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Supporting Rural Health: Practical Solutions for State Policymakers

Issue Brief

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Introduction

Rural health has long been an area of concern for policymakers, with perennial challenges such as quality of care, workforce development, and the dearth of research that specifically addresses rural health challenges. The accelerating health and economic disparities between rural and suburban and urban populations highlight the need for evidence-based rural health initiatives. In view of these challenges, the Milbank Memorial Fund and the Reforming States Group (RSG)¹ identified rural health as an issue of critical importance to state policymakers.

In November and December 2018, the Fund conducted three RSG regional meetings. As part of those meetings, state health policy leaders from both the executive and legislative branches met with national experts to discuss rural health concerns and learn more about practical, actionable solutions to the most pressing issues. Based on [presentations](#) from federal and state officials, academic researchers, and policymakers regarding rural health concerns, several key themes emerged:

- The importance of health care delivery models that promote and incentivize investment in community health;
- The need for workforce development, including development of programs to train and retain providers in rural areas, including leveraging technology and telehealth options where possible; and

- The need for ongoing research and policy development specifically directed toward rural health.

This issue brief summarizes and expands upon the recent RSG rural health meetings, providing case studies highlighting successful models for each of these key themes, with the intent that policymakers may draw on these examples in other contexts. The primary audience for this brief is state policymakers, including legislators and executive branch staff who are responsible for rural health policy in their states. In addition to sharing experiences from states, the program was designed to link policymakers to the work of academic research organizations—particularly state universities—that can supply new evidence to inform policymaking.

Rural Health: Challenges and Opportunities

The majority of U.S. counties are considered rural,² comprising roughly 15% of the total U.S. population.³ The trend toward urbanization has continued largely unabated over the prior century, leaving rural areas at a disadvantage on virtually all health metrics. Today, significant health disparities exist between urban and rural areas, rooted in factors such as access to health care services, economic forces, demographics, and the social determinants of health. For example:

- Rural areas are disproportionately impacted by avoidable deaths, with rates of excess deaths from heart disease, chronic lower respiratory disease, and unintentional injuries approximately 50% higher in rural versus urban areas.⁴
- Rural populations are disproportionately impacted by disability and suicide, along with behavioral factors such as smoking, obesity, and inactivity.⁵
- The opioid epidemic has particularly affected rural areas. Rural residents are more likely to be prescribed⁶—and overdose from—painkillers than urban residents, and deaths from opioid overdose in rural areas increased by 10% from 2015 to 2016.⁷ Treatment options in rural areas are limited, as more than 60% of rural counties lack a single physician who can prescribe buprenorphine,⁸ and fewer than 10% of medication-assisted opioid treatment programs are in rural areas.

Many factors contribute to these health disparities. Rural areas have reduced access to all types of health care services, including primary care, specialty services, oral health, behavioral health, obstetric, and emergency services, driven in part by workforce shortages and by the financial instability of many rural health care providers, particularly hospitals.

Limited transportation options in rural areas compound the problem. Perhaps as a result, rural areas have higher rates of preventable hospitalizations than their urban counterparts.

Powerful economic and demographic forces compound these issues. People who live in rural areas are on average older and have lower rates of educational attainment than their urban counterparts and higher rates of poverty, particularly among children and the elderly.⁹ In addition, rural areas have not recovered from the Great Recession (2007–2009) on par with urban areas, resulting in reduced job opportunities and more economic volatility.¹⁰

Rural Health Initiatives: Lessons for Policymakers

The complex drivers of rural health highlight the importance of health care delivery models that promote and incentivize investment in community health, ultimately resulting in improved quality of care, better population health, and a sustainable cost trajectory. While there are a number of successful models for improving rural health, those that have demonstrated promise within a value-based payment environment may be of heightened relevance to state policymakers. Both the Eastern Oregon Coordinated Care Organization and the Arkansas Rural Health Partnership provide examples of novel strategies to support rural health in an evolving payment framework. In addition, emerging initiatives in Virginia and Pennsylvania show promise and should be monitored by policymakers.

Eastern Oregon Coordinated Care Organization

In Oregon, diverse coalitions of health care providers have come together to form coordinated care organizations (CCOs)—network comprised of physical, behavioral, and dental professionals, along with nonemergency medical transportation providers, who collectively work to serve members of the Oregon Health Plan (Medicaid). Following legislation adopted in 2011,¹¹ 15 CCOs were created across Oregon pursuant to a formal procurement process, with the goal of achieving the Institute for Healthcare Improvement’s Triple Aim of improving health, improving health care, and lowering costs by transforming the delivery of health care. Essential elements of CCOs include care integration and coordination, local accountability for health and resource allocation, defined standards for effective care, and, perhaps most significantly, a global Medicaid budget tied to a sustainable rate of growth.

The Eastern Oregon Coordinated Care Organization (EOCCO) serves a predominantly rural area in Eastern Oregon, covering 50,000 square miles (roughly half the territory of entire state) and a population of approximately 50,000 enrollees.¹² The EOCCO plays a unique role in meeting the needs of Oregon’s rural population. Of the 12 counties EOCCO serves, 10 are considered “frontier,” with fewer than six people per square mile. Even with the challenges inherent in serving a widely dispersed population, the EOCCO has delivered high-quality, cost-effective care to its population.

Mission and Model. The EOCCO represents an important move toward the improved patient care, including quality and satisfaction; improved population health; and a sustainable cost trajectory. The mission of the organization is to improve the health of members while operating within an annual 3.4% fixed growth global budget rate framework¹³ in an environment of cost-based reimbursement to type A/critical access hospitals, rural health clinics, and federally qualified health centers. To do so, the EOCCO employs value-based payment methodologies that include shared savings and an enhanced medical home payment program. The organization must also strive to meet state-mandated CCO quality measures and reinvest in local communities, using tools such as community benefit initiative grant programs.

Governance Structure. The EOCCO is owned by a coalition of hospitals and health care providers and governed by a 17-member board that includes hospital, primary care, behavioral health, public health, local elected, and lay member representatives. Twelve local community advisory councils (one per county) and one regional advisory council are responsible for community health assessments and community health improvement plans. A 12-member clinical advisory committee composed of primary care, behavioral health, public health, and dental health providers is responsible for advising the governing board on clinical matters.

Provider Network. The EOCCO has a broad and comprehensive provider network,¹⁴ including 10 area hospitals (seven of which are type A/critical access hospitals; none are tertiary hospitals), 57 primary care clinics (24 are rural health clinics, seven are federally qualified health centers, and 90% of members are served by certified medical homes), and many specialty, behavioral health, dental health, and nonemergency medical transportation providers.

Value-Based Payment Methodologies. Providers may elect to participate in shared savings programs and are eligible for quality bonus payments and enhanced payments for certified medical homes. The EOCCO participated in the shared savings program, in which a percentage of premium funds were withheld and participating organizations were eligible to earn enhanced funding based on meeting specified performance metrics. In the previous five years, the EOCCO received 100% of eligible funding (an amount exceeding the withheld funds) in two years, 101% of eligible funding in 2017, the most recent year for which full data are available, and 80% to 90% in the other two years. Quality measures include claims-based metrics, such as emergency department utilization and adolescent well-child visits; clinical measures, such as depression screening and control of high blood pressure; chart review measures, such as timeliness of colorectal cancer screening and prenatal care; and CCO-specific measures, such as medical home enrollment.

Results. The EOCCO has seen an increase in primary care utilization and a reduction in inpatient care in the most recent measurement periods (2016–2018). Average per-member per-month (PMPM) expenditures showed increases ranging from 0.9% (October 2016–September 2017) to 3.9% (June 2017–May 2018). The organization remained

under budget on a PMPM basis (10.4% under budget October 2016 to September 2017; 8.8% under budget June 2017–May 2018).

Future Trends. The EOCCO has demonstrated that it is possible to deliver quality care within a sustainable financial model. However, in his presentation to the RSG,¹⁵ Chuck Hoffman, MD, highlighted several factors that may impact future results, including the threat of rate reductions even if organizations keep cost increases at or below the sustainable growth rate target, as well as looming workforce shortages, particularly in primary care and behavioral health, and possible financial implications for hospitals as inpatient utilization drops. Thus, states interested in adopting a similar model should consider these issues in program design.

Arkansas Rural Health Partnership

The Arkansas Rural Health Partnership (ARHP) is a nonprofit network composed of 11 independently owned south Arkansas rural hospitals. The ARHP operates pursuant to by-laws and is governed by a board made up of chief executive officers from each of the member hospitals. Collectively, the ARHP is the sixth-largest health care provider in Arkansas. The organization's mission is "to create and implement sustainable solutions to improve the health care infrastructure and strengthen health care delivery in rural Arkansas."¹⁶

Need for the Partnership. The ARHP was developed in response to several powerful forces that are present in most states: the trend toward health care system consolidation, exposing small rural hospitals to increased vulnerability; the importance of rural hospitals as economic and health care drivers within their communities; a need to recruit and train health care providers who will commit to rural communities; and a need for rural hospitals to collaborate to deliver high-quality care across communities rather than viewing neighboring hospitals as competitors.¹⁷ Originally funded through a Health Resources & Services Administration (HRSA) grant, the ARHP has to date obtained over \$10 million in grant funding to support its work.

ARHP manages two types of service arrangements for its members:

- **The Clinically Integrated Network.** The ARHP has developed a clinically integrated network (CIN) whose mission is "to lead the transformation of health care in collaboration with patients, payors, and caregivers, through the use of evidence-based medicine." The ARHP identifies the network's goal as "to improve quality and reduce overall cost of care for the patients and communities we serve in rural Arkansas."¹⁸ The network is organized as an accountable care organization (ACO),¹⁹ enabling members to participate in the Medicare Shared Savings Program (MSSP). Governed and led by physicians, the network is primarily focused on improving patient care through improved communication, care coordination, use of IT solutions provided by the CIN, and sharing of best practices among members. In her presentation to RSG members, ARHP CEO Mellie Bridewell, MS, outlined several factors supporting the creation of the CIN:

- **Achieving critical mass.** To be an ACO with the Medicare program (and thus be eligible for MSSP), a hospital or clinic must have a minimum number of individuals covered by Medicare. In general, individual rural hospitals are unable to meet the threshold and therefore must participate in an ACO with other organizations and providers to be eligible for MSSP opportunities.
- **Improved quality and continuity of care.** Shared clinical services are vital to quality and access in underserved areas, and participation in the CIN can improve continuity of care throughout the region.
- **Strengthening the ARHP.** The CIN strengthens the work of the ARHP and can provide a catalyst to the shared services arm of the partnership (see below).
- **Cost containment and reallocation.** Successful CIN efforts can reduce overall health care expenditures in the region while financially benefitting rural providers by allowing participation in MSSP and commercial shared savings programs.
- **Managed Service Organization.** The impetus for the managed service organization (MSO) program was a recognition that ARHP members “need to improve the health of rural Arkansans by offering more health care services at the local level...[and] to do that, [members] must cut ... costs by providing service lines to our members that are affordable.”²⁰ Through an organizationally owned MSO, members can achieve economies of scale and realize savings on service lines provided directly by the MSO, as well as negotiated outside contract savings. Opportunities for savings include business office solutions, contract negotiation, health insurance, staffing rates, credentialing and contract management, coding, billing and collection services, and human resource functions.
- **Partnership with the University of Arkansas for Medical Sciences.** In addition to the CIN and MSO functions, the ARHP leverages a partnership with the University of Arkansas for Medical Sciences to provide telehealth services (including pediatric urology, burn consultation, hand trauma, and neurosurgical spine programs), on-site simulation training, distance learning, and provider recruitment (including an effort to support creation of additional physician residencies in Arkansas),²¹ each of which would be challenging for rural hospitals to do individually but can be cost-effective and beneficial when pursued as part of the ARHP.

Emerging Rural Health Initiatives to Watch

In addition to the more established models in Oregon and Arkansas, there are a number of promising emerging initiatives that may be of interest to policymakers. Virginia’s efforts to expand access to substance use disorder treatment and Pennsylvania’s hospital global budgeting initiative are highlighted here.

Virginia Medicaid: Prioritizing Substance Use Disorder Treatment and Prevention. In an effort to combat the opioid epidemic, Virginia (which recently adopted Medicaid expansion pursuant

to the Affordable Care Act) implemented an initiative in April 2017: the Virginia Medicaid Addiction and Recovery Treatment Services (ARTS) program. Under the ARTS program, Virginia has expanded its Medicaid substance use disorder (SUD) benefit to include coverage for inpatient detox and residential services, along with peer support services and increased reimbursements for SUD providers. It also supports increased provider recruitment and training and requires SUD care coordinators at contracted managed care plans.²²

While SUD is widespread across Virginia, the ARTS program has particularly benefited rural populations. ARTS has added more than 400 addiction treatment providers, including a 2,250% increase in residential treatment providers, a 177% increase in SUD outpatient treatment providers, and a 137% increase in opioid use disorder (OUD) outpatient treatment providers. So far, the results are encouraging. Virginia has seen a 57% increase in Medicaid members with an SUD diagnosis receiving treatment and a 48% increase in those with OUD receiving treatment. The state has also seen a decrease in SUD- and OUD-related emergency department visits.

Pennsylvania Rural Health Model: Global Budgeting. The Pennsylvania Rural Health Model seeks to smooth the transition for rural hospitals from a fee-for-service framework to a population health model, while improving access to quality health care services and maintaining a sustainable cost trajectory. Under the model, participating rural hospitals will be paid based on all-payer global budgets—a fixed amount that is set in advance for inpatient and outpatient hospital-based services and paid monthly by Medicare fee-for-service and all other participating payers. In addition, the rural hospitals will redesign their care delivery systems to improve quality and meet community health needs.²³

Supported by a \$25 million four-year grant from the Centers for Medicare and Medicaid Services and with a goal of gaining participation of Medicaid and commercial payers in addition to Medicare, the model is open on a voluntary basis to both critical access and acute care hospitals in rural Pennsylvania. At least six rural hospitals will participate in the model's first year (2019), at least 18 during model year two (2020), and at least 30 rural hospitals will participate during model years three through six (2021–2024). Pennsylvania has committed to achieving \$35 million in Medicare hospital savings over the course of the model and to maintaining a growth rate of rural Pennsylvania total Medicare expenditures per beneficiary of not more than the growth rate of the rural national total Medicare expenditures per beneficiary. Across all participating payers, Pennsylvania has agreed to an all-payer financial target of no more than 3.38% in annual hospital spending growth on inpatient and outpatient hospital-based services per resident of Pennsylvania's rural areas served by participating rural hospitals.²⁴ If successful, this could be a model for rural hospitals in other states that are seeking opportunities to transform their care delivery models to focus on population health.

Rural Health Care Workforce: Novel Strategies to Develop and Expand Capacity

The challenges of rural health care workforce development are well-known and have long presented challenges for policymakers. Traditional strategies to recruit and retain providers have proven insufficient to meet the needs of rural communities. Both Oklahoma and California have successfully engaged in novel strategies to develop and expand provider capacity, offering other states opportunities to learn from these models.

Developing a Rural Physician Workforce: Lessons From Oklahoma

The Oklahoma State University College of Osteopathic Medicine (OSU-COM) educates primary care physicians (PCPs) with a particular emphasis on delivering care to rural and underserved Oklahoma. Seventy-six counties in Oklahoma are designated as “health professional shortage areas”; 10 counties have one PCP, and three counties have none. As in many rural areas, the PCP workforce is rapidly aging, with 52% of rural PCPs over age 55.²⁵ In the face of national trends among medical school graduates to choose specialty care over primary care, OSU-COM has successfully recruited and trained PCPs. Since 1977, 62% of OSU graduates have chosen primary care residencies, and OSU-COM ranks in the top 20 schools nationwide in the percentage of primary care residents produced.²⁶

OSU-COM achieved these results through a multifaceted approach driven by a strong focus on building a robust and diverse pipeline of individuals with both interest and commitment to rural health practice. Core elements of the pipeline included targeted early recruitment efforts, creation of a dedicated rural medical track within the medical school curriculum, support for new rural residency programs, and strong engagement with diverse communities, particularly Oklahoma tribal communities.

Core components of the rural physician pipeline model include a commitment to recruiting and training rural Oklahomans, including Native Americans, for primary care residencies, funding for new rural primary care residencies, and development of a curriculum that emphasizes rural practice, providing training opportunities that increase the likelihood graduates will pursue careers in rural medicine.

Although students with rural backgrounds may be more likely to pursue rural-based practice, studies have shown that the strongest predictor of the likelihood of medical school graduates choosing rural practice is exposure to rural practice during clinical training. Moreover, the strongest predictive factor in rural physician retention is rural-based residency training. Thus, OSU-COM’s rural training programs were designed for students with both rural and urban backgrounds.²⁷

In 2011, with support of a five-year HRSA grant, OSU-COM implemented a rural training program that includes “early recruitment of rural high school students, introduces medical students to rural practice options through rural clinical training opportunities, and provides

opportunities to remain in rural Oklahoma for residency training through ongoing GME (graduate medical education) development.²⁸ Each is discussed below.

Early recruitment and development of a diverse rural pipeline. To develop a physician workforce that reflects Oklahoma's diversity and meets the state's need for rural providers, the OSU Center for Health Sciences (OSU-CHS) developed several programs directed toward early identification of rural talent, with a particular focus on Native American engagement. Approximately 9% of the Oklahoma population identify as Native American compared with 0.7% in the United States as a whole. Oklahoma has 39 federally recognized tribes and the highest per capita number of Native Americans of any state. Nationwide, efforts to increase diversity in the medical profession have been largely unsuccessful at increasing the numbers of Native Americans with the allopathic field. In 2015, only 0.1% of allopathic graduates were Native American. However, OSU-COM has seen robust growth in its Native American graduates, rising from 9.8% in 2015 to 16% in 2018. Funding for each program varies, but in total includes nonprofit, federal and state government, private, and university sources. Each of the programs below has been integral to Oklahoma's success in building a more robust and diverse rural medical provider community:

- **Operation Orange.** With 700 participants annually, Operation Orange is a free, one-day camp that allows rural Oklahoma students to spend "a day in the life" of an OSU medical student.
- **Immersion Camp.** Dr. Pete's Medical Immersion Camp is an interactive experience open to high school students who are Native Americans or a members of the Future Farmers of America. Participants spend three days on the OSU-COM campus learning and working alongside current medical students within the context of rural medicine, including hands-on experiences of dissection and suturing, as well as simulation rotations. In 2018, approximately 50 students were selected for participation.
- **Native Explorers.** Funded by a diverse group of stakeholders, including the Chickasaw Nation, Cherokee Nation, Choctaw Nation of Oklahoma, OSU-CHS, and others, the Native Explorers Program is designed to promote and increase the number of Native Americans in science and medicine, by exposing participants to careers in graduate and medical programs, as well as federal programs such as the National Park Service, state agencies, and sovereign nations (e.g., Cherokee and Chickasaw). The program includes exposure to osteopathic medicine through OSU-COM.
- **OKstars and Native OKstars.** Started in 2013 and running for approximately six weeks each summer, OKstars is a summer research program sponsored by OSU-CHS that allows high school juniors and seniors to participate in cutting-edge research with OSU-CHS faculty and graduate students, including in-depth work with a research team, access to modern instrumentation, and potential opportunities to participate in publications and presentations. Because no Native American students participated in OKStars in 2013, Native OKStars, was implemented in 2014. Native OKstars is geared

specifically toward Native American students and contains a cultural component from the OSU-CHS Office for American Indians in Medicine and Science including Native American faculty and student mentors. In surveys, students ranked the programs highly on questions such as “helped me develop the confidence to pursue a [Science, Technology, Engineering, and Math] career.” OKstars and Native OKstars plan to serve approximately 20 to 25 and five to 10 students each year, respectively.

- **3+1 Program.** In addition to the programs above, OSU-COM has partnerships with multiple regional universities and OSU Stillwater to support a “3+1” accelerated medical education program for undergraduate students interested in careers in rural primary care. The 3+1 Program allows students to complete undergraduate degree requirements and the doctor of osteopathic medicine degree in seven years rather than eight.

Rural Medical Track. The pipeline strategy³ involved creation of a rural medical track within OSU-COM (the Rural Medical Option or RMO) that included elective courses, rural clinical rotations, and support for participation in national rural organizations and conferences, along with development of a network of rural-based training sites and preceptors and regional coordinators to serve as liaisons between OSU-COM, the students, and the preceptors. In addition to superior academic performance on exams in family medicine and certain other specialties, students gave “extremely positive” qualitative feedback on the program.²⁹

Development of New Rural-Based Residency Opportunities. In 2008, there was one rural-based residency program in Oklahoma. Since then, OSU has partnered with stakeholders including the OSU-COM–affiliated Osteopathic Postdoctoral Training Institute and the Osteopathic Medical Education Consortium of Oklahoma to develop six new rural residency programs, for a total of 118 new residency positions in family, internal, and emergency medicine.³⁰

Nation’s First Tribally Affiliated Medical School. In 2018, OSU announced it would open the nation’s first college of medicine on tribal land in 2020. The OSU-COM at the Cherokee Nation will be an additional site to OSU-COM’s Tulsa site. The university plans an inaugural class of 50 students in fall 2020, with an enrollment of 200 when fully operational. As reflected in the choice of partnership and location, there is a commitment to Native American populations and an expectation that a large percentage of students will be Native American.

Leveraging Technology to Improve Rural Health: Teledentistry in California

Paul Glassman, DDS, of the University of the Pacific Arthur A. Dugoni School of Dentistry created the concept of the “virtual dental home” using teledentistry to serve as a core component of improved dental health in underserved areas, particularly in rural communities. The American Dental Association defines teledentistry as “the use of telehealth systems and methodologies in dentistry. Telehealth refers to a broad variety of technologies and tactics to deliver virtual medical, health, and education services. Telehealth is not a specific service, but a collection of means to enhance care and education delivery.”³¹

The Virtual Dental Home System of Care: A California Demonstration Project. In oral health, teledentistry has the potential to bring additional capacity to underserved populations in community settings. For example, Dr. Glassman highlighted the Pacific Center for Special Care's Virtual Dental Home (VDH) System of Care, a community-based oral health delivery system in which people receive dental diagnostic, preventive, and early intervention services in community settings.

Under the program, the VDH uses telehealth technology to link dental hygienists and expanded function dental assistants in the community with dentists in dental offices and clinics, facilitating access to a full dental team and comprehensive dental care. Community-based allied dental personnel (dental hygienists and extended function dental assistants) collect dental records and provide preventive care for patients in community settings, then provide that patient information through a secure web-based cloud storage system to a dentist at a clinic or dental office that then establishes a diagnosis and creates a dental treatment plan. Under the direction of a dentist, hygienists or assistants may perform a minor procedure to stabilize patients until a dentist determines that further treatment is required. Patients with more complex needs are referred for a dental appointment.³²

By engaging patients in community settings, the VDH significantly reduces the need to travel for care. In a six-year demonstration project, the VDH allowed approximately two-thirds of the children and half the adults with complex health conditions to receive all necessary care they needed at a community site. Importantly, this preventive and minor care most likely would not have been received in the absence of the VDH.

The Legal and Regulatory Environment for Teledentistry: Scope of Practice Restrictions. In states that wish to facilitate expanded use of telehealth modalities, policymakers must first examine and update their legal and regulatory environments, including considerations such as reimbursement rules, licensure of practitioners, liability coverage, HIPAA, and scope of practice restrictions.

Regarding scope of practice restrictions, which can often be among the most politically contentious issues in discussions regarding telehealth expansion, Glassman points to the recommendations issued by the Institute of Medicine (IOM) in its 2011 report *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*.³³ The IOM emphasized that states can maximize access to oral health care by:

- Permitting allied dental professionals to practice to the full extent of their education and training;
- Allowing allied dental professionals to work in a variety of settings under evidence-supported supervision levels;
- Allowing technology-supported remote collaboration and supervision;
- Permitting allied oral health personnel, with necessary training and working under telehealth or general supervision or predetermined protocols, to collect diagnostic records including images (radiographic and photographic), charting, and other components of a complete electronic dental record; and
- Allowing allied oral health personnel, with necessary training and working under telehealth or general supervision or predetermined protocols, to perform preventive and early intervention procedures at community sites.³⁴

Rural Health Research Centers: Building an Evidence Base for State Policy Action

While there is much research and data on health and health care, rural health issues have traditionally been underserved and underevaluated, leaving a need for ongoing research and policy development. Several academic research centers are working to fill those knowledge gaps by undertaking research directed specifically at rural health and rural populations. With close to \$6 million support from the Federal Office of Rural Health Policy through its Research Centers Program, these research programs are building a stronger evidence base for state policy action on rural health.

University of Kentucky Rural and Underserved Health Research Center. In 2016, the University of Kentucky established a Rural and Underserved Health Research Center with a \$2.8 million grant from HRSA's Rural Health Research Center Cooperative Agreement grant program. The center is one of seven federally funded centers dedicated to rural health policy and services research, conducting research with a concentration on underserved rural areas of the United States, including the predominantly white Appalachia region, predominantly African American Mississippi Delta region, and heavily Hispanic areas of the West. The center's objectives are to advance understanding and inform decision-makers about effective means of organizing health services, facilitating access, and improving population health. However, as Center Director Ty Borders emphasized in his presentation to the RSG, the "rural vs. urban" distinction is in many ways an arbitrary geopolitical one, and researchers must endeavor to identify instances in which the "rural" designation is a proxy for other determinants of health, such as the quality of a health system, or economic, social, and demographic factors.

Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) Rural Health Research Center. Federally funded since 1998, the WWAMI Rural Health Research Center, housed at the University of Washington, is another of seven federally funded rural health research

centers whose mission is to carry out national and regional research that informs policy related to:

- Training and supply of rural health care providers and the content and outcomes of the care they provide;
- Availability and quality of care for rural women and children, including obstetric and perinatal care; and
- Access to high-quality care for vulnerable and minority rural populations.³⁵

The WWAMI Rural Health Research Center is particularly focused on rural health workforce considerations and, in partnership with the University of Washington Center for Rural Health Workforce Studies and the Rural PREP (Collaborative for Rural Primary care Research, Education, and Practice), researchers have highlighted the need for flexible thinking in rural health workforce development, with an emphasis on a full continuum of health professionals, from support services to specialists. The group recently put forth a report offering 45 recommendations to the Washington State governor, the state legislature, and other stakeholders to support development of a robust behavioral health workforce, including better integration of care, improved training initiatives, and a modernized reimbursement structure.³⁶

The University of South Carolina Arnold School of Public Health Rural and Minority Health Research Center. Housed at the University of South Carolina, the Rural and Minority Health Research Center’s mission is “to illuminate and address the problems experienced by rural and minority populations in order to guide research, policy, and related advocacy.” Deputy Director Elizabeth Crouch, PhD, presented research regarding differences in exposure to adverse childhood experiences in rural and urban populations, observing that rural children were in general more likely to have experienced adverse childhood experiences than their urban counterparts but noting that poverty was the variable that accounted for the rural/urban distinction. As Crouch observed, poverty is addressable via policy, while “rural” is a distinction not easily changed through intervention.³⁷

Notes

- ¹ Supported by the Milbank Memorial Fund since 1992, the RSG is a bipartisan group of state executive and legislative leaders who meet annually to share information, develop professional networks, and commission joint projects.
- ² Although various uses and definitions of “rural” and “urban” exist within federal law, unless otherwise noted, this brief uses the term “rural” in reference to the methodology of the National Center for Health Statistics, which classifies geographic areas as “rural” at the county level. For more detail, see National Center for Health Statistics, “NCHS Urban-Rural Classification Scheme for Counties,” https://www.cdc.gov/nchs/data_access/urban_rural.htm. Accessed January 30, 2019.
- ³ Pew Research Center analysis of National Center for Health Statistics Urban-Rural Classification Scheme for Counties (2018). <https://www.pewsocialtrends.org/2018/05/22/demographic-and-economic-trends-in-urban-suburban-and-rural-communities/>.
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- ⁵ Rural Health Information Hub. Rural health disparities. Last reviewed November 14, 2017. <https://www.ruralhealthinfo.org/topics/rural-health-disparities>. (Citations omitted.) Accessed February 26, 2019.
- ⁶ Guy GP Jr, Zhang K, Bohm MK, et al. Vital signs: changes in opioid prescribing in the United States, 2006–2015. *MMWR Morb Mortal Wkly Rep.* 2017;66(26):697–704.
- ⁷ Mack KA, Jones CM, Ballesteros MF. Illicit drug use, illicit drug use disorders, and drug overdose deaths in metropolitan and nonmetropolitan areas – United States. *MMWR Surveill Summ.* 2017;66(19):1-12. doi: 10.15585/mmwr.ss6619a1.
- ⁸ Andrilla CHA, Coulthard C, Larson EH. Changes in the supply of physicians with a DEA DATA waiver to prescribe buprenorphine for opioid use disorder. Data Brief 162 WWAMI Rural Health Research Center, University of Washington, Seattle, WA. May 2017.
- ⁹ Rural Health Information Hub. Social determinants of health for rural people. <https://www.ruralhealthinfo.org/topics/social-determinants-of-health#rural-difference>. Accessed January 30, 2019.
- ¹⁰ Economic Innovation Group. *From Great Recession to Great Reshuffling: Charting a Decade of Change Across American Communities*. <https://eig.org/wp-content/uploads/2018/10/2018-DCI.pdf>. Published October 2018. Accessed April 7, 2019.
- ¹¹ Oregon House Bill 3650 (2011).

- ¹² Eastern Oregon Coordinated Care Organization. About Us. www.eocco.com/about. Accessed January 31, 2019.
- ¹³ The Oregon Health Authority has a sustainable rate of growth target of not more than 3.4%, as established in the state’s Section 1115 Demonstration Waiver.
- ¹⁴ These network figures include Oregon, Washington, and Idaho providers.
- ¹⁵ Chuck Hoffman, MD, MAACP, EOCCO Clinical Consultant, “Eastern Oregon Coordinated Care Organization: Lessons Learned From Oregon’s Frontier,” Western Regional Meeting of the Reforming States Group, November 2018.
- ¹⁶ Arkansas Rural Health Partnership, About Us. www.arruralhealth.org/about-us/.
- ¹⁷ Mellie Bridewell, Arkansas Rural Health Partnership. Unifying care, transforming communities. Presented at: Milbank Memorial Fund Reforming States Group Meeting; December 2018.
- ¹⁸ Bridewell, note 17.
- ¹⁹ Accountable care organizations are an initiative of the Medicare program, which creates opportunities for “groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high-quality care to their Medicare patients” and participate in innovative payment systems such as shared savings models. Centers for Medicare and Medicaid Services, Accountable Care Organizations. www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/. Accessed January 31, 2019.
- ²⁰ Bridewell, note 17.
- ²¹ Mark Jansen, MD, Chief Medical Officer, UAMS Regional Programs, presentation to Reforming States Group meeting, December 5, 2018.
- ²² Katherine Neuhausen, MD, MPH. “Transforming Medicaid’s Addiction and Recovery Treatment Services Benefit,” December 2016. <https://slideplayer.com/slide/12406959/>; see also Katherine Neuhausen, MD, MPH, Virginia Medicaid Addiction and Recovery Treatment Services (ARTS) Program (2018). Presented at: Milbank Memorial Fund Reforming States Group; December 2018.
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Author's Note

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Appendix

Presentations from Three 2018 RSG Meetings

Portland

Paul Glassman, Professor of Dental Practice, Arthur A. Dugoni School of Dentistry, University of the Pacific, [Disruptive Innovation Presentation](#)

Bruce Goldberg, Senior Associate Director, Oregon Rural Practice-Based Research Network, Oregon Health Sciences University, [The Rural Health Landscape: Overview and Key Issues](#)

John T. Hammarlund, Regional Administrator, Centers for Medicare & Medicaid Services, [Federal Role Presentation](#)

Carrie Henning-Smith, Assistant Professor, Division of Health Policy and Management, University of Minnesota School of Public Health, [Changes in Access Presentation](#)

Chuck Hofmann, Clinical Consultant, Eastern Oregon Coordinated Care Organization, [Health Care Transformation: Lessons from Oregon's Frontier Presentation](#)

Davis G. Patterson, Deputy Director, WWAMI Rural Health Research Center, University of Washington; Susan M. Skillman, Deputy Director, Center for Health Workforce Studies, University of Washington, [The Rural Healthcare Workforce](#)

Charleston

Elizabeth Crouch, Assistant Professor, Department of Health Services Policy and Management, University of South Carolina, [Adverse Childhood Experience and Rural/Urban Disparities](#)

Bruce Goldberg, Senior Associate Medical Director, Oregon Rural Practice-Based Research Network, Oregon Health & Science University. See Portland above.

Lisa Hayes, Executive Director, Chatham County Safety Net Planning Council, [Integrated Services for At-Risk Youth: A Coordinated Approach](#)

Jeffery E. Heck, Professor and Associate Dean, UNC Health Sciences at MAHEC, [Addressing Rural Health Workforce Needs in North Carolina](#)

Cara V. James, Director, Office of Minority Health, Centers for Medicare and Medicaid Services, [Federal Role in Rural Health](#)

Katherine Neuhausen, Chief Medical Officer, Virginia Department of Medical Assistance Services, [Virginia Medicaid Addiction and Recovery Treatment Services \(ARTS\) Program](#)

Kayse M. Shrum, President, Center for Health Sciences, Oklahoma State University, [Strategies for Developing a Rural Physician Workforce](#)

Louisville

Ty Borders, Professor and Foundation for a Healthy Kentucky Endowed Chair in Rural Health Policy, Rural and Underserved Health Research Center, University of Kentucky, [Contemporary Issues in Rural Health Policy and Research](#)

Allen Brenzel, Medical Director, Kentucky Department for Behavioral Health, Developmental, and Intellectual Disabilities, [Kentucky's Opioid Use Disorder Crisis](#)

Mellie B. Bridewell, Chief Executive Officer, Arkansas Rural Health Partnership, UAMS Regional Programs, [Rural Hospital Transformation](#)

Bruce Goldberg, Senior Associate Medical Director, Oregon Rural Practice-Based Research Network, Oregon Health & Science University. See Portland above.

Robin A. Howell, Project Manager, UAMS Regional Programs, [Arkansas AHEC Program](#)

Mark T. Jansen, Chief Medical Officer, UAMS Regional Programs, [Rural Primary Care and Health Workforce](#)

Gilbert C. Liu, Chief Medical Officer, Cabinet for Health and Family Services, Kentucky Department for Medicaid Services, [Medicaid Strategies and Rural Health](#)

Tom Morris, Associate Administrator for Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services, [Federal Role in Rural Health](#)

Mark V. Williams, Chief Quality and Transformation Officer, UK HealthCare, and Jing Li, Assistant Professor, Department of Internal Medicine, University of Kentucky, "[Kentucky Consortium for Accountable Health Communities \(KC-AHC\)](#)"

The Author

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Most recently, Ms. Parento was associate professor of law and the Gordon D. Schaber Health Law Scholar at the University of the Pacific McGeorge School of Law. Previously, to McGeorge, Ms. Parento served as executive director of the Office of Health Policy for the Commonwealth of Kentucky, advising the administration of Governor Steven L. Beshear during the implementation of the Affordable Care Act. Earlier in her career she served as a federal judicial clerk and practiced litigation at Davis Polk & Wardwell in New York and California. She holds a JD and LLM from Georgetown University Law Center, a BBA from the University of Notre Dame, and is admitted to the state bars of California, New York, and Kentucky.