide solutions: Are there trustworthy and easier ways for patients to access preventive care, such as through more convenient and accessible health clinics, or expanding the scope of practice for health care professionals who deliver high-quality care in lower cost settings, such as pharmacists?

LOOKING AT THE NUMBERS

Access to medical care, especially preventive care, is closely tied to the complexities and lack of price transparency for some of the basic health care needs. Access and lack of accessible services are why many patients don't seek the care they need. Across our study area, 2.9 million people (10.8%) did not seek coverage and/or lacked health insurance at some point during 2020. Those living in nonmetro counties (11.9%) were less likely to have insurance of any kind than individuals in metro counties (10.4%). The lowest rates of people lacking insurance (7.8%) were in Arkansas and Kentucky.[7]

Private insurance was the most common form of health care coverage across the study area. An average of 62.5% of county residents have coverage through private insurance, compared to an average of 16.5% who are enrolled in Medicaid and 7.0% who are enrolled in Medicare. Notably, nonmetro counties have higher rates of public health care assistance participation, which can indicate greater access issues arising from quality and breadth of health care as well as affordability.

FIGURE 5. INSURANCE COVERAGE BY COUNTY TYPE

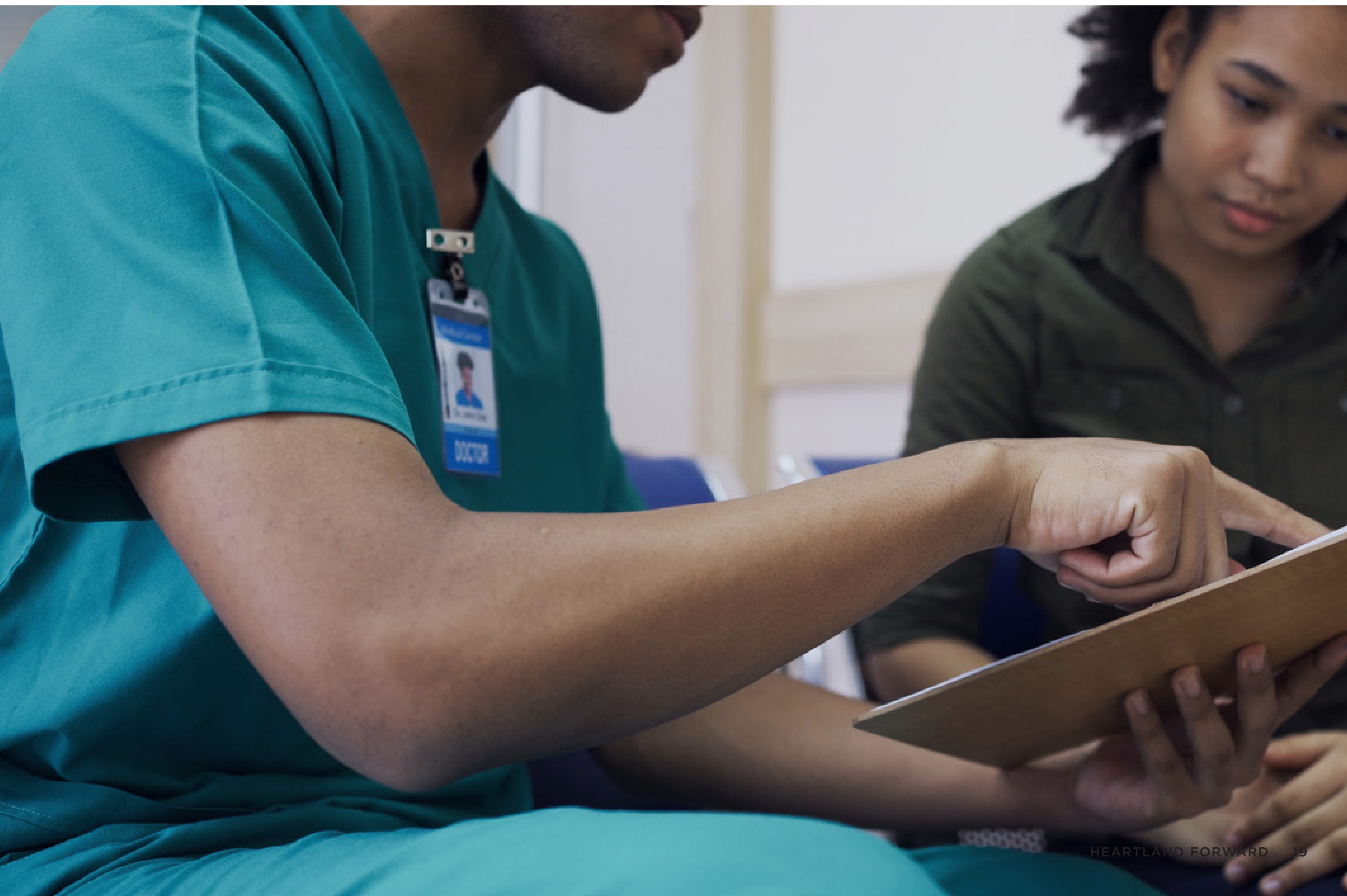


POLICY OPPORTUNITIES

Community health workers (CHWs) address some of the complexities of the health care system but not the underlying causes. CHWs help patients navigate the system, knowing what the next step of care is for their diagnosis (e.g., assisting with scheduling referral appointments) or helping them understand their insurance coverage or payment options, as well as assisting them with enrollment. By increasing patients' understanding of their care, payment systems, and resources, CHWs can help foster more trust between patients and providers. **A necessary policy change is Medicare and Medicaid coverage and adequate reimbursement of a broad set of CHW services**

The focus groups and analyses above also point to a need for a simpler health care system. One source of complexity is rooted in the lack of price transparency; requiring providers to state their prices for specific services would reduce uncertainty around medical bills and empower patients to make informed decisions. Increasing insurance coverage would also reduce debts owed by the uninsured, although the premiums must be affordable and the insurance understandable.

Public-private partnerships also need to be created to increase health literacy in rural areas by educating patients about the importance of preventive care and other forms of health services that might be available to them. **While we will address policy changes to expand scope of practice for pharmacists and eliminating licensing barriers across state lines for health professionals, this significant issue should be highlighted and flagged multiples times for state legislators, health agencies and regulatory agencies, and every governor in the heartland.** This was addressed as a positive change by many of our focus group participants who agree these services provide quality care while also offering ease of access, affordability and adaptability for patients.



TELEHEALTH

The COVID-19 pandemic led to significant changes in policy and behavior, and much can be learned from the period and potentially be carried forward. The need to maintain physical distance, for instance, meant traditional service models had to adapt to keep both patients and providers safe. And while the exceptional circumstances led many people to be more open to changing habits and trying new things like telehealth, it also led state governments to temporarily relax restrictions on the health care industry to allow more flexibility and increase capacity. Insurers, providers and health care technology developers also gained valuable insight into the potential for big changes in their businesses.

FOCUS GROUP FEEDBACK

Although we explicitly asked participants to answer questions on telehealth assuming the lack of reliable connectivity would be resolved, focus group participants were adamant to reiterate this shortfall.

Broadband is an issue, not necessarily just with telehealth, but new, really cool things that are helping people stay connected, that are more available in those urban centers. The cost of getting the technology to use telehealth or any other type of health care technology can definitely be a barrier, because there just isn't enough cash flow associated with those types of technology.

— Sydne Enlund, NCSL senior policy specialist in health workforce

Providers and administrators said acceptance is wide for telehealth, but with certain exceptions. Telehealth is seen as an important complement but not necessarily as a substitute for in-person services.

Focus group participants shared that flexibility in delivery methods increases the chances of access for underserved populations.

For telehealth to be successful, it needs to improve cultural competency around social needs and understanding someone in the rural community. You get to see into that person's home through this little screen. You see the dishes piling up in the sink; you see someone fighting in the background. You see all these social needs happening and you're not assessing them. You're not helping them connect to resources. Telehealth misses on that because you're someone who feels like you're in my home, but you're not..

— Georgina Dukes, Senior Director of Social Care Advocacy, UniteUs

They also mentioned education around health services and digital skills are needed to ensure proper and more equitable adoption. A patient-centered approach, in which telehealth is chosen when it is the best alternative for the individual case, was stressed. This means it is not just about convenience for the patient and/or the provider, rather what is best to improve the health outcome for that patient in the context of each specific appointment. However, rural health care providers say they are understaffed and overburdened with too many bureaucratic demands, so any new requirement or adoption can easily be overwhelming.

Community health workers could be the facilitators for the technology on the side of the patient. They are good in connecting to those patients, and they can help patients who get overwhelmed with one more thing to deal with if they are not used to the technology. And there's so much distrust today in general, in particular with the opioid epidemic and then COVID.

— Maria Sallie Poepsel, current fellow and former board member of the American Association of Nurse Anesthesiology (AANA)

Participants in the focus groups noted that isolation is a factor for many rural residents and one that is exacerbated by telehealth. Seeing a provider in person can be the only personal interaction someone has in a week or longer. **One solution is to provide telehealth services from inside a retail health clinic setting, where the patient's visit with the virtual health care professional is facilitated by a CHW or medical assistant. Opportunities also exist to consider how a retail health clinic setting can be used to connect specialists and patients who otherwise would not have access to such care.**

Mental health is by far the most widely utilized category of telehealth service, as perceived by health care providers in our focus groups. Telehealth helped expand access among some battling substance abuse who were not seeking care before the pandemic.

Privacy can be perceived as a cause of reluctance by patients. Specifically, two sources of privacy violations were discussed: the risk of sharing information through the internet, as well as homes not always having sufficient private space.

Additionally, our focus group respondents agreed that telehealth played an important role during the pandemic, not just in serving existing patients, but also expanding access to some who were previously not accessing services. Focus groups also acknowledged there is considerable room to expand telehealth, as well as to continue learning about what works best and how to present it.

LOOKING AT THE NUMBERS

Supporters of telehealth for many years have advocated for policy changes that would increase its use. The disruption caused by the COVID-19 pandemic led to more rapid, widespread adoption.[8] As state policy advanced, temporary executive orders were put in place, insurance coverage expanded and patient and provider preferences shifted in response to the risk of infection.[9]

However, some patients continue to have limited access to telehealth due to lack of connectivity. The digital divide issues that manifested during the pandemic must be addressed. Figure 6 provides estimates of broadband availability by state and region, and it demonstrates the overlap that exists between households with broadband access but that are likely located in a health center desert.

FIGURE 6. BROADBAND ACCESS AND HEALTH CARE DESERT COMPARISON FOR STUDY AREA

	COUNTY RURAL URBAN DESIGNATION	MEAN POPULATION WITH BROADBAND ACCESS	MEAN POPULATION LIVING IN HEALTH CENTER DESERT
Arkansas	Metro Counties	76.6%	39.9%
	Nonmetro Counties	69.3%	44.0%
Kansas	Metro Counties	81.8%	58.5%
	Nonmetro Counties	79.1%	78.1%
Kentucky	Metro Counties	81.4%	46.2%
	Nonmetro Counties	73.9%	32.7%
Missouri	Metro Counties	80.3%	42.1%
	Nonmetro Counties	75.3%	47.6%
Oklahoma	Metro Counties	80.7%	52.6%
	Nonmetro Counties	76.6%	58.3%
Tennessee	Metro Counties	79.5%	48.1%
	Nonmetro Counties	72.9%	48.5%
Region	Metro Counties	80.1%	47.2%
	Nonmetro Counties	74.4%	52.0%

While the lack of broadband is an underlying factor to why telehealth made up less than 1% of all visits prior to the 2020 onset of COVID-19, low uptake can also be explained by the numerous policy and payment restrictions and limitations that existed prior to the pandemic.[10]

Following the implementation of numerous federal and state waivers and flexibilities at the start of the pandemic, the share of telehealth visits peaked and then began to drop as social-distancing restrictions eased and vaccines became available (see Figure 7).

Prior to the pandemic, only 15 states (including Arkansas, Missouri, Kentucky and Tennessee) mandated telehealth payment parity. Then, during the pandemic, the Centers for Medicare and Medicaid Services (CMS) used its waiver authority to establish payment parity for in-person, audio/video, and audio-only telehealth. Many states are following CMS' lead and are implementing payment parity – on a permanent basis. As of November 2022, 21 states have implemented policies requiring payment parity, 5 states have payment parity in place with caveats, and 24 states have no payment parity.[14]

FIGURE 7. USE OF TELEHEALTH SERVICES INCREASED DRAMATICALLY DURING COVID-19 AND REMAINS HIGHER THAN PREPANDEMIC[11]

TELEHEALTH SHARE OF MEDICAL CLAIMS (INCLUDES PRIVATE AND MEDICARE INSURANCE CLAIMS)	
Jan 2019	0.17%
July 2019	0.15%
Jan 2020	0.24%
March 2020	WHO declares COVID-19 pandemic
July 2020	6.0%
Jan 2021	7.0%
April 2021	Vaccines available to all U.S. adults
July 2021	4.2%
Jan 2022	5.4%
July 2022	5.3%

In a survey of federally qualified health centers (FQHCs), 90% reported they served many patients who would not have otherwise been able to access care, and 96% identified their telehealth offerings as being at risk if state Medicaid policy flexibility were to end.[12]

Telehealth visits are a benefit to people with restricted mobility, including those who have physical impairments, caregivers who find it difficult to leave home for extended periods, and those who lack access to convenient transportation or live in remote locations.[13] It also offers convenience to those whose work schedules or travel make an in-person visit more onerous.

As we look to the future, it is important to consider policy changes that facilitate consumer access to telehealth, including the existence of coverage and payment parity between telehealth and in-person services.

It is unclear to what extent payment parity will continue, and for which types of telehealth modalities and services. It is important to consider, however, that inadequate reimbursement will limit providers' ability to offer telehealth in the future.

Telehealth and related digital therapeutics, such as those that allow diabetics to monitor and track their blood glucose levels, can help with chronic disease management. Interventions can be timed based on a patient's need and health, with apps and devices providing regular guidance and reminders. This approach has been shown to have improved outcomes in recent meta-studies of diabetes management, reducing costs and improving health and convenience to participants.[15] In our six focus states, the prevalence of diabetes among adults was above 15% in nearly one-third of the counties.

With a large pool of patients experiencing telehealth for the first time during COVID-19, consumer perceptions and familiarity with services have changed and new preferences are emerging. While people are returning to in-person appointments to see specialists and gynecologists, for example, the share of visits to psychiatrists and psychologists conducted via telehealth has remained high, as patients are able to conduct regular mental health visits with more privacy and convenience.[16]

A scorecard created by the Reason Foundation, Cicero Institute and Pioneer Institute looks at telehealth policies by state. Figure 8 provides an overview of where states in the study stand regarding nine distinct areas of telehealth policy. Rankings follow a stoplight progression: red representing state policies that are the most restrictive; yellow representing policies that have some support for telehealth use but have room for improvement; and green noting policies that coordinate with telehealth policy best practices.

The scorecard in Figure 8 shows where policy changes impact how a state effectively executes telehealth to serve patients.

FIGURE 8. TELEHEALTH POLICY SCORECARD[17]

TELEHEALTH POLICY	ARKANSAS	KANSAS	KENTUCKY	MISSOURI	OKLAHOMA	TENNESSEE
No In-person Requirement	Green	Green	Green	Green	Green	Red
Start Telehealth by Any Mode	Red	Red	Green	Green	Green	Green
Modality Neutral	Green	Yellow	Green	Yellow	Green	Yellow
No Barriers to Across State Line Telehealth	Red	Green	Red	Red	Green	Red
All Providers Can Use Telehealth	Green	Yellow	Yellow	Green	Green	Yellow
Independent Practice	Yellow	Red	Red	Red	Red	Red
Compacts	Yellow	Green	Green	Yellow	Green	Green

POLICY OPPORTUNITIES

Considerable confusion exists among patients and providers regarding telehealth regulations—coding and billings, licensing allowable and covered mode of delivery, and whether the platform complies with HIPAA regulatory requirements. There is also confusion as to what is regulated at the federal level versus the state level, as well as public and private payer internal policies.

Policy around telehealth coverage and reimbursement is primarily determined at the federal level for Medicare and at the state level for Medicaid and private insurance, though local and individual factors affect accessibility of telehealth to patients.

Across the six-state region, policies are neither universal nor entirely supportive of using telehealth to its full potential.

Given the number of households living in health care deserts across the region, policy shifts related to telehealth could provide increased access to preventive and primary care when made in combination with efforts to increase patient literacy and trust of this tool for intervention.

The ability for patients to choose when, where, and how they receive care is recognized as an essential component of increasing access to health care in rural areas. This is why Medicare covered some telehealth services for patients in rural areas prior to the pandemic. A 2021 study estimated that more than 80% of U.S. counties contain significant health care deserts.[18]

And in 72% of the counties in our six focus states, more of the population lives in rural settings than in urban areas.

Policy around telehealth reimbursement is primarily determined at the federal level for Medicare and at the state level for Medicaid and private insurance providers, while local and individual factors affect accessibility of telehealth to patients.

Another potential benefit of telehealth is that, in combination with cross-state policies, it can increase the size and diversity of the pool of health service professionals available to a patient; however, since states regulate health care licensing, this is not generally possible.

Arizona and Florida have registries for out-of-state providers of telehealth services, which allows professionals with comparable licenses in other states to pay a fee to register and serve patients via telehealth. In both Florida (enacted 2019) and Arizona (2021), however, the law in the provider's home state still determines what services can be offered regardless of where the provider is located.

The Uniform Law Commission, a nationwide nonprofit that promotes consistency of laws between states, has proposed a model bill that would lay the groundwork for expanding telehealth across state lines. This could lead to the development of more specialized services that improve the patient experience for those who have been underserved by local providers. For example, patients may be able to find a provider who speaks their native language or who can provide culturally appropriate services.

The changes to state health care policies during the pandemic were largely achieved through executive orders that allowed swift responses to shifting circumstances. Legislative action is required for these changes to become permanent.

Four states—Illinois, Massachusetts, Utah and West Virginia—added a requirement that telehealth be covered by private insurers licensed in the state, and 22 states expanded access and coverage of telehealth in some way. **All six of our focus states had pre-pandemic laws requiring insurers to cover telehealth.[19]**

Requirements that telehealth include live video prevents use by patients with limited or low-speed internet access, creating a particular challenge in many rural areas. While 18 states added coverage of audio-only telehealth services between March 2020 and March 2021, none of our six focus states did so, although Kentucky already covered audio-only visits in cases where other forms of telehealth were not feasible.[20] Missouri and Arkansas added telemedicine coverage for real-time, interactive audio in 2022.[21]

Medicare telehealth coverage policies also changed during the COVID-19 pandemic. Beginning in March 2020, a series of temporary federal waivers removed restrictions on Medicare telehealth services, including eliminating geographic restrictions, coverage of audio-only services, and recognition of additional eligible provider types, e.g., physical therapist, occupational therapist, and speech-language pathologist. The most significant change may have been the new [temporary] definition of originating site, to mean any site in the U.S. at which the beneficiary is located at the time the service is furnished, including their home. Prior to the pandemic, the statute restricted Medicare coverage of telehealth services to patients located in physician offices, hospitals, skilled nursing facilities, etc. This meant that a Medicare beneficiary would have to travel to such setting in order to receive telehealth from a distant types, e.g., physical therapist, occupational therapist, and speech-language pathologist. The most significant change may have been the new [temporary] definition of originating site, to mean any site in the U.S. at which the beneficiary is located at the time the service is furnished, including their home. Prior to the pandemic, the statute restricted Medicare coverage of telehealth services to patients located in physician offices, hospitals, skilled nursing facilities, etc. site provider. **It is imperative that future Medicare telehealth coverage rules include a broad definition of originating site.**

Local CHWs can help with other concerns raised around a move to telehealth, including worries that the trust and rapport a patient can build with a provider would be lost without in-person visits and that remote providers would lack local context and an understanding of relevant community and cultural factors that could affect a patient's health.

Health centers and school health hubs, where telehealth is combined with on-site staff (and possibly a community health worker), can help mitigate some of these challenges by acting as a bridge between remote and in-person services in a more convenient location. Additional investments by telehealth providers can also help ensure their services can adapt to diverse patient needs.

Whether telehealth is available will depend on providers making the necessary investments in equipment, staff, training and willingness to offer these services. While consumer demand may encourage these investments, federal policy around Medicare and state policy around Medicaid reimbursement will determine whether many patients can access telehealth services.

Similarly, state policy regulating the provision of telehealth services across state lines will affect the pool of potential providers. The complexity of licensing and scope of practice regulations in different states may impede cross-state services, even where these are permitted. Another major concern involves the effectiveness and trust in systems that store and transmit confidential patient data.[22]

A model being used today is when telehealth is accessed through a health clinic or hospital, and a nurse, doctor or CHW participates with the patient and virtually connects to a specialist. This requires

close collaboration between the local provider and the specialist, not just for the appointment per se, but also when follow-ups and/or treatment are needed. Even though there's a significant initial investment in equipment and staff training, it seems to pay off quickly considering the serious need for specialists.

Additionally, facilitating a patient's telehealth visit at the health clinic or hospital may be a good way to help expand adoptability for other services like mental health therapy, which can later be transferred to the home once the patient feels more confident and/or reliable connectivity is available. Policy changes that relax the supervision requirements for CHW or medical assistants when assisting with virtual visits when a medical professional is on the other end are needed, and virtual visit facilitation should be a reimbursable service by public and private insurance.

When it comes to adoptability for both providers and patients, **flexibility is needed to find innovative ways that will work best as each locality strives to make the best use of telehealth as a way to expand access to health care.**

While telehealth offers many potential benefits, wider availability during the pandemic demonstrated several challenges that need to be addressed to avoid telehealth fortifying the existing structural barriers faced by underserved communities.[23]

For telehealth to work **we must close the digital divide and create access for affordable, high-speed internet access. Devices and training must be provided to allow individuals to use web-based telehealth services from home.**[24] For example, studies during the pandemic found that older adults, people of color and non-native English speakers were less likely to access video telehealth services.[25]

As telehealth offerings expand, support for people who may have difficulty navigating new systems is essential.[26] For those living with cognitive or physical impairments and the elderly, support either from caregivers, family members or formal programs—CHWs, for example—can help familiarize them with telehealth offerings.[27]

HEALTH CARE WORKFORCE

While all industries have struggled to employ an adequate workforce, the highly regulated nature of health care presents unique challenges. Rural communities lack population density and amenities to help attract specialists and other highly trained medical workers, and low health literacy means few are exposed to health care as a possible career. Supplementing the local workforce using technology and expanded scope of practice is another way of increasing access to health care; however, the regulatory environment around certifications, licenses and scope of practice of health care workers is determined by states. This fragments providers' potential pool of patients and limits patient access to additional health care services.

LABOR SUPPLY

FOCUS GROUP FEEDBACK

Finding skilled workers was consistently the most identified challenge to health care access; it was mentioned at each focus group session. Consequently, many of the other themes are underpinned or reinforced by workforce-related challenges. Participants noted the key component to improving health outcomes in rural communities is growing the number of primary care physicians. A general decline in primary care physicians and other preventive-care providers—including dentists, optometrists, and mental and behavioral health providers—was the most pressing concern discussed during our focus groups.

In many of these communities, participants described appointment wait times exceeding 3-4 weeks and providers running hours behind schedule because only one practicing physician was available. Of concern are the challenges, whether real or perceived, to being a primary care physician in a rural community and the unwillingness of physicians to go into private practice. However, this aspect can also be an advantage for rural communities. Physicians who truly want to make a difference in their communities are attracted to the fact that, in rural towns, they are seen as important leaders.

Our focus groups across all six states in our study noted a complete lack of specialists in rural areas. They specifically emphasized the need for cardiologists, dermatologists, orthopedists, pulmonologists, and mental health specialists. While the conversation generally centered on physicians and specialists, it was also noted that challenges extended to other providers, including dentists, nurse practitioners, pharmacists, and optometrists, as well as physician extenders, support personnel and nurses.

In many places, staffing shortages led to an "or not and" for service provision. For instance, if the local hospital offered mental health services, then the federally qualified health center (FQHC) could not, as doing so would create competition for limited mental health service providers. These scenarios often require rural residents to seek medical care outside the county in which they live. Rural residents with accessibility challenges have begun to rely on the availability of urgent care facilities. However, it was noted that urgent care facilities do not replace primary care services for preventive care and chronic-disease management. Therefore, a disproportionate number of patients are forced to utilize emergency services because chronic issues have not been well managed, and preventive and primary care are difficult to schedule.

We learned that there hasn't been a facilitator focused on connecting K-12 schools, community and technical colleges, and healthcare employers. Local workforce boards primarily focus on manufacturing. Our workforce program, funded by Delta Regional Authority (DRA) was the first program in the state focused on placing youth into entry level healthcare careers. We've seen successes in bridging those gaps between educators and employers. It's been so well received, we've started to replicate the program statewide.

— Jacy Warrell, Executive Director, Rural Health Association of Tennessee

In one community we studied, a regional hospital had just increased nurse wages by $2 per hour, with a starting wage of $25 per hour plus a sign-on bonus. Unfortunately, while health care professions previously had paid above-average wages, other local employers in manufacturing, distribution and logistics, and food service had begun paying relatively comparable wages for low-skill positions, making it more difficult for rural health care providers to recruit entry-level positions.

Economic development professionals stressed that physicians were accustomed to a standard of living that rural communities could not provide. Often, they said, recruitment efforts focused more on the families of the physicians than on the doctors themselves. To be successful, recruiters had to sell the charm and culture of rural communities instead of its amenities. Additionally, participants highlighted the lack of amenities, such as outdoor recreation activities, spousal employment options, housing, child care and shopping options.

Success stories absolutely exist in the rural heartland—in one Kansas community, the local health care system partnered with the state's largest four-year educational system to develop a 21,000-square-foot training and education facility to expand access to training for various health care occupations.

The structure quickly evolved into a more holistic facility with wraparound services for students, including legal support, financial and tuition assistance, and transportation assistance.

Additionally, participants mentioned that residency programs have proven to be the most impactful recruitment and retention tool for rural America. It is important to note here that such programs should not be solely restricted to physicians; they can and should be used for an array of providers.

LOOKING AT THE NUMBERS

To complement the conversations with focus group participants, we analyzed the employment and wages of health care workers across the region. We consider employment in 31 different health care occupations relative to the size of the regional labor market. Data on employment, wages and salaries, and projected job growth specific to each region within our six-state study area, is available by occupation here.

Location quotients (LQ) measure the percentage of the labor force employed in an occupation relative to the national average; they provide a measure of relative concentration, so it is scaled such that a value of 1.0 indicates the percent of the labor force employed in an occupation equals the national average. The lowest LQ among health care workers is for dentists at 0.77, which means our region employs 23% fewer dentists than the national average relative to the size of the labor force. The highest LQ is for licensed practical nurses at 1.48, indicating our region employs 48% more LPNs than the national average. Figure 9 below shows the health care occupations employed at rates different from the nation overall.[28]

FIGURE 9. HEALTH CARE OCCUPATIONS EMPLOYED DIFFERENTLY THAN THE U.S.

HEALTH CARE OCCUPATIONS LESS EMPLOYED IN STUDY REGION	
OCCUPATION	**LOCATION QUOTIENT**
Dentists	0.77
Home Health Aides	0.83
Physician Assistants	0.85
Dental Hygienist	0.87
All Other Health Care Support Workers	0.87
Dental Assistants	0.91

HEALTH CARE OCCUPATIONS MORE EMPLOYED IN STUDY REGION	
OCCUPATION	**LOCATION QUOTIENT**
Licensed Practical and Licensed Vocational Nurses	1.48
Nurse Practitioners	1.32
Nursing Assistants	1.31
Pharmacy Aides	1.28
Physical Therapist Assistants	1.23
Pharmacy Technicians	1.23
Health Technologists and Technicians	1.15
Health Care Social Workers	1.14
Pharmacists	1.13
Dispensing Opticians	1.12
Medical and Health Services Managers	1.09

While our study region as a whole differs from the national average in health care employment patterns, we explored the metro and nonmetro local areas within the region for differences. Eight of the 31 occupations have significantly different LQs in the metro and nonmetro areas, with higher employment in the metro areas across each of those occupations.[29]

FIGURE 10. DIFFERENCES IN OCCUPATIONAL EMPLOYMENT ACROSS METRO AND NONMETRO AREAS IN THE STUDY REGION

OCCUPATION	NONMETRO LQ	METRO LQ
Dentists	0.66	0.84
Physician Assistants	0.73	0.93
Dental Hygienists	0.72	0.97
Dental Assistants	0.76	1.00
Audiologists	0.79	1.06
Nutritionists and Dietitians	0.92	1.03
Registered Nurses	0.92	1.11
Nurse Practitioners	1.12	1.45

We also examined the wages for health care workers in the 12 counties where the focus groups were held. We compare the wages paid to different workers within an occupation to the expenses incurred to support different family or household structures. Rather than looking only at the starting or median wage for each occupation, we study the distribution of wages paid to workers within the same occupation.

The wage distribution is based on the nonmetro region that includes multiple counties. Rural counties simply have too few people in some occupations for us to have a clear picture of the wage distribution for all occupations. Since living costs do not vary by occupation, those are available at the county level for all counties. We use the cost of living in the county as estimated by the Massachusetts Institute

of Technology and made available online here. We compared four different points on the annual income distribution to the costs associated with four different household structures, as shown in Figure 11.

FIGURE 11. INCOME AND EXPENDITURE COMBINATIONS

WAGE (ANNUAL INCOME)	EXPENSES FOR HOUSEHOLD STRUCTURE
Entry Level Income	One-adult Household
25th Percentile Income	½ of Two-adult Household
50th Percentile (Median) Income	½ of Two-adult, Two-toddler Household
75th Percentile Income	One-adult, Two-child Household

The first row compares entry-level wages to the costs of having a one-adult household. This would include a one-bedroom apartment, necessary transportation and living expenses for a newly launched adult who has just started a new job.

The second row considers a married couple or adult roommates where each adult works to cover half of the living expenses associated with the household. For this scenario, we assume someone has some job experience and is earning more than 25% of others in the same occupation.

The third row considers a married couple with two young children requiring full-time child care; each adult earns enough to cover half of the household expenses. For this scenario, we assume someone has considerable experience and makes the median income for their occupation, which is more than half of the workers in the local area with the same occupation.

The fourth row considers a single parent with two children who are old enough to attend school and only need part-time child care. Since it is a single-parent household, the adult needs to earn enough to cover all household expenses for this situation to be viable. Figure 12 shows how many of the 12 focus group locations have annual incomes that exceed household expenses; the occupations are grouped into categories with similar wage patterns.

FIGURE 12. COMPARISON OF INCOME DISTRIBUTION TO HOUSEHOLD EXPENDITURES AND FAMILY STRUCTURES

COMPARING INCOME DISTRIBUTION TO HOUSEHOLD EXPENSES AND FAMILY STRUCTURES					
	NUMBER OF LOCATIONS WHERE INCOME EXCEEDS HOUSEHOLD COSTS				
	Entry wage	25th percentile	50th percentile	75th percentile	Median income
	1 Adult	2 Adult * 1/2	2 Adult, 2 toddler * 1/2	1 Adult, 2 elementary	In study region
Income exceeds expenses					
Dentists	12	12	12	12	$154,800
Pharmacists	12	12	12	12	$127,900
Optometrists	12	12	12	12	$107,700
Nurse Practitioners	12	12	12	12	$101,000
Physician Assistants	12	12	10	12	$99,900
Medical Service Managers	12	12	12	12	$91,400
Audiologists	12	12	12	10	$76,200
Dental Hygienists	12	12	12	9	$75,000
Speech-Language Pathologists	12	12	12	11	$73,000
All but single parent					
Registered Nurses	12	12	12	2	$64,700
Occupational Therapy Assistants	12	12	12	3	$60,400
Physical Therapist Assistants	11	12	12	4	$57,700
Dieticians, Nutritionists	10	12	12	1	$56,300
Healthcare Social Workers	7	12	9	0	$50,700
Varies					
LPNs & Licensed Vocational Nurses	12	12	2	0	$45,600
Community Health Worker	5	12	6	0	$43,200
Married/Roommate only - no kids					
Counselors & Social Workers	0	12	1	0	$42,700
Health Techs	1	12	0	0	$42,400
Mental Health & Sub Abuse Social Workers	5	12	6	0	$41,600
Dental & Opthalmic Lab Technicians	2	12	2	0	$38,400
Dental Assistants	2	12	1	0	$37,900
Dispensing Opticians	0	12	0	0	$35,100
Medical Secretaries	0	12	0	0	$34,700
Pharmacy Technicians	0	12	0	0	$33,500
Expenses exceed income					
Occupational Therapy Aides	0	8	4	0	$39,800
Other Healthcare Support Workers	0	6	0	0	$32,500
Nursing Assistants	0	1	0	0	$28,700
Pharmacy Aides	0	1	0	0	$25,600
Physical Therapy Aides	0	0	0	0	$24,200
Home Health Aides	0	0	0	0	$23,700

** These comparisons are made using non-metro region wages by SOC code and county level living expenses for the family structure.*
***Green** occupation titles indicates LQ is greater than 1.10 for study region*
***Dark blue** occupation titles indicates LQ is less than .90 for study region.*

The occupations are listed from highest to lowest median income within their group. The occupations in blue font are the six that tend to be employed less frequently and those in green are the 11 employed more frequently in the study region.

Simply counting job titles, it seems about half of health care workers can support a family and half cannot. To get a fuller picture, we considered how many people are employed in each of these occupations in our region, and we break it down by metro and nonmetro regions since we have already seen that some occupations are employed at different rates in metro areas. Figure 13 shows there is a much larger share of health care workers in nonmetro regions of the states who cannot support a family.

As long as the incomes and living costs do not align, health care providers will struggle to be able to fill open positions.

POLICY OPPORTUNITIES

All community focus groups acknowledged the need to develop local workforce pipelines to meet short- and long-term health care workforce challenges. As stated above, participants discussed how successful recruitment efforts hinge on a personal connection to a community or the rural lifestyle. Participants also noted

FIGURE 13. PERCENT OF WORKERS IN EACH INCOME CATEGORY BE NONMETRO DESIGNATION

	NONMETRO	METRO	ENTIRE STUDY REGION
Income > Expenses	10.1%	19.1%	16.3%
All But Single Parent	19.9%	39.9%	33.7%
Varies	6.5%	9.1%	8.3%
Married/Roommates Only	45.4%	7.3%	19.1%
Expenses > Income	18.1%	24.7%	22.7%

Combining the top two income categories reveals that, in nonmetro areas, only 30% of health care workers have sufficient incomes to support a household with children, as opposed to 59% in metro areas. And the combined percentage in the two lowest income groups is 63.5% in nonmetro areas and 32.0% in metros.

Almost two-thirds of health care workers in nonmetro regions do not earn enough to cover the expenses of a household with children.

It is noteworthy that these comparisons are based on wage distribution across all employers in a six-state region and are not driven by a single employer or group of employers exercising power in the labor markets. These income distributions are the result of copious challenges within our labor markets that should be identified and addressed.

the need to "grow your own" local pipeline by creating workforce strategies that generate interest and support earlier in the training and education cycle for students considering careers in health care. While many efforts focus on early-high school students, others begin as soon as kindergarten through health literacy and reading programs.

In locations where recruitment challenges are insurmountable, health care providers have increasingly relied on internally developed workforce training programs managed through nontraditional training providers, including local nonprofits. Communities also noted increased marketing of state scholarship programs for specific degree programs, including nursing and physicians.

Others suggested providing direct support for students interested in health care careers. For example, one rural community had a very difficult time recruiting a pharmacist. The local school district, in coordination with a local health care provider and philanthropy, financially supported a local student to attend pharmacy school with the understanding they would return to the community to practice their trade.

OCCUPATIONAL LICENSURE

Workers providing health care services are required by states to obtain and maintain professional licenses and certifications. These licenses aim to ensure the quality of the health care workforce so that patients are not put at risk. They also can raise patient trust in the services provided by health care professionals, both by verifying qualifications and training, and sometimes by including good-character clauses. Excessive or ambiguous licensing restrictions, however, can cause significant costs to workers, create a barrier to obtaining employment, contribute to social exclusion and limit cross-state mobility (especially when restrictions vary by state).

FOCUS GROUP FEEDBACK

When asked how existing occupational licensing systems and scope of practice restrictions affected health care labor markets, most focus group members seemed aware of the prevalence of scope-of-practice regulations, as well as occupational licensing processes and restrictions. Many acknowledged general confusion over the rules and a somewhat adversarial position that state boards often seem to take with local providers. However, it was consistently agreed upon that more licensing reciprocity agreements amongst states are needed, especially for neighboring states.

POLICY OPPORTUNITIES

Obtaining a state credential to operate as a health care professional generally requires meeting a range of requirements that vary by profession and by state. These often include educational standards, training hours completed, hours of experience, passing professional exams, being of good moral character, maintaining expertise through specified hours of continuing education, and an initial or renewal licensure or certification fee. These requirements are generally established by state legislation, although there are initiatives to align requirements through reciprocity agreements between states and interstate compacts.

For some occupations (e.g., dentists), the requirements are well aligned across states.

All six of our focus states expect an applicant to have completed an accredited dental school, have passed the same five professional exams and the state jurisprudence exam, although licenses costs vary by state. Appendix 2 contains comparisons for licensed occupations across the six states, including dentists.

For many other health care professionals, licensing requirements vary widely between states, with licenses good for different amounts of time.

Psychologists need to complete a doctorate, a 2,000-hour internship, two years of supervised experience (one postdoctoral) and pass the Association of State and Provincial Psychology Boards (ASPPB) exam to be licensed for one year in Arkansas. In Kentucky, they also need a doctorate and two years of supervised work experience, but they must pass the state jurisprudence exam in addition to the ASPPB exam to earn a license for three years.

Phlebotomists (staff who draw blood from patients), on the other hand, are not licensed at the state level in any of our six focus states. Employers may require specific certifications, but these are not defined by any state regulatory body.

Beyond the need to pay fees and file paperwork in multiple states at different cadences (and stay up to date on any variations in scope of practice across these states), different standards among states can complicate work for professionals who might want to operate across state lines—for example to serve a less densely populated but large rural area.

Both dentists and psychologists provide services for which needs are growing; in more than one-third of counties in our six focus states, the number of people per dentist was more than double the national

average. Streamlining licensure requirements could make serving a larger geographic area more attractive, draw more people into practice, and increase access to mental health and dental services in rural areas.

While both dentists and psychologists need advanced degrees to practice, other health professionals with less onerous academic training also face licensing rules that are inconsistent from state to state.

Pharmacy technicians, for example, are licensed in all six of our focus states, but only have a training requirement in Tennessee. They must pass a professional exam in Arkansas and Kansas, but not in the other four states, and they are only required to complete 20 hours of continuing education in Kansas. Ex-offenders cannot be licensed as pharmacy technicians in Arkansas or Tennessee, while Kentucky and Oklahoma have requirements for "good moral character." Three states—Arkansas, Kentucky and Oklahoma—participate in reciprocity or endorsement agreements, meaning that despite some of the differences, a professional in this field can more easily work outside their state of residence.

Interstate compacts help foster mobility of health care workers and can improve patient safety by facilitating the exchange between licensing boards of information about a worker's performance.[30] In addition to making it easier for health care professionals to relocate, these compacts also help workers who want to serve patients across state lines (in person or via telehealth).

For example, the Psychology Interjurisdictional Compact (PSYPACT) allows psychologists licensed by their participating home state who meet certain qualifications (no disciplinary action listed on their license, for instance) to apply for a PSYPACT license to offer telehealth or a temporary in-person license to operate in other PSYPACT member states. The professional is expected to stay abreast of relevant laws and policies in the patient's state, and the compact clarifies how regulations apply across jurisdictions.

By applying for a compact license, the psychologist avoids needing to apply state by state for telehealth licenses (which still would shave been necessary under an endorsement or reciprocity model).

Similar compacts exist for physicians, advanced practice registered nurses (APRNs), counselors, nurses, physical therapists, and occupational therapists (see Figure 14). **In conjunction with alignment in scope of practice and other relevant state regulations, these compacts can significantly reduce the burden of operating across state lines and increase access to health care services for rural residents.**

FIGURE 14. PARTICIPATION IN INTERSTATE COMPACTS, SELECTED STATES (2022)

	APRN COMPACT	PSYCHOLOGISTS COMPACT -PSYPACT	COUNSELORS COMPACT (NOT INCLUDING PSYPACT)	INTERSTATE MEDICAL LICENSURE COMPACT	NURSE LICENSURE COMPACT	PHYSICAL THERAPISTS COMPACT	OCCUPATIONAL THERAPIST LICENSURE COMPACT
Arkansas	No	Yes	No	No	Yes	Yes	No
Kansas	No	Yes	No	Yes	Yes	Yes	No
Kentucky	No	Yes	Yes	Yes	Yes	Yes	Yes
Missouri	No	Yes	Pending	No	Yes	Yes	Yes
Oklahoma	No	Yes	No	Yes	Yes	Yes	No
Tennessee	No	Yes	Pending	Yes	Yes	Yes	Yes

Moreover, because occupational licensing regulations can diminish the labor pool for key professions, some states are exploring ways to improve policy governing licensure.

For example, Arkansas and Kentucky participate in the Occupational Licensing Learning Consortium, building understanding among legislators and other key stakeholders, developing solutions and learning from attempts to implement change across other states. Participating states have passed laws that reform criminal background rules (Arkansas) and streamline the user experience by building an online clearinghouse for all professional and occupational licensing boards (Kentucky).[31]

Many states used executive orders to rapidly expand the health care workforce during COVID-19. These included temporary loosening of occupational licensing regulations, waiving some restrictions and fees, automatically extending licenses, and improving processes (e.g., accelerating the licensing process for key health workers).

Oklahoma permitted any medical professional licensed in compliance with the Emergency Management Compact to practice in the state during the pandemic.[32] In Tennessee, barriers to out-of-state health professionals were dropped temporarily by executive order in 2020; in addition, the state lifted interview and continued competency requirements, allowing many retired health care providers to return to the workforce.[33] And in April 2020, Arkansas temporarily removed limits on working hours for key health care workers by executive order.

Licenses were automatically extended in many states, without health professionals needing to apply for renewal, lessening the administrative burden on these essential workers.

Many temporary exceptions lapsed in Arkansas when the state's public health emergency (PHE) ended in May 2021, but as cases began to rise with the Delta variant in July, Gov. Asa Hutchinson ordered the state Department of Health to evaluate and then suspend any licensing restrictions for health care workers that might hinder health care access.
State legislatures also took more lasting action, and participation in interstate compacts increased. For instance, prior to the pandemic, Missouri (2018) and Oklahoma (2019) had joined PSYPACT and enacted the relevant legislation (along with 10 other states). After March 2020, the four remaining focus states joined the compact.

By the beginning of 2023, 33 states will participate in PSYPACT, with several others considering related legislation. This rapid adoption of PSYPACT significantly broadens the pool of potential providers of mental health services via telehealth in our six focus states. The sustained demand for remote mental health visits after the pandemic reinforces the potential impact of PSYPACT.

These, along with other efforts to improve portability of occupational licenses, have the potential to improve access to health care through telehealth and a larger potential labor pool.

Actions taken by two of our focus states, Kentucky and Arkansas, to bolster modernize licensing requirements and administration include:

Kentucky is addressing such issues with its one-stop online business portal, and similar efforts are under way in Arkansas to improve coordination and address the overlapping responsibilities among licensing boards, respectively.[34]

If implemented in other states, this would help monitor and align enforcement regarding over prescription of opioids, even when providers are overseen by different licensing boards (as is the case for physicians and APRNs).

Attempts to streamline or align occupational licensing regulations can create friction with state boards concerned over potential lowering of standards, loss of expert knowledge in standard setting, and reduced oversight. Pilot efforts in the Occupational Licensing Learning Consortium suggest that successful strategies to amend licensing regulations include broad and inclusive engagement of stakeholders (including state legislators) throughout the process, focusing messaging on meeting workforce needs and safeguarding patient safety, and bringing in trusted third-party facilitators.[35]

SCOPE OF PRACTICE

A scope of practice specifies the type of health care services a licensed professional is permitted to perform. Defined by state legislatures and professional licensing boards, the scope of practice for a particular health care profession can vary by state. Advanced-practice registered nurses (APRNs, or nurse practitioners), pharmacists, pharmacy technicians and physician assistants (PAs) are some key health occupations with state-defined scopes of practice.

Allowing health care professionals to practice at the top of their license may expand the number of providers who can offer services (writing new prescriptions, for example)[36] and the number of services a worker can provide. **With an increasing number of rural hospitals closing and a growing physician shortage, it is imperative that the pool of other providers who can deliver a variety of health-related services is expanded.**

The scope of practice defined by state policy for health care professions may be narrower than the services these professionals were trained to deliver, meaning that allowing professionals to practice at the top of their license better aligns with the professional's training and education.

Expanding and streamlining licensure flexibilities and better aligning scope of practice with a professional's training and education can increase access to health care (especially primary care and chronic disease management), reduce travel times to appointments, and improve health outcomes, by ensuring the patient receives the right care at the right time, leading to lower costs for the patient and the health care system downstream.

FOCUS GROUP FEEDBACK

Participating providers acknowledged the disproportionate impact of scope-of-practice restrictions on rural communities and the need for more flexibility for rural providers, including pharmacists.

With rural communities having fewer health care resources, existing clinics and hospitals need the ability to do more with less. For instance, nurse practitioners and pharmacists being able to practice at the top of their license was discussed and is essential. While some participating physicians acknowledged the need for a more collaborative approach to care between local physicians, nurse practitioners, pharmacists, etc., others expressed concern that expanding the scope of practice could over complicate already very difficult and complicated licensing regulations. For instance, state medical boards govern physicians who diagnose and prescribe medications. But if a nurse practitioner is also prescribing medications without the knowledge and consultation of a physician, that falls under the state nursing board.

Additionally, expanding scope of practice further blurs the line for a patient unaware of the difference between seeing a nurse, pharmacist or a physician. Such expansion may increase access, but it can also create a higher-risk environment in which provider responsibilities to a patient are unclear.

The conversations ended with many participants noting a need for increased collaboration between licensing boards and other regulatory agencies, particularly in rural areas, allowing for the professions to work at the top of their license and the need for additional education to be provided to the patient to ensure quality and affordable care.

LOOKING AT THE NUMBERS

The pandemic highlighted the role of pharmacies in monitoring disease and the support they can provide in rendering health care services, such as giving vaccinations and working at the top of their license.

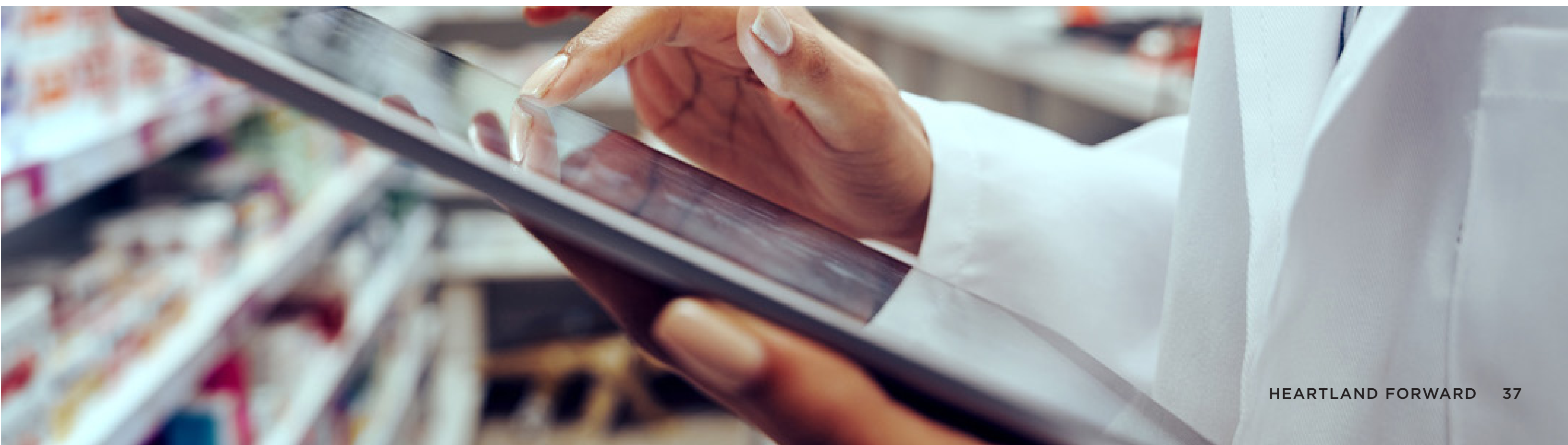
In fact, executive orders in many states temporarily granted most health professionals the authority to administer COVID-19 vaccines. In Kansas, for example, the order included all pharmacists, pharmacy students or interns, podiatrists, dentists, dental hygienists, physician's assistants, APRNs, nurses, advanced emergency medical technicians, emergency medical technicians and paramedics.[37]

Pharmacy training exceeds scope of practice as dictated by state licensing boards. As Figure 15 demonstrates, the scope of practice not only varies by state, but pharmacists receive training in all of the 6 practices listed.

FIGURE 15. PHARMACIST SCOPE OF PRACTICE, SELECT STATES 2022

	VACCINATION		INDEPENDENT PRESCRIPTION AUTHORIZATION			
	ADMINISTER VACCINES	**PRESCRIBE VACCINES**	**CONTRACEPTIVE AUTHORITY (WITHOUT CPA)**	**TEST & TREAT STREP, FLU, & COVID**	**TOBACCO CESSATION**	**OVERDOSE (NALOXONE)**
Arkansas	Yes – All (Ages 3+)	Yes - Independent	Yes - Independent	Yes - Independent	Yes - Independent	Yes - Dependent
Kansas	Yes - CDC/ACI recommended (Ages 12+)	Yes - Dependent	No	Yes - Independent	No	Yes - Independent
Kentucky	Yes – All (Ages 0+)	Yes - Dependent	No	Yes - Dependent	No	Yes - Dependent
Missouri	Yes – State statute	No	No	No	Yes - Independent	Yes - Independent
Oklahoma	Yes – All (Ages 0+)	Yes - Independent	No	No	No	Yes - Independent
Tennessee	Yes – All (Ages 0+)	Dependent	No	Yes - Dependent	No	Yes - Independent

Note: *Independent prescription includes direct authority through statewide protocols, dependent authority is delegated through a CPA or standing order.*



In five of the six states studied (the outlier being Oklahoma), residents in metro and nonmetro counties were less likely to be in a pharmacy desert than a health center desert, suggesting that access to a variety of health care services can be increased by allowing pharmacists with scopes of practice that better align with their training and education. Unfortunately, this is not true in completely rural counties in all 6 states. Figure 16 provides details for each state by county type and compares the share of resident access to specific providers.

For example, pharmacists can both prescribe and administer all FDA-approved vaccines in Arkansas, Kentucky, Oklahoma and Tennessee, and all CDC recommended vaccines in Kansas, while in Missouri they can only administer vaccines specified in statute. In Arkansas and Kentucky, supervising pharmacists can also direct pharmacy technicians to administer vaccines. Depending on the state, pharmacists can take on additional prescribing, monitoring and medication-management responsibilities as part of a care team with a prescriber (e.g., a physician or nurse practitioner) under a collaborative practice agreement (CPA). This can be particularly helpful with patients who require chronic care management.

FIGURE 16. HEALTH CARE ACCESS BY STATE AND METRO/NON-METRO COUNTY DESIGNATION

	COUNTY RURAL URBAN DESIGNATION	MEAN POPULATION LIVING IN PHARMACY DESERT	MEAN POPULATION LIVING IN HEALTH CENTER DESERT	MEAN POPULATION LIVING IN TRAUMA CENTER DESERT
Arkansas	Metro Counties	39.7%	39.9%	16.7%
	Nonmetro Counties	43.2%	49.5%	17.0%
	Completely Rural Counties	75.1%	28.6%	26.1%
Kansas	Metro Counties	51.0%	58.5%	32.4%
	Nonmetro Counties	52.7%	60.4%	35.6%
	Completely Rural Counties	98.8%	96.6%	57.2%
Kentucky	Metro Counties	41.1%	46.2%	51.9%
	Nonmetro Counties	25.6%	30.3%	51.7%
	Completely Rural Counties	50.0%	36.0%	43.0%
Missouri	Metro Counties	44.9%	42.1%	20.8%
	Nonmetro Counties	45.6%	42.8%	43.2%
	Completely Rural Counties	90.9%	55.7%	42.7%
Oklahoma	Metro Counties	43.1%	52.6%	6.6%
	Nonmetro Counties	47.6%	51.7%	2.0%
	Completely Rural Counties	89.8%	76.1%	3.0%
Tennessee	Metro Counties	31.8%	48.1%	53.4%
	Nonmetro Counties	39.4%	55.1%	79.5%
	Completely Rural Counties	67.5%	33.1%	73.6%
Region	Metro Counties	40.7%	47.2%	34.8%
	Nonmetro Counties	42.2%	47.6%	37.8%
	Completely Rural Counties	79.6%	60.0%	44.6%

POLICY OPPORTUNITIES

Many health care professions have their scope of practice defined by state policy, with statutes evolving in response to changing needs, advocacy from professional organizations and a desire to improve access to health care.

States in recent years have granted direct prescribing authority to pharmacists in specific areas, expanding the services that can be provided at a pharmacy. For example, among our six focus states, Arkansas (in 2021) and Kansas (in 2022) authorized pharmacists

to treat certain conditions using rapid tests that have a low risk of error. These conditions include influenza, strep throat and urinary tract infections.

Kentucky and Tennessee grant similar authority in the context of a CPA (see Table 2).[38] The availability and reliability of rapid test technology makes this possible and points to the evolving nature of appropriate scope-of-practice policy. In conjunction with licensing requirements, the inconsistency in scope of practice across states can create obstacles to attracting out-of-state health care workers and limit the potential labor pool in rural areas.

CPAs entered into by pharmacists in some states may also apply to others working as part of health care teams. These can have geographic restrictions, such as a South Carolina requirement that the physician supervisor be within 45 miles of a location where an APRN is working. This can limit the effectiveness of extending health care access in rural areas, especially if the APRN provides specialty services and wants to collaborate with a physician in that field.[39]

Before the pandemic, APRNs had full practice authority in 23 states, meaning they were authorized to assess, diagnose, test and treat patients and could prescribe medications. APRNs represent one fourth of health care providers in rural areas, and the share is higher in states that grant full practice authority.[40]

Systematic reviews have found that reducing APRN practice restrictions increases their numbers and improves access to health care for rural residents and does not reduce the quality of care.[41]

During the pandemic, many states waived restrictions on scope of practice for APRNs, either temporarily allowing them full practice authority or removing some of the restrictions for the duration of the pandemic.[42] While these waivers were typically granted by executive order, and many have already expired (such as in Oklahoma and Tennessee), it is important to recognize that these changes successfully scaled up the capacity to provide care for the population.

Advocates argue the changes should be made permanent to increase capacity and better serve rural populations. Legislative action is typically needed to make these changes permanent, and some states have done just that. For example, Arkansas in 2021 created the Full Independent Practice Credentialing Committee, to which APRNs can apply for full practice authority (FPA). In 2022, Kansas joined Massachusetts and Delaware in passing post-pandemic legislation that grants FPA to APRNs.

The pandemic highlighted the role of pharmacies in monitoring disease and the support they can provide in rendering health care services, such as giving vaccinations and working at the top of their license. In fact, executive orders in many states temporarily granted most health professionals the authority to administer COVID-19 vaccines. In Kansas, for example, the order included all pharmacists, pharmacy students or interns, podiatrists, dentists, dental hygienists, physician's assistants, APRNs, nurses, advanced emergency medical technicians, emergency medical technicians and paramedics.[43]

Professional organizations continue to express concern about expanded scopes of practice. A lack of training and expertise can be dangerous to patients, they say. And the American Medical Association, which represents physicians and medical students, has campaigned successfully against many attempts to expand scope of practice of other health care professions, arguing for the importance of doctors leading health care provision.[44]

Patients can also be uncomfortable receiving treatment from someone who is not a doctor, although we heard in focus groups that a nurse practitioner in partnership with a doctor through a CPA is more readily accepted by patients.

Finding ways to appropriately regulate scopes of practice and communicate standards and expectations to the public is crucial to ensuring that the additional health care services made possible by these changes are actually used so that rural populations experience better health outcomes.

POLICY MODERNIZATION AND ROADMAP

AFFORDABILITY AND COMPLEXITY

- **Monitor implementation and enforcement of the good faith estimate and transparency in coverage rules.**
- **Require Medicaid coverage of comprehensive dental care for both adults and children and increase the payment rate.**
- **Expand Medicare fee-for-service (FFS) coverage to include additional dental services.**
- **Reduce administrative burden for health care providers, with a particular focus on coding and billing rules.**
- **Expand Medicaid coverage in Kansas and Tennessee.**
- **Expand Medicaid dental coverage and increase reimbursement for dental providers.**
- **Reimburse and incentivize CHWs to work alongside health care providers to:**
  - Screen patients for social risk factors, such as housing and food insecurity,
  - Connect patients with community-based resources,
  - Serve as a liaison between the community and health care organizations, such as providing education to providers and stakeholders about community health needs, diagnosis-related patient education and health promotion education to prevent chronic illness,
  - Help patients navigate health care and social service systems,
  - Connect patients with resources like Medicare, Medicaid, Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and other services that fall within the scope of practice of a CHW.

TELEHEALTH

- **Adopt and implement the Uniform Law Commission[45] model telehealth bill.** The nonpartisan model bill has the potential to expand access for patients to a broad range of telehealth services while maintaining state control over health policy.[46,47] This is one of the first comprehensive models for providing telehealth across states—specifically providing clear direction for our six focus states.
- **Update state policies relating to telehealth**, including:
  - Require that Medicaid and private payers provide reimbursement for telehealth services,
  - Recognize audio-only and asynchronous technology as telehealth services,
  - Eliminate or prohibit coverage policies that require an in-person visit prior to telehealth coverage,
  - Expand the types of health care providers who can furnish telehealth and the services that qualify for telehealth where necessary,
  - Eliminate or prohibit restrictions on originating sites,
  - Update relevant standards and regulations.
- **Permanently recognize qualified health centers as Medicare-eligible providers of telehealth services.** Maintain expanded access to telehealth through federally qualified health centers (FQHCs) and rural health clinics (RHCs), and explore the integration of Medicare telehealth access into retail health clinics and school-based health centers.
- **Continue and make permanent federal Medicare policy allowing audio-only telehealth access from**

home, particularly in rural areas and for older adults to maintain increases in accessibility.

- Remove restrictions that prevent full use of currently available technology in areas without broadband access.

- **Provide financial and administrative support for independent telehealth access.** Explore and expand models that use mediated care to help patients facing structural challenges in accessing telehealth. For example, local community care workers or health care workers could provide initial in-home support to build skills and confidence for patients conducting telehealth visits independently.
- **Lower barriers for new telehealth providers.** Explore options that lower start-up costs for providers by, for example, providing state-developed training resources and state incentives for telehealth-related investments in equipment, staff and training.
- **Continue to leverage federal Broadband Equity, Access and Deployment Program (BEAD) and Digital Equity broadband funds.** Federal funding can address the lack of high-speed internet in underserved communities. And digital equity programs can broaden access to relevant devices and provide training to help patients operate these devices independently to access telehealth services.
- **Expand and require Medicaid and private payer coverage** of smart phones, tablets and broadband for patients and providers in medically underserved communities and health professional shortage areas.
- **Establish DEA registration process for the prescription of controlled substances by telehealth.** This flexibility exists today but will expire with the federal COVID-19 PHE declaration.
- **Promote and educate health care professionals on best practices related to using telehealth**, such as

the model in which a patient meets in-person with a primary care physician (PCP) and they are joined virtually by a specialist.

WORKFORCE — LABOR SUPPLY

- **Expand high school internship and apprenticeship health-related programs between local area schools and employers** to help expose young adults to the field and provide training while helping perform some of the lower-level technical tasks.
- **Rearrange how tasks are configured into jobs by employers** to increase the productivity of health care jobs so employers can pay higher wages with current revenue models.
- **Health care professional regulating agencies and boards should modernize scope of practice regulations** to ensure health care professionals can practice at the top of their license in accordance with their training and education, particularly in rural and under-resourced communities.
- **Cover the upfront costs of adopting labor saving technology through state and federal funding.** For instance, make available capital infrastructure grants or loans that providers can use to modify service lines or improve structural or patient safety.
- **Modify tax policies to promote practice in rural and underserved areas** and minimize the administrative and financial burden on health care providers.
- **Increase funding of the National Health Service Corps (NHSC) Loan Repayment Program and expand the program to other eligible health professionals**, such as allied health care professionals.
- **Increase funding for Substance Abuse and Mental Health Services Administration (SAMHSA) programs to strengthen the behavioral health workforce.**
- **Increase and expand funding from the Center for Disease Control and Prevent (CDC) and the Health Resources and Services Administration (HRSA)** to support health care job development, training and placement in rural and tribal communities for maternal and child public health workers, CHWs and other paraprofessionals.
- **Increase access to hearing and vision services and related items for children and adults in rural communities by expanding Medicare, Medicaid and commercial payer coverage.**
- **Expand the Medicare Health Professional Shortage Area (HPSA) Physician Bonus Program**

for services furnished in HPSAs or medically underserved areas (MUAs) by nonphysicians, dentists and certain allied health care professionals.

- **Recognize pharmacists, marriage and family therapists, licensed mental health counselors and** CHWs as eligible Medicare Part B providers.
- **Increase Medicare support for graduate medical education (GME)** to support funding and training and support for rural providers, rural residency training and rural training tracks.
- **Require Medicaid and private payer coverage of services furnished by pharmacists and pharmacy technicians, CHWs, doulas, dietitians, etc.**

WORKFORCE — OCCUPATIONAL LICENSURE AND SCOPE OF PRACTICE

- **Join cross-state initiatives to align licensing and scope of practice** (e.g., the APRN Compact created in 2020 that has the potential to essentially license APRNs with full-practice authority to offer health care services in member states. Currently, North Dakota, Utah and Delaware are members, with four more states needed to activate the compact.
- **Increase coordination across regulatory boards within each state** to align scope of practice and licensing requirements and ensure coherence. Florida and Louisiana are good examples of starting this collaborative process across boards.
- **Conduct statewide reviews of occupational licensing regulations for health care professions**, using executive orders and task forces to reconsider and/or remove restrictions or barriers to entry (e.g., around criminal records).
- **Continue efforts to increase license portability** by joining interstate compacts, or facilitating license portability by endorsement, reciprocity and temporary licenses.
- **Streamline licensing process** to increase efficiency, ease of compliance and access to opportunities, potentially by creating comprehensive web portals that clearly communicate requirements and collect applications for all relevant boards.
- **Implement abbreviated licensure processes, streamlined requirements, and lower fees** for health care professionals, particularly for those who work in HPSAs, MUAs and rural areas.
- **Permanently adopt the scope of practice expansions for health care professionals** where evidence shows it has been safe and effective.
- **Coordinate scopes of practice to enhance health care access for underserved areas,** which could also lead to greater understanding of and trust in the health care system by patients.

WHAT'S NEXT?

Policy is often motivated by the economic incentives that underly the status quo market structure. The policy changes described in this report fundamentally change the existing market structure, and therefore change the underlying economic incentives associated with existing modes of delivering health care.

Policymakers need economic analysis that evaluates how particular changes impact patients, health care providers and other agents in the marketplace. Such knowledge will help determine whether changing policies increase social benefits so as to offset costs associated with those policies.

PRICE TRANSPARENCY AND HEALTH CARE DEBT

As discussed earlier in this report, the lack of price transparency in the health care industry not only prevents patients from making informed decisions about their health, but it also creates anxiety and discourages patients from seeking care. While it is only one factor contributing to a rise in health care debt, clarifying health care costs with patients could lead to better health outcomes and reduced household debt. It could also lead to increases in household consumption, as less debt would allow households to consume more. When it comes to accessibility, the socioeconomic context of these rural communities needs to be looked at through the lens of social determinants of health. Rural communities in the six states we studied have a significant population of low-income, elderly and diverse residents. Arkansas and Tennessee have above average Black populations, while Oklahoma has a significant Native American population. Throughout the region, the Hispanic population is growing, and there are other cultural and ethnic populations in the region, such as established Amish and Mennonite populations and an increasing number of refugees from different countries.

These realities, coupled with low levels of health literacy and an acute shortage of health care resources that worsened since the pandemic, pose challenges on accessing a complex health care system.

Rural populations are one of the populations that we oversee and really focus on, as well as communities of color and low-income populations. There's a great deal of intersectionality across those three groups. I will also say, understanding that rural America is a really, really diverse place in some of the research and listening that we've done, we've had folks talk about bias, discrimination and respect that make them sometimes nervous about going to seek care.

— Kristin Wikelius, Chief Program Officer, US of Care

ACCESS TO HEALTHY FOOD

After transportation, access to healthy food came up as the second SDOH challenge. Many rural residents live in food deserts, meaning transportation again poses barriers. A significant portion of the population that lacks access to healthy food also has high rates of obesity, diabetes and heart disease. Furthermore, having healthy food available and affordable may not be enough to change established cooking and eating behaviors.

A growing elderly population means many people are homebound and limited or lack of home care is just one challenge for them. Other basic services that impact health—like food access, personal care services, etc.—are also very limited, if available at all. In addition to the elderly population needing home assistance, there are children who now live in hospitals for the duration of their treatment due to lack of services in their hometown.

Focus group participants recurrently referred to the need to look at all these constraints with an SDOH lens—plus a more holistic, patient-centered approach that could empower individuals to better manage their health.

Moreover, the complexity of the health care system has gotten to a point that is ironically taking away this empowerment. Community health workers were often cited as being in great need to help patients navigate our complex health care system and connect them to

other needed resources that impact health. At the same time, there is strong recognition that a CHW alone is not going to solve all these complexities. There is an urgent need to simplify the health care system.

PATIENT FEEDBACK

Our focus groups only captured the perspectives of medical providers, community leaders, and economic and workforce development professionals. We need a survey of rural patients to discover if their opinions align with the conclusions of this report and to determine their other preferences regarding access to health care.

OTHER SOCIAL DETERMINANTS OF HEALTH NEEDS (SDOH)

The No. 1 SDOH factor raised among all the focus groups and interviewees—as a significant barrier to improve the health and wellness of rural residents—is transportation. The current infrastructure and services available assume everyone has a car to access resources—with money to afford gas and maintenance. But for many people, this is a luxury. In some cases, the lack of transportation options is so severe that people call the ambulance to access care and prescriptions.

For patients with young children, the lack of child care adds to the SDOH challenges. For those needing to travel regularly outside of town for longer-term treatment—primarily those requiring access to certain specialists—not having their own transportation may determine if they get treatment at all.

Finally, for some services, Medicaid or Medicare may cover the transportation expenses for appointments; however, not all patients who are financially constrained are enrolled in these and, as they relate to the SDOH, transportation issues are not restricted to health care appointments.

CONCLUSION

Now is the time to reimagine the health care system. The good news is we have the technology, tools and systems to increase access and quality of care through centering a Social Determinants of Health approach. To that end, we have suggested the following overarching policy solutions:

- Increasing transparency on pricing and costs by providers and insurers and using more community health care workers can allow us to build a system that is **affordable and less complex**, one of the main issues we heard from our focus groups.
- Expanding access to **telehealth** by lowering barriers for providers and patients and improving standardization across states will allow more communities—particularly those in rural areas—to seek the care they need.
- Creating more robust pipelines to the medical field and modernizing occupational licensure and scope of practice will increase the supply of the medical **workforce** to meet the growing demand of care across the nation.

Heartland Forward is proud to have taken stock of the challenges and outlined our vision for maximizing opportunities that will deliver accessible, equitable and quality health care to the American heartland. We remain committed to the goals outlined in this report and urge others to join us in taking action to improve health care by reaching us at info@heartlandforward.org. We look forward to your feedback and partnership.

ENDNOTES

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APPENDIX 1

A data-dependent identification process was implemented to select the 12 locations in which to hold focus groups. Since the project is focused on underserved rural populations, only counties designated as a geographic health care professional shortage area (HPSA) by the Health Resources and Services Administration were considered. Ultimately, four criteria were utilized to identify target counties:

1. Classified as a geographic health professional shortage area for primary, dental and mental health care
2. Classified as a nonmetro county by the United States Department of Agriculture rural-urban continuum codes 4 through 92
3. Sufficient population density to allow for focus group participation and partner organization
4. Large number of HPSA access risk factors relative to other counties in the state.

When multiple counties within a state were similar on the above criteria, we prioritized counties where the team had established relationships to help identify focus group members and nonadjacent counties that would provide as much geographic diversity within each state. Unsurprisingly, counties with the greatest health care shortages also had the lowest population densities. Therefore, there were no counties that met all established criteria. In these areas, we chose an adjacent county as a focus group site and prioritized identifying participants from neighboring counties.

Focus groups were semistructured, consisting of a mix of open-ended and survey questions. A separate member of the team took notes via Zoom teleconferencing for each focus group. Focus groups were also recorded and transcribed using Zoom's embedded transcription service to help research team members with the final coding process. Survey responses were collected using the Plickers system. Focus group notes were coded using a rubric and reviewed for consistency by members of the research team. Coding of the focus group notes allowed for the development of themes, which were grouped and modified to establish key issue areas.

Focus group questions centered on the accessibility and affordability of rural health care services—primarily preventive care and chronic disease management, including vision, dental and behavioral/mental health—and workforce challenges associated with each. Participants also were asked about the role of telehealth and local, innovative service-delivery strategies providers had implemented to support health care access, including supportive services.

APPENDIX 2: OCCUPATIONAL LICENSING REQUIREMENTS FOR SELECTED OCCUPATIONS AND STATES

FIGURE A1. LICENSING REQUIREMENTS FOR DENTISTS, SELECTED STATES (2022)

	EDUCATION REQUIRED	PROFESSIONAL EXAM	REQUIRED TIME OF LICENSE RENEWAL (IN YEARS)	CONTINUING EDUCATION REQUIREMENT (IN HOURS)	ADDITIONAL REQUIRED EXAMS	COST OF INITIAL LICENSURE (IN DOLLARS)	COST OF LICENSE RENEWAL (IN DOLLARS)	RECIPROCITY OR ENDORSEMENT	GOOD MORAL CHARACTER REQUIREMENT
Arkansas	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	2	50	AR Jurisprudence Exam	$150 by exam $1,000 by credential	$300	No	No
Kansas	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	2	60	KS Jurisprudence Exam	$200 by exam $300 by credential	$275	No	Yes
Kentucky	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	2	30	KY Jurisprudence Exam	$325 by exam $325 by credential	$295	No	No
Missouri	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	2	50	MO Jurisprudence Exam	$150 by exam $150 by credential	$150	Yes	Yes
Oklahoma	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	1	40	OK Jurisprudence Exam	$200 by exam $500 by credential	$200	No	Yes
Tennessee	CODA-accredited Dental School	CDCA, CITA, CRDTS, SRTA, WREB	2	40	TN Jurisprudence Exam	$400 by exam $150 by reciprocity	$250	Yes	Yes
Certification requirements for other occupations mentioned in this study are included in Appendix 3.									

FIGURE A2. LICENSING REQUIREMENTS FOR PSYCHOLOGISTS, SELECTED STATES (2022)

	Education Required	Experience Required / Training Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Additional Required Exams	Cost of Initial Licensure*	Cost of License Renewal	Reciprocity or Endorsement	Good Moral Character Requirement
Arkansas	Doctorate	2 years (incl. 1 postdoctoral) / 2,000 hours internship	ASPPB exam	1	20		$400	$300	Reciprocity	Yes
Kansas	Doctorate	2 years supervised work experience	EPPP exam	2	50		$775	$150	Reciprocity	Yes
Kentucky	Doctorate	2 years supervised work experience	EPPP exam	3	39	KY Jurisprudence Exam	$450	$450	Reciprocity	Yes
Missouri	Doctorate	1 years supervised work experience	EPPP exam	2	15	MO Jurisprudence exam	$150	$300	Reciprocity	No
Oklahoma	Doctorate	2 years supervised work experience	EPPP exam	1	20	OK Jurisprudence Exam	$400	$200	Reciprocity	No
Tennessee	Graduate	2 years postgrad supervised work experience	National Counselor Examination; National Clinical Mental Health Counseling Examination	2	20		$600	$225	Yes	Yes

* *Initial Licensure may include exam, application and licensing fees.*

FIGURE A3. LICENSING REQUIREMENTS FOR PHARMACY TECHNICIANS, SELECTED STATES (2022)

	Education Required / Training Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure	Cost of License Renewal	Reciprocity or Endorsement	Good Moral Character Requirement	Blanket Ban for Ex-Offenders	Good Moral Character Requirement
Arkansas	None	Yes	2	0	$145	$35	Yes	Yes	Yes	Yes
Kansas	None	Yes	2	20	$67	$20	Yes	No	No	Yes
Kentucky	None		1	0	$25	$25	No	Yes	No	Yes
Missouri	None	No	1	0	$75.3	$35	No	No	No	No
Oklahoma	None		1	0	$75	$75	Yes	Yes	No	No
Tennessee	480 hours of training required (non-degree)	No	2	0	$95	$95	No	Yes	Yes	Yes

Note: *No experience or additional exams required*

FIGURE A4. LICENSING REQUIREMENTS FOR OCCUPATIONAL THERAPY ASSISTANTS, SELECTED STATES (2022)

	Education Required	Experience Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement	Good Moral Character Requirement	Blanket Ban for Ex-Offenders	Good Moral Character Require-ment
Arkansas	Associates	2 months	Yes	1	10	$605 / $50	Yes	Yes	Yes	Yes
Kansas	Associates	0	Yes	2	40	$635 / $75	Yes	Yes	No	Yes
Kentucky	Associates	16 weeks	Yes	1	12	$590 / $35	Yes	Yes	No	Yes
Missouri	Associates	Fieldwork prescribed by accredited institution	Yes	2	24	$585 / $10	Yes	Yes	No	No
Oklahoma	Associates	2 months	Yes	2	20	$605 / $20	Yes	Yes	No	No
Tennessee	Associates	Fieldwork prescribed by accredited institution	Yes	2	24	$585 / $80	Yes	Yes	Yes	Yes

Note: *No hours of training required, no additional exams required, no blanket ban for ex-offenders.*

FIGURE A5: LICENSING REQUIREMENTS FOR OCCUPATIONAL THERAPISTS, SELECTED STATES (2022)

	Education Required	Training Required (in hours) / Experience Required (in hours)	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement	Good Moral Character Requirement	Blanket Ban for Ex-Offenders	Good Moral Character Require-ment
Arkansas	Master's or Doctoral from an ACOTE®-accredited program	0 / 0	Yes (Board for Certification in Occupational Therapy)	1	10	$75 / $55		Yes	Yes	Yes
Kansas	Master's or Doctoral from an ACOTE®-accredited program	0 / 0	Yes	1	40 for the preceding two-year period, reported during the odd-numbered years	$80 / $80	No	No	No	Yes
Kentucky	Master's or Doctoral from an ACOTE®-accredited program	0 / 24 hours	NBCOT certification exam	1	12	$50 / $50	Yes	Yes	No	Yes
Missouri	Master's or Doctoral from an ACOTE®-accredited program	1,000 hours fieldwork / 0	Yes	2	24	$30 / $30	Yes	No	No	No
Oklahoma	Master's or Doctoral from an ACOTE®-accredited program	0 / 0	NBCOT certification exam	1	20	$120 / $100	Yes	Yes	No	No
Tennessee	Master's or Doctoral from an ACOTE®-accredited program	10 hours / 0	NBCOT certification exam	2	24	$100 / $85	No	Yes	Yes	Yes

Note: *No hours of experience required, no additional exams required, no blanket ban for ex-offenders*
ACOTE® – Accreditation Council for Occupational Therapy Education

FIGURE A6: LICENSING REQUIREMENTS FOR SOCIAL WORKERS, SELECTED STATES (2022)

	Education Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement	Good Moral Character Requirement	Blanket Ban for Ex-Offenders
Arkansas	Bachelor's	Yes	2	30	$100 / $80	Yes	No	Yes
Kansas	Bachelor's	Yes	2	6	$150 / $150	Yes	Yes	No
Kentucky	Bachelor's	Yes	3	15; 3-year period	$25 / $75	No	No	No
Missouri	Bachelor's	Yes	2	15	$70 / $65	Yes	Yes	No
Oklahoma	Bachelor's	Yes	2	16 per 2-year period	$150 / $100	Yes	Yes	No
Tennessee	Bachelor's	Yes	2	9	$75 / $45	Yes	No	No

Note: *No hours of training required, no hours of experience required, no additional exams required*

FIGURE A7: LICENSING REQUIREMENTS FOR PHARMACY TECHNICIANS, SELECTED STATES (2022)

	Training required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement	Good Moral Character Requirement	Blanket Ban for Ex-Offenders
Arkansas		Yes	2	0	$145 / $35	Yes	Yes	Yes
Kansas		Yes	2	20	$67 / $20	Yes	No	No
Kentucky			1	0	$25 / $25	No	Yes	No
Missouri		No	1	0	$75.3 / $35	No	No	No
Oklahoma			1	0	$75 / $75	Yes	Yes	No
Tennessee	480 hours (non-degree)	No	2	0	$95 / $95	No	Yes	Yes

Note: *No education required, no experience required, no additional exams*

FIGURE A8: LICENSING REQUIREMENTS FOR DIETICIAN NUTRITIONIST, SELECTED STATES (2022)

	Education Required	Experience Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement	Good Moral Character Requirement
Arkansas	Baccalaureate	American Dietetic Association approved pre-professional experience	Commission on Dietetic Registration exam	1	12	$110 / $50	Yes	No
Kansas	Baccalaureate	900 hours of planned continuous pre-professional experience	Commission on Dietetic Registration exam	1	15	$140 / $135	Yes	No
Kentucky	Baccalaureate		Commission on Dietetic Registration exam	1	15	$50 / $50	Yes	No
Missouri	Baccalaureate		Commission on Dietetic Registration exam	2	75 (every 5 years)	$50 / $20	Yes	No
Oklahoma	Baccalaureate	Internship or preplanned professional experience	Commission on Dietetic Registration exam	1	0	$120 / $100	Yes	No
Tennessee	Baccalaureate	900 hours of planned continuous pre-professional experience	Commission on Dietetic Registration exam	2	0	$130 / $70	Yes	Yes

Note: *No training hours required, no additional exams, no blanket ban on ex-offenders*

FIGURE A9: LICENSING REQUIREMENTS FOR OPTOMETRIST, SELECTED STATES (2022)

	Education Required	Professional Exam	Required Time of License Renewal (in Years)	Continuing Education Requirement (in hours)	Additional Required Exams	Cost of Initial Licensure (in dollars) / Cost of License Renewal (in dollars)	Reciprocity or Endorsement / Cost	Good Moral Character Requirement	Blanket Ban for Ex-Offenders
Arkansas	Doctorate	Entrance exam	1	12		$450* / $150	Yes / $438.50	No	Yes
Kansas	Doctorate	Entrance exam	2	48		$180** / $450	Yes / $150	Yes	No
Kentucky	Doctorate	Entrance exam	1	12		$525 / $250	Yes /$725	Yes	No
Missouri	Doctorate	Entrance exam	2	32	Law exam	$275*** / $150	Yes / $225	Yes	No
Oklahoma	Doctorate	Entrance exam	1	25		$200 / $300	No	Yes	No
Tennessee	Doctorate	Entrance exam	2	40	Jurisprudence exam	$250 / $275	Yes	Yes	No

Note: *No training required, no experience required, no blanket ban for ex-offenders*
** includes $400 entrance exam fee; **includes $150 for entrance exam fee; ***includes $50 law exam fee*

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