

# Design and Impact of a Novel Rural Hospital Alliance

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**Abstract:** Without rural hospitals, many patients may not have access to essential services, or even any health care. Rural hospitals provide a community hub for local access to primary care and emergency services, as well as a bridge to specialized care outside the community. The goal of this review was to demonstrate how the University of Arkansas for Medical Sciences supports and empowers rural hospitals through an alliance that provides cost savings through clinical networks, collaborative purchasing, and leveraged services; workforce recruitment and education; telemedicine and distance learning; community outreach; and access to best practices, resources, and tools for hospital transformation. Born out of grassroots efforts in the rural US South, this model alliance, the Arkansas Rural Health Partnership, with the University of Arkansas for Medical Sciences supporting as an academic medical center participant, offers resources and programs intended to help rural hospitals and health-care providers survive and even thrive in the challenging landscape that is forcing many other rural hospitals to close. The Arkansas Rural Health Partnership model is relevant for rural states that are seeking to develop or reenvision rural hospital alliances with academic medical centers to the benefit of the hospitals and the health of their communities and state.

**Key Words:** community partnerships, health disparities, hospitals, hospital finances, rural health

Rural hospitals are critical to the health of 60 million Americans living in rural communities.<sup>1</sup> Beyond providing care, these hospitals are economic engines for many of these communities as large employers and drivers of additional businesses and jobs. Lagging rural population growth has been a factor contributing to the closing of 136 rural hospitals across the United States

since 2010, however.<sup>2</sup> Furthermore, the 2016 iVantage “Rural Relevance – Vulnerability Value” study demonstrated that 673 additional facilities are vulnerable to closure, representing more than one-third of the rural hospitals in the United States.<sup>3</sup> The closure rate has steadily increased since Medicare sequestration began in 2011 to reduce payments to providers and write-offs of bad debt began to increasingly affect rural hospitals, resulting in a closure rate six times higher in 2015 compared with 2010.<sup>4</sup> In 2016, the South census region showed the largest percentage of rural hospitals predicted to be at high or mid-to-high risk of financial distress. A 2023 report from the Center for Healthcare Quality and Payment Reform showed that out of Arkansas’ 49 rural hospitals, 22 (45%), were at risk of closing, including 10 hospitals identified at “immediate risk” of closure because of the severity of their financial problems.<sup>5</sup> In 2019, just nine Arkansas hospitals were rated in the high-risk and 11 in the mid-high risk categories.<sup>6</sup> The coronavirus disease 2019 pandemic had a compounding effect, but irrespective of these factors, rural communities are disproportionately affected because their populations are older, poorer, and sicker than their urban counterparts, especially in southern states such as Arkansas.

Rural hospital closures in Arkansas are a growing concern, with two in the past 5 years. The economic impact is immediate; when a community loses its hospital, per capita income falls 4% and the unemployment rate rises by 1.6 percentage points.<sup>7</sup> In addition, many rural hospitals now own and operate primary care clinics. The economic and health impact of a hospital closure

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Accepted October 3, 2023.

0038-4348/0–2000/117-67

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DOI: 10.14423/SMJ.0000000000001648

## Key Points

- Rural hospitals and health systems in the United States are critical sources of medical care and wellness in the communities they serve while being important local economic engines.
- These hospitals are challenged by rising expenses, workforce shortages, and the difficulties of recruiting providers to rural areas. As a result, the number of rural hospital closures has been increasing.
- A grassroots effort by a group of hospitals in rural south Arkansas to protect their viability grew into a partnership, leveraging the resources of the state’s academic medical center to create a mechanism for attracting more funding, starting programs that promoted hospital viability and sustainability, and initiating a mechanism for recruiting and retaining healthcare professionals.

is amplified with the loss of primary care in the community, often along with radiology, laboratory, and outpatient services provided by the hospital. Along with facilities challenges, rural communities have more difficulty recruiting and retaining providers.<sup>8</sup> When a hospital closes, not only does the community lose access to emergency care but also many physicians and other community providers leave.

Economic pressures, delivery and payment system reforms, and the shift from a volume-based business model to a value-based model mean that the healthcare industry must consider redefining the “hospital” of the future. Across the country, rural hospitals are considering a variety of options, including the following:

- Merging with a local, regional, or national health system
- Affiliating or establishing a joint venture with another health system without ownership or asset change
- Partnering more closely with health plans for payment redesign
- Eliminating clinical services and maintaining only those that best serve the community
- Converting a full-service facility to one that focuses on an area of specific need, given the resources of the community and region’s capacity, such as emergency care, urgent care, rehabilitation care, or long-term care
- Diversifying to include a wider variety of healthcare services, including mental and behavioral health

## Approach

As the state’s only academic medical center, the mission of the University of Arkansas for Medical Sciences is to improve the health of the entire state. UAMS possesses the resources, knowledge, and capacity to help rural hospitals and communities sustain critical healthcare services. In 2008, a grassroots effort began in southern Arkansas to explore ways in which UAMS, with its main campus in the central Arkansas city of Little Rock, could better support the health and well-being in the region. The goal was to improve access to rural health services and provide a framework for connecting communities and their hospitals with local, state, and federal resources. Long-term solutions for the stability of rural health statewide also were pursued, while seeking to fill a void caused by a lack of rural health/rural hospital associations in the state.

This effort led to creation of the Arkansas Rural Health Partnership (ARHP), a collaborative network of five southern Arkansas hospitals. Since 2008, ARHP has grown to include 16 independently owned southern Arkansas hospitals and two federally qualified health systems serving 22 counties in south Arkansas, along with three Arkansas medical schools/academic partners located around the state. ARHP has obtained more than \$47 million in grant funding for healthcare provider education and training opportunities, community outreach programs, patient and community assistance services, and mental and behavioral health services. The funding also has supported grants to communities throughout the Arkansas Delta for rural health projects. ARHP administrative staff are contracted to the partnership through UAMS and focus on leveraging the capacity of UAMS

to assist member hospitals in the region with needed resources, services, and cost-savings strategies.

The ARHP mission is to create and implement sustainable community solutions that support and improve healthcare infrastructure and strengthen healthcare delivery across rural Arkansas. The partnership is a public nonprofit 501(c)(3) organization governed by a 14-member board of directors. Initially funded by institutional seed support from UAMS, the continued growth of ARHP has been fueled by grants from and contracts with state and national government agencies and organizations, including the Health Resources & Services Administration (HRSA), the US Department of Labor, the US Department of Agriculture, the Blue and You Foundation for a Healthier Arkansas, the Arkansas Economic Development Commission, Arkansas Children’s Hospital, the state Department of Health, and the state Department of Human Services. The ARHP administrative staff are employees of the UAMS Office of Strategy Management. These positions include the president and founder of ARHP, the chief executive officer, the chief financial officer (CFO), the vice president for programs, the executive officer of projects, and the executive officer of logistics, along with support staff.

## ARHP Model Components and Impact

### Cost Savings through Clinical Networks, Collaborative Purchasing, and Leveraged Services

Because a single rural hospital closure could cause a devastating economic ripple effect, ARHP developed programs focused on hospital viability and sustainability. These programs and services include consultations, collaborations on shared services to aid hospital finances, and strategies for increasing revenue and efficiencies. On behalf of member hospitals, ARHP worked with vendors and insurance companies on contract negotiation and vendor facilitation. This led to insurance rate adjustments, discounted pricing on medical equipment, guidance on using the 340B drug-pricing program, and revenue cycle management. Collaborations included group purchasing of compliance, medical utilization/medical record, and other types of software and information technology hardware. The hospitals also shared services in areas including public relations and marketing.

ARHP consulted with hospitals on how to conduct community health needs assessments, grant-writing assistance, marketing/public relations techniques, and strategic planning. Working with members designated as critical access hospitals, ARHP launched a swing bed program in October 2020 to increase revenue and patient volume. The program demonstrated success by allowing participating hospitals to maximize inpatient bed use through bed conversions for acute care or skilled nursing care. This enabled patients to recover from major procedures closer to their rural homes.<sup>9</sup> Other consultations assisted hospitals with staff education, billing education, and marketing assistance. ARHP facilitated and performed internal service line reviews for hospitals seeking

opportunities to improve service and efficiency. In addition, ARHP provided financial assistance on feasibility studies for hospitals wanting to join the partnership's clinically integrated network expansion.

ARHP developed a clinically integrated network (CIN) in 2019 to improve care and the patient experience while decreasing costs. ARHP patient navigators assisted patients following a hospital stay to ensure proper treatment, address chronic conditions, and reduce readmissions. In 2019, the ARHP CIN received approximately \$600,000 for shared savings. After expenses, \$300,000 was distributed among participating providers. The CIN received \$1,885,000 for shared savings, after expenses, in 2020 and managed to break even in pandemic-affected 2021.

### Workforce Recruitment and Education

Efforts to develop and retain a skilled healthcare workforce is another area of cooperation between the ARHP and participant hospitals. As the state's only health sciences university, UAMS contributed greatly through its Kindergarten–grade 12 pipeline programs focused on creating interest in health careers for elementary and secondary students.

UAMS and ARHP, in partnership with the Community Health Centers of Arkansas, launched a mobile workforce unit and Web site for high school students in rural Arkansas. The mobile unit travels to high schools, pipeline program locations, and community events with interactive video boards that highlight Arkansas rural healthcare workers in all healthcare careers and sectors. The Web site connects students with information on available academic programs in those professions and the average salary, and offers contact with college counselors who are available to assist students. During the past year, the mobile unit interacted with 1662 students.

In partnership with the UAMS College of Medicine, the ARHP offered 64 paid summer internships in 2021 and 2022 to high school seniors and college students preparing to enter the healthcare field. These students worked in ARHP hospitals and within the ARHP organization, receiving training that included becoming community health workers and completing a mental health first aid course.

ARHP leveraged a network of 12 nursing schools in Arkansas, 16 rural hospitals, and two federally qualified health centers to introduce the region's first nursing clinical collaborative. This project seeks to increase the number of nurses recruited, trained, and retained in the region. The collaborative used a centralized clinical rotation platform to assist nursing schools with increasing rotation opportunities for students in rural Arkansas. ARHP also worked with the UAMS College of Medicine and the Arkansas College of Osteopathic Medicine to assist in the scheduling of medical student clinical rotations with board-certified physicians across southern Arkansas. Each college designated coordinators who live in the service area to work closely with students throughout their rotation. In 2020–2021, ARHP providers hosted 140 medical student rotations through these initiatives.<sup>10</sup>

It is well established that a new physician is more likely to stay and start a career in the location where they complete their residency training. As such, ARHP, UAMS, and other partners are seeking to increase the number of federally funded medical residency slots in rural Arkansas. Development is under way for a rural residency training program in southern Arkansas, allowing resident physicians to spend their entire residency experience in a rural setting. ARHP partners in this effort include Ashley County Medical Center, Jefferson Regional Medical Center, and Mainline Health System.

Increased staff education opportunities are another way to strengthen the healthcare workforce. The ARHP Health Business and Operations Initiative is working with hospitals across 23 counties to increase staff members' skills through the development of accessible degree programs. Supporting continuing education (CE) for employees directly affects hospital financial viability and sustainability. Proposed program tracks include medical coding and billing, health information management, clinical documentation, and healthcare administration.

In a region known for high poverty, unemployment, and outward migration, dozens of job openings sit vacant at southern Arkansas healthcare organizations. The Connect-to-Tech AR program will support southern Arkansas residents to move successfully from training and into career placement in the high-demand information technology field. Under the program, 70 students will receive grants to support education and training opportunities such as apprenticeships, one-to-one support, community health worker training, and career placement with a local healthcare provider. Degree and certification scholarships offered include medical coding and billing, health information management, clinical documentation, and healthcare administration (associate's, bachelor's, and master's degrees) through the online University of Arkansas Grantham as well as health information technology and behavioral health technology (technical degree or associate's degree) through Phillips Community College of the University of Arkansas and the University of Arkansas at Monticello.

To deal with workforce challenges, including the rising cost of staffing postpandemic, ARHP teamed with the Arkansas State Office of Rural Health to develop effective recruitment and retention strategies for hospitals. ARHP and the Office of Rural Health identified and assisted eligible hospital members in securing National Health Service Corps certification through HRSA. Certification allows participation in a student loan repayment program for health professionals, a valuable staff recruitment perk. An online job board was created for ARHP hospital members to increase the visibility of job listings.

### Telemedicine and Distance Learning

ARHP healthcare provider training and education improves the quality of care by offering easy access to CE and professional development for rural health professionals that will improve patient satisfaction and provider cost savings. Through its online

Learn OnDemand platform, the UAMS Institute for Digital Health & Innovation supplies CE and continuing medical education opportunities to 16 healthcare organizations and 4400 healthcare providers and workers across the Arkansas Delta region, with an estimated cost savings to those participants of \$100,000/year.

The ARHP mobile simulation van travels across southern Arkansas to deliver on-site simulation training/certification. This hands-on simulation education allows health providers to practice lifesaving techniques in real time with instructors from the UAMS Centers for Simulation Education. Training areas include obstetrics, pediatric and adult trauma, stroke, cardiac arrest, and sepsis. Other education needs are identified by participating hospitals on an ongoing basis.

Collaborating with the UAMS Psychiatric Research Institute, ARHP offers primary care clinic support for mental health education and medication management. An on-call pharmacist is available during business hours on weekdays to answer medication-related questions. There are on-demand presentations available to rural providers on mental health topics, including identification and treatment of common mental health disorders. ARHP is working with the Psychiatric Research Institute to provide education and support to hospital emergency departments and for the promotion of ARConnect, a 24-hour hotline for mental and behavioral health crises.

## Community Outreach

Community initiatives and population health initiatives expand the scope of care available to rural populations. Patient navigation programs help rural residents find and access the services they need. For ARHP, this encompasses a community health resource hub where counselors provide free patient navigation services via a toll-free hotline staffed 8 AM to 5 PM, Monday through Friday. With HRSA, the Arkansas Department of Health, and UAMS funding, ARHP has seven community health workers who provide information and support on health insurance enrollment, housing assistance, food assistance, prescription assistance, vaccination education, and patient monitoring device support. This also includes assistance with enrollment in Medicare or Arkansas's Medicare expansion program, AR Works (with more than 1300 residents served to date), or enrollment in a prescription assistance program that has obtained 4272 prescriptions for uninsured or underinsured participants at a cost savings of \$3.8 million.

The Good Food Rx program, an 18-month pilot project started in spring 2022 at two clinics in the region, is attacking food insecurity. Through the project, each site identifies approximately 60 patients who meet eligibility criteria (chronic disease and food insecurity). Participants receive access to healthy food (for up to a family of four), nutritional and health coaching, cooking classes, and health improvement tracking and support. Participating patients, their vital signs monitored by remote devices, are referred to the program by clinic chronic care management staff

and supported by community health workers. Data from the monitoring devices are provided directly to the clinic's chronic care management staff. UAMS College of Nursing students provide health education to patients via telehealth and menus are prepared with assistance from the UAMS Institute on Aging. ARHP will continue to work with payers and stakeholders to demonstrate the impact of healthy eating as medicine for better health outcomes.

Mental and behavioral health services are a priority and challenge in the state. Creation in 2018 of the South Arkansas Behavioral Health Task Force, supported by an ARHP opioid grant, offered a platform for increasing mental health and behavioral health resources in the region. The 36-member group developed a behavioral health strategic plan, implemented a pilot drug court program, and have continued to work on increasing inpatient behavioral health treatment facilities. In 2019, ARHP produced an education and awareness video highlighting Delta residents, providers, and communities facing the opioid crisis. The video offered guidance on substance use screening and linkage to care, including counseling, medication-assisted treatment, and peer recovery. In addition, ARHP developed a mental health first aid course that has trained more than 350 adults and teenagers. Course participants have included educators, law enforcement officers, first responders, 4-H leaders, pharmacy students and pharmacists, Boys & Girls Clubs of America leaders, church leaders, mental health advocates, women's shelter staff, substance use treatment facility staff, college administration and staff, parents, and healthcare workers.

## Access to Best Practices, Resources, and Tools for Hospital Transformation

ARHP leadership comprises experienced former rural hospital administrators and subject matter experts, offering members an additional source of guidance and support. The ARHP founder has 15 years of experience in rural health, and can help with strategic planning, methods for obtaining funding, and networking to connect hospitals with national experts. The ARHP CFO, a former hospital CFO, has counseled hospital CFOs on finance issues and provided interim CFO services to three member hospitals.

Monthly meetings of ARHP staff and member hospital leadership have led to new services and programs. ARHP facilitates 15 different professional roundtables quarterly with member organization directors, including CFOs; chief nursing officers; and leaders in procurement, revenue cycle, plant operations (maintenance), social services, laboratory, information technology, radiology, emergency department, compliance and quality improvement, medical records, human resources, and pharmacy. These roundtables foster information sharing, peer support, education, and cost savings among participants. ARHP roundtables proved invaluable during the coronavirus disease 2019 pandemic, providing an avenue for UAMS and ARHP to provide critical education and support.

## Conclusions

Rural communities in states such as Arkansas are crucial to the entire state's prosperity. UAMS recognized the vulnerability of access to high-quality health care in these rural communities. The Arkansas Rural Health Partnership, with critical support from UAMS, is community based and driven by the rural hospitals, a key component to the success of the organization.

The ARHP model is efficient, sustainable, and more effective than other models because of a lack of overstep by major health systems. Major health systems, most likely located within urban areas, cannot understand the challenges unique to rural hospitals and the specific healthcare needs of these communities. With its statewide perspective, however, UAMS understands that these rural hospitals and communities must be the driving force when addressing local needs. This principle, combined with unwavering support and partnership, creates a space for rural hospitals and communities to thrive.

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