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A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies

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Executive Summary

The number of rural hospital closures has increased significantly in recent years. This trend is expected to continue, raising questions about the impact the closures will have on rural communities' access to health care services. To investigate the factors that contribute to rural hospital closures and the impact those closures have on access to health care in rural communities, the Kaiser Commission on Medicaid and the Uninsured and the Urban Institute conducted case studies of three hospital closures that took place in 2015: Mercy Hospital in Independence, Kansas; Parkway Regional Hospital in Fulton, Kentucky; and Marlboro Park Hospital in Bennettsville, South Carolina. Two of these hospitals were in states that did not adopt the Medicaid coverage expansion under the Affordable Care Act (ACA) (Kansas and South Carolina), while one of the hospitals was located in a Medicaid expansion state (Kentucky). Key findings include the following:

A number of factors contributed to the rural hospital closures, including aging, poor, and shrinking populations, high uninsured rates and a payer mix dominated by Medicare and Medicaid, economic challenges in the community, aging facilities, outdated payment and delivery system models, and business decisions by corporate owners/operators.

The hospital closures reduced local residents' access to care, especially emergency care. While inpatient hospitals in these and other communities may not be sustainable, without new models of health care delivery in place, hospital closures can lead to gaps in access. The closures led to an outmigration of health care professionals and worsened pre-existing challenges around access to specialty care. Some communities were able to adapt to fill in gaps in access to primary care. Elderly and low-income individuals were more likely than others to face transportation challenges following the closures, and were thus more likely to delay or forgo needed care.

New care models may be better able to address the health care needs of rural communities. Some rural hospitals may be able to adapt and new models may be created to address changing demographics and delivery systems. Such reconfiguration may require federal support and assistance as well as regional planning efforts. A state's decision about the Medicaid expansion has an important impact on hospital revenues and access to care, but the sustainability of rural hospitals depends on a broader set of factors.

Introduction and Methods

The number of rural hospital closures has increased significantly in recent years. This trend is expected to continue, raising questions about the impact the closures will have on access to health care services in rural communities.[1] To investigate the factors that contribute to rural hospital closures and the impact of those closures on access to health care in rural communities, the Kaiser Commission on Medicaid and the Uninsured and the Urban Institute conducted case studies of three hospital closures that took place in 2015: Mercy Hospital in Independence, Kansas; Parkway Regional Hospital in Fulton, Kentucky; and Marlboro Park Hospital in Bennettsville, South Carolina.

In selecting hospital closures for study, we limited ourselves to hospitals that: 1) had closed recently, 2) had not converted to another type of facility (e.g., an urgent care facility) following the closure; and 3) had been reimbursed by Medicare under the prospective payment system (PPS) through predetermined fixed reimbursement rates, not on a cost basis. We applied these criteria to enhance our understanding of the immediate impacts of complete rural hospital closures on community access to care, and to eliminate the effect of Medicare reimbursement type as a confounding factor in our analysis. Also, because we wished to examine the role of state decisions about whether or not to expand Medicaid to nonelderly adults under 138% of the federal poverty level under the Affordable Care Act (ACA), we selected two hospital closures that took place in states that did not expand Medicaid (Kansas and South Carolina) and one closure that took place in a Medicaid expansion state (Kentucky).[2]

For each case study, we conducted 6-8 interviews with community stakeholders, including nearby hospitals, community health centers, provider associations, health plans, public officials, and local business leaders. We also reviewed publicly-available materials related to the closures and, where available, state and regional rural health analyses and planning initiatives, and interviewed state and national rural health experts to gain perspective on these closures in the context of broader trends.

The case studies addressed the following research questions:

1. What factors contributed to the hospital closure?
2. How has the closure affected access to care?
3. What were the broader community effects of the closure? and
4. Did the state Medicaid expansion decision make a difference in the closure of the hospital or on residents' ability to access care after the closure?

This brief addresses each of these questions and concludes by addressing the implications of a growing number of rural hospital closures for rural communities and rural health.

Background

In 1946, Congress authorized the Hill-Burton program, which provided federal funding for construction of public and nonprofit hospitals in rural communities. The program led to a significant increase in the number of rural hospitals in the country, particularly in the South. In 1983, responding to significant increases in Medicare hospital spending, Congress mandated use of fixed predetermined reimbursement rates for hospitals through the PPS. Following the adoption of PPS, many rural hospitals closed in the 1980's and 1990's.[3] In response to growing concerns over rural health care access, CMS implemented the Medicare Rural Hospital Flexibility Program of 1997 (Flex Program), which authorized payment of inpatient and outpatient services on a "reasonable cost basis" for hospitals designated as Critical Access Hospitals (CAHs).[4] To be classified a CAH, a hospital must have no more than 25 inpatient beds and must be at least 15 miles by secondary road and 35 miles by primary road from the nearest hospital; until 2006, however, states could waive the distance requirement by designating a hospital as a "necessary provider."[5] The closure trend slowed for several years following adoption of the Flex Program, but picked up again during the Great Recession of 2008-09.

There are nearly 5,000 short-term, acute care hospitals in the United States. Half of these hospitals are in urban areas and half are in rural areas. About 4 in 10 rural hospitals are located in the South.[6] More than half of rural hospitals are CAHs (53.5%); smaller shares of rural hospitals are designated as Sole Community Hospitals (SCHs) (13%), Medicare Dependent Hospitals (MDHs)(8%), and Rural Referral Centers (RRCs) (11%).[7] All of these designations provide enhanced or supplemental reimbursement under Medicare, using different formulas.[8] Rural hospitals that do not qualify for these Medicare programs are reimbursed as standard Medicare PPS Hospitals.

In 2012-2013, rural hospitals had an average of 50 beds and a median of 25 beds. They had an average daily census of 7 patients and 321 employees, and they were 10 years old on average. Compared to urban hospitals, rural hospitals are more likely to be in counties with an elderly and poor population.[9] According to The North Carolina Rural Health Research Program (NC RHRP) at the Cecil G. Sheps Center for Health Services Research, which tracks rural hospital closures, there were 72 rural hospital closures between January 2010 and April 2016, compared to 42 closures between 2005 and 2009, and since the 2008-2009 recession, the annual number of closures has increased each year.[10] More than half of all rural hospital closures since 2010 were in the South and few Southern states have expanded Medicaid under the ACA.

This report focuses on three hospital closures that took place in 2015: Mercy Hospital in Independence, Kansas; Parkway Regional Hospital in Fulton, Kentucky; and Marlboro Park Hospital in Bennettsville, South Carolina. All three hospitals were privately owned. Bed size ranged from 45 to 102, and two of the hospitals had fewer than 1,000 admissions per year. Occupancy rates were also low. The nearest hospital post-closure was 12 to 15 miles away; in one community, the nearest hospital was across the state line. Table 1 shows selected basic characteristics of the three hospital closures we studied. More detailed information about the hospitals can be found in the Appendix.

Table 1: Selected characteristics of the three study hospitals			
	Parkway Regional Hospital, Fulton KY[11]	Mercy Hospital, Independence, KS[12]	Marlboro Park Hospital, Bennettsville, SC[13]
Date of Closure	March 2015	October 2015	April 2015
Owner / Ownership Status	Community Health Systems (CHS) / For-Profit	Mercy Health / Not-For-Profit	A subsidiary of Community Health Systems operated the hospital; Medical Properties Trust, a real estate trust owned the facility / For-Profit
Number of Beds	70	45	102
Occupancy	Unknown	25%	13.9% as of 2013
Employees	170-190	243 (11 physicians as of 2013)	100
Admissions	700 in 2014	995/year	Unknown
Nearest Hospital/ Distance away	Tennova Healthcare-Volunteer Martin, in Martin, TN (owned by Community Health Systems) Approximately 12 miles Jackson Purchase Medical Center (Life Point Health), in Mayfield, KY Approximately 22 miles	Wilson Medical Center, in Neodesha, KS (owned by Duke LifePoint) Approximately 14 miles Coffeyville Regional Medical Center, in Coffeyville, KS (city-owned hospital) Approximately 20 miles	McLeod Health Cheraw, in Cheraw, SC (owned by McLeod Health) Approximately 15 miles Scotland Memorial Hospital, in Laurinberg, NC (community- owned and -controlled, not-for-profit) Approximately 17 miles
Medicaid Expansion State	Yes	No	No

Notes: Data regarding the number of beds, occupancy rate, number of employees, and admission rates were collected from local news outlets that reported on the respective closures, not from formal reports produced by the hospitals. Many of the media reports did not cite the original source for the data, or data were not available for all three communities. Information regarding the location of nearby hospitals is based on interviews with stakeholders and was verified with data from Google Maps.

Key Findings

What factors contribute to rural hospital closures?

Rural areas face challenging demographic, social, and economic pressures. Respondents in all three communities pointed to similar economic and demographic trends that contributed to the closures. They cited high poverty and uninsured rates in rural communities, high rates of Medicare and Medicaid coverage, and declining populations. In each community, poverty rates were higher than state and national averages and median incomes were lower, and the population was shrinking. Two of the counties where the study hospitals were located (Fulton County, Kentucky and Montgomery County, Kansas) had higher rates of elderly residents, and two counties (Fulton and Marlboro County, South Carolina) had higher rates of Black residents relative to the rates in the state overall and the U.S. (See Appendix Table 1)

Stakeholders also noted the loss of major employers, the "evaporation" of local industry (i.e., mining, textiles, manufacturing and agriculture), and the subsequent rise in unemployment and loss of employer health coverage as factors contributing to the closures. The communities' economic difficulties were exacerbated by the recent recession. With the disappearance of jobs, many young adults have left town in search of other opportunities, leading to further population decline and to a graying population with greater health care needs.

Privately insured patients often went elsewhere for care, hurting the local hospital's revenue base and contributing to perceived low quality of the local hospital. In all three case studies, respondents reported that, prior to the hospital closure, community residents with private insurance or other resources typically travelled to bigger, newer hospital systems outside the community, weakening the hospital's payer mix and also reinforcing local perceptions – often based on anecdotal accounts from friends and family members — that the local hospital was of low or poor quality. The local community hospital may have been older, and due to financial struggles prior to closure, may have invested less in infrastructure improvements compared to facilities in nearby urban areas, contributing to its perceived poor quality. The fact that, even while the local hospital was operating, residents had to go elsewhere for many types of specialty care, including labor and delivery services and surgery in some cases, reinforced views that the hospital was inferior. Without privately insured patients, study hospitals were left with high rates of uninsured patients and patients with public insurance (Medicare and Medicaid), which pay lower reimbursement rates than commercial insurance that are often below costs. All these factors resulted in negative margins. With insufficient revenues to maintain their aging facilities, the hospitals declined further, adding to negative perceptions of their quality, leading in turn to continuing deterioration of their finances.

"If you have health insurance and a car, you'll drive [out of the community] for care because a perception exists that bigger, brighter facilities offer better quality services." – South Carolina Stakeholder

"Would-be patients from Independence chose to get their care elsewhere, which contributed to the death spiral for Mercy Hospital." – Kansas Stakeholder

Rural hospitals built in neighboring communities under Hill-Burton now compete for limited patients, federal dollars, and health care resources. All three case study hospitals were located in close proximity to larger hospitals in nearby communities. One respondent commented: "If you were going to plan placement of hospitals now, you would implement a very different design." Clusters of hospitals within a small geographic area are not only a barrier to CAH designation, but also result in hospitals competing for limited federal dollars, resources, providers, and patients. Along the same lines, some respondents observed that rivalries between neighboring communities, counties, and hospitals have bred competition instead of collaboration, sometimes leading to redundant health care and other services and costly inefficiencies.

Corporate business decisions, rather than assessments of local needs or planning, drove the hospital closures. In all three sites, the large health systems that owned and managed the hospitals made the decision to close them based not on community needs, but on corporate business considerations that favored other hospitals in their system over the ones they closed. Typically, there was little or no local process of consultation or public input. In both Fulton, Kentucky and Bennettsville, South Carolina, local stakeholders reported that the hospital's owner/operator invested its resources preferentially in a neighboring community hospital that it also owned, at the expense of the closed facility. Mercy Health System invested in rebuilding its hospital in Joplin, Missouri – 75 miles from Independence – after it was destroyed by a tornado, and reportedly "lost its focus" on the smaller Mercy Hospital in Independence. Although the hospital worked with an advisory group that included community stakeholders to address the closure of Mercy Hospital and potential alternative uses of the facility, the advisory group had limited influence over the ultimate decision by

Mercy Health System to close it. The group was also reportedly required to maintain confidentiality; as a result, the public felt uninformed and excluded from the process. In Kentucky, public officials from Fulton County wanted to take over the hospital and find other providers who might continue services in the area, but CHS rejected this offer, likely, to preempt competition for patients in the county. Further, CHS placed restrictions on the use of the hospital – namely, it permitted no acute care facility to operate there, an action that one respondent said "strangled" the community's access to local health care services.

Several respondents cited the "shift from mission to margin" as a major factor in the hospital closures and in the lack of consideration or planning for the impact on the community. A number observed that local residents and public officials often lack the expertise or experience needed to negotiate with large corporate health systems and have limited understanding of the transformations taking place in health care delivery and payment systems widely.

Changes in Medicare and Medicaid payment over the past few years have had an adverse effect on rural hospitals. Decreases in Medicare reimbursement rates have exacerbated financial pressure on already struggling rural hospitals, especially those with an older patient population. In recent years, Medicare cuts arising from budget sequestration and other federal policies[14] have led to lower reimbursement rates overall, while specific provisions of the ACA, such as the Readmissions Reduction Program, under which CMS reduces PPS payments to inpatient hospitals with high readmission rates, have also resulted in lower Medicare reimbursements for many hospitals.[15] CAHs are often in a stronger financial position than rural PPS hospitals because they receive cost-based Medicare reimbursement, but our study hospitals either did not meet the criteria to qualify as a CAH or had declined to explore conversion options. Since 2006, it also has been more difficult to obtain a CAH designation because states can no longer waive the CAH distance requirements by identifying a hospital as a "necessary provider."

Rural hospitals may also be adversely affected by budget-driven state policy actions, such as Medicaid rate freezes or other reductions, and by transitions to Medicaid managed care. For example, a stakeholder in Fulton, Kentucky reported that some Medicaid managed care plans were working to discourage inappropriate emergency department (ED) use by reimbursing the hospital only a small triage fee, rather than the full fee, for visits later determined to be non-emergent. Because the ED is a major access point for primary care in rural communities, the majority of patients in the ED present with more common ailments that do not require emergency care. Nevertheless, ED providers must determine if patients have a life-threatening condition and may deliver a variety of services to patients who turn out to need urgent or primary care; due to the triage fee policy, they will not be reimbursed for a significant portion of their costs for such patients.[16] Because rural hospitals are generally more reliant on public payers, changes to Medicare and Medicaid reimbursement can have a more significant effect on these hospitals. An analysis of profitability of urban and rural hospitals by Medicare payment classification shows that rural PPS hospitals with 26-50 beds and Medicare Dependent Hospitals had the lowest profitability.[17]

Rural hospitals have not adapted to new models of payment and service delivery that emphasize preventive and primary care provided in outpatient settings. Increasingly, Medicare, Medicaid, and large private payers are implementing payment and delivery system reforms that move "from volume to value" and shift investment away from inpatient care and toward preventive and primary care and

greater access to care in outpatient settings. As one South Carolina stakeholder put it, "We used to pay hospitals to keep patients in, now we pay to keep them out." Consistently, we heard from respondents that rural hospitals have been slow to adapt to these reforms and have instead maintained their hospital-centric focus oriented toward generating inpatient admissions.

South Carolina's Healthy Outcomes Plan (HOP) is an initiative to support hospitals proposing service delivery models to coordinate care for chronically ill, uninsured, high utilizers of emergency department (ED) services. Approximately $40 million was reportedly spent statewide, with some funding for Marlboro Park Hospital. However, it was not enough to save the hospital; one respondent described the impact of the program on rural hospitals as "like putting a finger in a dike."

What is the impact of rural hospital closures on access to care?

The hospital closures reduced access to emergency care. In all three case studies, stakeholders emphasized that a major impact of the hospital closure was the loss of access to emergency care in the community. They pointed out that the hospitals' EDs had also served as a safety-net for people with acute mental health or addiction treatment needs[18] by stabilizing them and arranging for their transport when needed; when the hospital closed, local capacity to address these needs disappeared. Respondents cited the immediate and ongoing need to ensure emergency transportation to neighboring hospitals following the closure.

Some public investment in ambulance services may be needed in the wake of a rural hospital closure. After Mercy Hospital closed, for example, the city of Independence purchased two new ambulances and hired an additional EMS crew. Fulton, Kentucky officials responded to Parkway Regional's closure by funding the ambulance service with city and county dollars. However, respondents also noted that there can be challenges transporting patients back home after they are taken by ambulance to another community for care and this problem can be significant for low-income patients who do not have the means or support system in place to ensure their travel home.

Many physicians and other providers left the community immediately following the rural hospital closure. Regardless of hospital closures, rural communities characteristically face difficulty recruiting and retaining providers, resulting in systemic workforce shortages. The large hospital systems in the three study communities typically employed the local physicians, so when the hospital closed, many physicians relocated to another hospital in the owner's system or left the area. As a result, the communities were often left without key providers. In Independence, Kansas, providers began to leave Mercy Hospital even before it closed when talk of closure "was in the air," hastening the deterioration of the already struggling hospital. Some also said that Mercy Health System made competitive offers to physicians formerly employed by the hospital to induce them to transfer to another hospital in the Mercy system, farther away from Independence. Respondents reported that physicians formerly employed by the hospital in Bennettsville, South Carolina were barred from entering into agreements with other hospitals in the area and were relocated to CHS' Martin, Tennessee facility following the closure. In all three study sites, respondents cited the outmigration of providers in the wake of the hospital closure as a significant problem, especially given the challenges of recruiting providers to rural areas.

Because hospital emergency departments are a major source of primary care in rural areas, closures can have a significant impact on access to primary care, but some communities can fill

these gaps. Respondents in all three study sites reported that most visits to the hospital ED were for urgent care or primary care because access to such care in community-based outpatient settings was limited; "true emergencies" made up only a small percentage of all ED visits. One South Carolina respondent referred to a "culture of overutilization" of rural EDs. Stakeholders from Kansas estimated that as many as 90% of ED visits to Mercy Hospital were for non-emergencies.

In two of the communities we studied (Independence, Kansas and Bennettsville, South Carolina), some stakeholders described a relatively smooth transition to community-based primary care following the closure. In both cases, federally qualified health centers (FQHCs) in or near the community were able to expand their provision of primary care. In Independence, office-based primary care is available in the community, while in Bennettsville, more people have to travel to obtain primary care since the closure. Some respondents commented that, following the closure of the hospital in Independence, nearby hospital systems opened competing primary care clinics in the community, leading to a fragmented health system. However, others noted that increased provider and health system interest in serving their community, often as a means to expand their market share, improved access to primary care.

At the time of our interviews, access to primary care remained more challenging in Fulton, Kentucky, where there was no nearby FQHC. Respondents reported that access to care is affected by ongoing competition between the two main health systems in the area, CHS and LifePoint. The border between Kentucky and Tennessee runs through the Fulton community and, following the closure, CHS moved some providers and staff to its Martin, Tennessee facility and relocated its outpatient services from Fulton to a new clinic across the state border in South Fulton, Tennessee, where at least some Medicaid patients are not eligible to receive care. LifePoint is trying to establish clinics in Fulton County but CHS placed a restriction on the Parkway Regional facility to prevent it from being used as a primary care hospital or operating in an acute capacity.

The hospital closures also exacerbated gaps in access to specialty care. Rural hospitals in small communities cannot afford to offer the range of specialty services available in hospitals in larger communities, and rural residents routinely travel for certain types of specialty care, particularly for complex medical needs. But respondents reported that pre-existing difficulties in accessing specialty care increased following the closures. In many cases, specialists who had visited the local hospital on a regular basis to provide outpatient visits were no longer available to see patients locally after the hospital closed. With the closure, local residents also lost their access point for referrals to subspecialists. Several respondents commented that many people now forgo lab work and diagnostic imaging rather than travel to another community for the services. Problems with access to obstetric care, diagnostic testing, laboratory tests, and mental health care – services that had often been provided at the hospital before its closure but were no longer available locally – were a consistent theme. Unmet need for mental health and substance use disorder treatment, a significant issue before the hospital closures, has also intensified. Respondents across all three communities reported that longer travel time and distance exacerbate tendencies to delay or forgo care, particularly among elderly and low-income individuals.

What are the other effects of rural hospital closures on communities?

Hospital closures result in job losses and have other ripple effects in the surrounding community. A hospital closure can eliminate a hundred or more jobs immediately, a significant loss in communities with small populations. In some cases, the local hospital is one of the largest employers in the community. Some health care providers and other hospital employees move away following a closure; others remain but commute elsewhere for work. The loss of jobs and residents has a negative impact on the tax base in the community, shrinking available resources for schools and other public services, potentially impacting jobs in the public sector as well.

Hospital closures can make it more challenging for rural communities to attract employers. The loss of a hospital makes it more difficult for rural communities to recruit new industries and employers to the area. Some businesses require, as a condition of locating in an area, that their employees have access to a hospital ED in close proximity. Thus, a hospital closure can compound the very same economic strains that contributed to the closure in the first place. Some respondents noted that the impact of the hospital closure on the local economy was more significant than its impact on access to care. The challenge, according to one expert, raises issues beyond health policy: "How can we make sure rural communities can be left financially viable without a hospital?"

How do state Medicaid expansion decisions affect rural hospitals and access to care?

Medicaid expansion increases access to care in rural communities.[19] In Fulton, many uninsured adults gained coverage when Kentucky implemented the Medicaid expansion, giving them access to providers and services they were previously unable to afford. Respondents reported that Medicaid coverage of non-emergency medical transportation is very important in rural communities and even more so in the event of a local hospital closure, because residents more often have to travel to get care. Respondents in Kansas and South Carolina reported that the tendency of uninsured residents in rural communities to forgo preventive care and to delay treatment until their health conditions worsen can be exacerbated by the loss of a local hospital, and they said that a decision by their state to expand Medicaid would have increased access to needed care for the low-income uninsured population.

However, Medicaid expansion alone cannot overcome the financial challenges facing rural hospitals. Respondents in all three case studies expressed the opinion that although Medicaid expansion can bring increased revenues into struggling hospitals, it is only one of many factors that impact hospitals' financial sustainability. Kentucky respondents pointed out that the state's Medicaid expansion may have delayed Parkway Regional Hospital's closure, but that since the Medicaid expansion, Parkway Regional and three other rural hospitals in the state have closed. In Kansas, respondents likewise cited the lack of Medicaid expansion as one of many factors that contributed to Mercy Hospital's closure – one person described the hospital's demise as "death by a thousand cuts."[20] The theme that emerged in all three case studies is that what caused the hospital closure was the confluence of difficult rural demographic and economic trends, the failure of the hospital or health system to adapt to changing health care payment and delivery systems, aging facilities and challenging payer mixes. Stakeholders across the board said they believed that increased financing through

Medicaid expansion could help other at-risk rural hospitals, but not alone overcome these fundamental challenges.

A recent study found that while rural hospitals were showing declines in charity care as a result of the ACA, the net financial impact was less clear because of bad debt from high-deductible plans as well as "shortfalls" between payments and costs of care in Medicare and Medicaid.[21] The study also noted concern about upcoming cuts to Medicaid Disproportionate Share payments.

What do increasing hospital closures imply for the future of rural health care delivery and access?

Rural communities could benefit from new health care delivery models that can provide access to care. Several stakeholders emphasized that new health care delivery models are necessary to address rural health needs. They discussed various strategies to meet the need for more primary and preventive care, effective referral systems for specialty care, and alternative access to emergency services when a hospital closes. They also emphasized the need for reforms to permit increased use of telehealth services. They suggested that an appropriate model would lie somewhere between a CAH and an FQHC; such models, they noted, would require changes in federal Medicare reimbursement policy and/or changes in health care facility state licensure rules. Several leading rural models are summarized in the table below. In addition, the federal government has funded several rural health demonstration projects to test out new models of care.[22] (See box about Rural Health Transformation Models)

More investment in transportation could mitigate the impact of rural hospital closures. Road systems were good in areas surrounding our study communities and, in all three sites, there was at least one neighboring hospital within 15 miles. But even in these communities, respondents stressed the need for more reliable transportation systems to facilitate access to health care services. Many rural communities do not have public transportation systems, so patients must have a car or someone willing to share their car or drive them, and money for gas to travel to seek medical care. Travel is an issue particularly for elderly people, who often cannot drive. One respondent emphasized that rural health policy needs to address the social determinants of health as well.

The investment of additional resources to support community needs assessments and regional planning could help further efforts to ensure access to care in rural communities. Despite the widespread movement away from hospital-centric health care delivery elsewhere, many rural communities continue to rely on the local hospital as the locus of care. Rural communities frequently lack the resources and infrastructure to evaluate community needs and develop a plan for access to care post-hospital closure. When there is no plan for the future, the announcement of a hospital closure can lead to chaos and divisions in a community. Regional planning efforts and technical assistance could help to educate and engage local residents, support assessments of community health care needs, improve the ability of communities to negotiate with large health systems, and promote integrated systems of primary care, referral centers for specialty care, and rational allocation of health care resources overall. Regional planning in areas where large hospital systems are present has the potential to bring the advantages of these systems' resources, health information systems, and capacity to invest in facilities, recruit providers, develop specialty referral systems, and implement telehealth initiatives, to rural communities. With such planning, these communities might be

able to demonstrate to prospective new employers that a strong health care system is in place, even if there is no hospital in the local community.

Rural Health Transformation Models

Current State Initiatives

The Kansas Hospital Association is promoting "Primary Health Centers" to shift small rural hospitals away from a focus on admissions to more outpatient and transitional services. They are proposing two alternative models, both of which would be open 365 days a year, but one for 12 hours/day and the other 24 hours/day. Such a model will require changes in state licensing requirements to authorize this new provider type and changes in Medicare reimbursement policies.[23]

The Oregon Rural Health Reform Initiative is an effort to sustain rural hospitals financially by transitioning them away from a cost-based reimbursement model. Instead, rates at these rural hospitals will be negotiated with local coordinated care organizations, under the oversight of the Oregon Health Authority (OHA). Currently, OHA is working to determine which hospitals will remain financially viable should they shift to a coordinated care payment model, and which hospitals should continue to operate with cost-based reimbursement.[24]

National Initiatives

The Medicare Payment Advisory Commission (MedPAC) Proposal offers two possible models designed to preserve access to health services in rural areas while eliminating the financial burden of maintaining an acute inpatient care facility. In the first model, struggling hospitals would maintain their ED 24/7 and would also continue to provide outpatient services. Hospitals would be reimbursed by a PPS rate per service and would also receive a fixed grant to help offset standby costs. The second option involves hospitals transitioning to a primary care clinic or FQHC-like model that would be open between 8 and 12 hours per day, along with ambulance services that would be available at all times. These hospitals would also be reimbursed by a PPS rate per service and would receive a fixed grant to help fund the "ambulance standby capacity" as well as any other uncompensated care costs.[25]

The REACH Act (Rural Emergency Acute Care Hospital Act), introduced by Senators Charles Grassley (R-IA) and Cory Gardner (R-CO), would create a new Medicare payment designation called a Rural Emergency Hospital (REH), to sustain emergency care in rural communities. The new designation is aimed at addressing the difficulty that CAHs may have in achieving occupancy rates high enough to keep their inpatient beds, and thus the hospitals themselves, open. REHs would provide only 24/7 emergency care, observation care, and outpatient services (which could include telehealth services), as well as ambulance services to transport patients who need a higher level or care or inpatient admission to larger regional medical centers; REHs would not operate any acute-care inpatient beds themselves. CAHs and other small rural hospitals ($\leq$50 beds) that meet these criteria would be eligible for the designation. The idea is that these hospitals would likely be more financially viable without an inpatient center and could instead focus solely on stabilizing and transporting patients to larger regional medical centers, while continuing to receive the benefit of higher Medicare reimbursement rates.[26]

The Save Rural Hospitals Act introduced by Representative Same Graves (R-MO) would reverse sequester cuts made to CAHs and small rural hospitals, and also seek to preserve or increase federal payments for low-volume and Medicare-dependent hospitals. Among other provisions, the Graves proposal delays penalties for small rural hospitals that have failed to transfer to an electronic health record system, and also increases Medicare payments for ground ambulance services in rural areas.[27]

Conclusion

The number of rural hospital closures has increased significantly in recent years. This trend is expected to continue, raising questions about the impact the closures will have on rural communities' access to health care services. Both the examination of rural hospital closures in three communities as well as interviews with national experts show that a number of factors contribute to rural hospital closures, including demographics (aging, poor, and declining populations), hospital finances (high uninsured rates and high shares of public paying patients), and overall changes in how care is delivered. This research also revealed that the hospital closures reduced local residents' access to care (especially emergency care), led to an outmigration of health care professionals, and worsened pre-existing challenges in obtaining access to specialty care. Although some communities were able to adapt to fill in gaps in primary care post-closure, elderly and low-income individuals were more likely to face transportation challenges and thus more likely to delay or forgo needed care. The experience of study hospitals, stakeholder interviews, and other research show that a state's decision about the Medicaid expansion has an important impact on hospital revenues and access to care, but the sustainability of rural hospitals depends on a broader set of factors. Looking ahead, new models of health care delivery, along with new models of payment and financing, may be better able than current admissions- and volume-driven systems to support the needs of rural communities. Such reconfiguration may require federal support and assistance as well as regional planning efforts.

Appendix: Description of Selected Hospitals

Marlboro Park Hospital – Bennettsville, South Carolina

Marlboro Park Hospital stopped admitting patients on April 25, 2015 and transferred all its remaining patients to nearby Chesterfield General Hospital in Cheraw, South Carolina, approximately 15 miles away.[28] Both hospitals were owned by a real estate trust and had been operated by Community Health Systems (CHS), which announced in 2014 that it would not renew the leases for either hospital when they expired on April 30, 2015. McLeod Health Systems, a South Carolina system, assumed operation of Chesterfield General Hospital and renamed it McLeod Health Cheraw, but it declined to operate Marlboro Park. According to the South Carolina Department of Health and Human Services, Marlboro Park Hospital lost nearly $35 million between 2009 and 2013 – more than any other hospital in South Carolina, while Chesterfield generated an $8.5 million profit during those same years. Currently, some residents of Bennettsville receive care at McLeod Health Cheraw, while others travel to one of the two hospitals in Florence, South Carolina (approximately 40 miles away by car) and Scotland Memorial Hospital in Laurinberg, North Carolina (approximately 17 miles away by car).

Mercy Hospital – Independence, Kansas

Mercy Hospital, part of the Mercy Health System, began a phased closure on October 10, 2015. In 2014, the hospital formed a task force to consider an affiliation with the Coffeyville Regional Medical Center, but those discussions ended after the hospitals were unable to reach an agreement. The nearest hospitals are now 16 minutes away in Neodesha and 20 miles away in Coffeyville (the Coffeyville hospital is now the only hospital in Montgomery County).

Parkway Regional Hospital – Fulton, Kentucky

After serving one of the poorest counties in western Kentucky for over two decades, Parkway Regional Hospital closed its emergency department and 70-bed inpatient hospital in Fulton, Kentucky in March, 2015. Two nearby hospitals in Union City and Martin, Tennessee competed with Parkway Regional for many of the same patients.[29] Fulton residents who had private insurance or could afford the cost typically left Fulton to seek care, primarily at Tennova Healthcare – Volunteer Martin, a 100-bed hospital only 12 miles away in Martin, Tennessee. Community Health Systems (CHS), the owner of Parkway Regional, also operates the hospital in Martin and promoted use of that Tennessee facility, including for specialty care, both before and after the closure of Parkway Regional. The closest Kentucky hospital is Jackson Purchase Medical Center (operated by LifePoint Health) in Mayfield, Kentucky – 22 miles from the town of Fulton. Some Fulton County residents received care at Jackson Purchase before the closure, including women who went there for labor and delivery services.

Appendix Table 1: Characteristics of Study Communities Compared to State and U.S. Overall, 2014

Table 1: Characteristics of Select Communities Compared to State and U.S. Overall, 2014			
	U.S Overall	Kentucky	Fulton County, KY
Population	318,857,056	4,413,457	6,265
Percent Change in Population (2010-2014)	3.3%	1.7%	-8.4%
Age			
Under 18	23.1%	22.9%	21.0%
Over 65	14.5%	14.8%	19.4%
Race/ethnicity			
White, single race	77.4%	88.3%	72.4%
Black, single race	13.2%	8.2%	24.3%
Hispanic or Latino	17.4%	3.4%	1.5%
Poverty Rate	14.8%	19.1%	31.2%
Median Household Income (2010-2014)	$53,482	$43,342	$32,948
	National	South Carolina	Marlboro County, SC
Population	318,857,056	4,832,482	27,924
Percent Change in Population (2010-2014)	3.3%	4.5%	-3.5%
Age			
Under 18	23.1%	22.4%	20.7%
Over 65	14.5%	15.8%	15.2%
Race/ethnicity			
White, single race,	77.4%	68.3%	42.1%
Black, single race	13.2%	27.8%	51.0%
Hispanic or Latino	17.4%	5.4%	3.2%
Poverty Rate	14.8%	18.0%	31.4%
Median Household Income (2010-2014)	$53,482	$45,033	$28,765
	National	Kansas	Montgomery County, KS
Population	318,857,056	2,904,021	34,065
Percent Change in Population (2010-2014)	3.3%	1.8%	-4.0%
Age			
Under 18	23.1%	24.9%	23.9%
Over 65	14.5%	14.3%	18.1%
Race/ethnicity			
White, single race	77.4%	86.8%	85.2%
Black, single race	13.2%	6.3%	5.8%
Hispanic or Latino	17.4%	11.4%	6.3%
Poverty Rate	14.8%	13.6%	18.0%
Median Household Income (2010-2014)	$53,482	$51,872	$40,716

Source: All estimates are from the Census Bureau's 2014 QuickFacts. QuickFacts provides statistics for all states and counties and for cities and towns with a population of 5,000 or more. http://www.census.gov/quickfacts/table/PST045215/00

[1] Brystana G. Kaufman, Sharita R. Thomas, Randy K. Randolph, Julie R. Perry, Kristie W. Thompson, George M. Holmes, and George H. Pink, "The Rising Rate of Rural Hospital Closures," *Journal of Rural Health*. 32, no. 1 (2016): 35-43, http://onlinelibrary.wiley.com/doi/10.1111/jrh.12128/epdf; Kristin L. Reiter, Marissa Noles and George H. Pink, "Uncompensated Care Burden May Mean Financial Vulnerability for Rural Hospitals in States that Did Not Expand Medicaid. Health Affairs vol. 34, no. 10 (2015): 1721-1729, doi: 10.1377/hlthaff.2014.1340. http://content.healthaffairs.org/content/34/10/1721.abstract; Sharita Thomas, Mark Holmes, George Pink. *2012-2014 Profitability of Urban and Rural Hospitals by Medicare Payment Classification*. (NC Rural Health Research Program, March 2016). *http://www.shepscenter.unc.edu/product/2012-14-profitability-of-urban-and-rural-hospitals-by-medicare-payment-classification/*

[2] For a current list of state Medicaid expansion decisions, *see* http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/

[3] Kaufman, Thomas, Randy K. Randolph, Julie R. Perry, Kristie W. Thompson, George M. Holmes, and George H. Pink, "The Rising Rate of Rural Hospital Closures," *Journal of Rural Health*. 32, no. 1 (2016): 35-43, http://onlinelibrary.wiley.com/doi/10.1111/jrh.12128/epdf; Mark Holmes and George H. Pink, *Change in Profitability and Financial Distress of Critical Access Hospitals from Loss of Cost-Based Reimbursement*. (NC Rural Health Research Program, December 2013), http://www.shepscenter.unc.edu/wp-content/uploads/2013/12/Change-in-Profitability-and-Financial-Distress-of-CAHs-November-2013.pdf. For a history of the Medicare prospective payment system, *see* Centers for Medicare & Medicaid Services, Office of Inspector General, Office of Evaluation and Inspections, Region IX, "Medicare Hospital Prospective Payment System, How DRG Rates Are Calculated and Updated" (August 2001). http://oig.hhs.gov/oei/reports/oei-09-00-00200.pdf

[4] The Flex Program was initially authorized by the Balanced Budget Act of 1997. For more information on the Flex Program, *see https://www.ruralcenter.org/tasc/flex-program-fundamentals*

[5] The Medicare Payment Advisory Commission, *Critical Access Hospitals Payment System*. (Washington DC: October 2014). http://www.medpac.gov/documents/payment-basics/critical-access-hospitals-payment-system-14.pdf

[6] Victoria Freeman, Kristie Thompson, H. Ann Howard, Randy Randolph, and G. Mark Holmes. *The 21st Century Rural Hospital Chart Book, March 2015*. (Rural Health Research and Policy Center, March 2015). http://www.shepscenter.unc.edu/wp-content/uploads/2015/02/21stCenturyRuralHospitalsChartBook.pdf

[7] Ibid. Rural Referral Centers (RRCs) may also be classified as Medicare Dependent Hospitals (MDHs) or Sole Community Hospitals (SCHs). The percentages given for MDHs and SCHs refer to hospitals that have only those designations and are not also RRCs. As explained by Freeman, Thompson, et al., "[t]hese payment programs [CAHs, MDHs, SCHs and RRCs] recognize the challenges of providing care in rural settings and provide enhanced or supplemental reimbursement. Qualifications for these programs are complex and may include locations, hospital size, staffing, network agreements, patient demographics including insurance, and patient referral patterns."

[8] The Medicare Payment Advisory Commission, *Critical Access Hospitals Payment System*. (Washington DC: October 2014). http://www.medpac.gov/documents/payment-basics/critical-access-hospitals-payment-system-14.pdf

[9] Ibid.

[10] The North Carolina Rural Health Research Program defines a rural hospital as "any short-term, general acute, non-federal hospital" that is either: (a) not located in a metropolitan county; (b) located in a Rural-Urban Commuting Area Code (RUCA) type 4 or higher; or (c) a Critical Access Hospital. For a list of the hospitals and more information about the project, *see* http://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/

[11] Robert Bradfield. *Parkway Regional Hospital ending in-patient and ER services*. (Paducah, Kentucky, WPSD Local 6 News, December 10, 2014). http://www.wpsdlocal6.com/story/27598425/parkway-regional-hospital-ending-in-patient-and-er-services; West Kentucky Star Staff. *Fulton Hospital Closing ER, Inpatient Service*. (The West Kentucky Star, December 12, 2014). http://www.westkentuckystar.com/News/Local-Regional/Western-Kentucky/Fulton-Hospital-Closing-ER-Inpatient-Service.aspx; Amanda Roberts. *Last day open for Parkway Regional Hospital*. (Paducah, Kentucky, WPSD Local 6 News, March 31, 2015). http://www.wpsdlocal6.com/story/28676177/last-day-open-for-parkway-regional-hospital; Rob Canning. *Hospital Closure Will Have 'Domino Effect' on Fulton Economy"* (WKMS, Murray State's NPR Station, December 12, 2014). http://wkms.org/post/hospital-closure-will-have-domino-effect-fulton-economy#stream/0

[12] Alan Bavley and Dave Helling. *Closing of Kansas hospital adds to Medicaid expansion debate*. (Kansas City, Kansas, The Kansas City Star, October 17, 2015). http://www.kansascity.com/news/business/health-care/article39620442.html#storylink=cpy; U.S. News and World Report. *Mercy Hospital Independence, Independence KS*. http://health.usnews.com/best-hospitals/area/ks/mercy-hospital-independence-6670440. More information on the Mercy Health system available at: https://www.mercy.net/

[13] Rod Overton. *Marlboro Park Hospital in Bennettsville to close, officials say*. (WBTW News13, April 22, 2015). http://wbtw.com/2015/04/22/marlboro-park-hospital-in-bennettsville-to-close-officials-say/ South Carolina Health Data, Statistics and Insights in SC Health Care. (2013). http://schealthdata.org/list; *McLeod Health Cheraw, History*. http://www.mcleodhealth.org/cheraw/mcleod-health-cheraw-history.html

[14] The American Hospital Association (AHA) prepared a summary of Medicare policies unrelated to the ACA that have resulted in lower payments to hospitals since 2010. Helen Adamopoulos. *AHA: Hospital Medicare, Medicaid Payments Cut by $113B Since 2010*. (Becker's Hospital Review, January 15, 2014). http://www.beckershospitalreview.com/finance/aha-hospital-medicare-medicaid-payments-cut-by-113b-since-2010.html. AHA's chart can be found at http://www.aha.org/content/16/acahospitalcuts.pdf

[15] Information about the Readmission Reduction Program can be found at https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html

[16] Melissa Patrick. *Bill would require Medicaid managed-care firms to pay contracted fees for ER visits; Senate hearing targets two companies*. (Kentucky Health News, February 27, 2015). http://kyhealthnews.blogspot.com/2015/02/bill-would-require-medicaid-managed.html

[17] Sharita Thomas, Mark Holmes, George Pink. *2012-2014 Profitability of Urban and Rural Hospitals by Medicare Payment Classification*. (NC Rural Health Research Program, March 2016). *http://www.shepscenter.unc.edu/product/2012-14-profitability-of-urban-and-rural-hospitals-by-medicare-payment-classification/*

[18] While our interviews did not address what type of mental health and substance use incidents led people to the emergency departments of these hospitals, rural communities are facing significant challenges with the current opioid epidemic. *See* Toliver, Z. *The Opioid Epidemic: Testing the Limits of Rural Healthcare*. (The Rural Monitor, Rural Health Information Hub, May 18, 2016). https://www.ruralhealthinfo.org/rural-monitor/opioid-epidemic/

[19] All three of our case studies involved hospitals that were located close to a state border. The ability of Medicaid patients to access care across state lines may depend on state rules and Medicaid managed care contracts and networks even if a provider in another state is the closest provider.

[20] Others have used this concept to describe the current status of many rural hospitals. *See, e.g.*, Lemming M, Wyland M. February 23, 2016. Death by a Thousand Cuts: The Flickering Lights of the U.S. Rural Hospital. Boston, Massachusetts: The Nonprofit Quarterly https://nonprofitquarterly.org/2016/02/23/death-by-a-thousand-cuts-the-flickering-lights-of-the-u-s-rural-hospital/

[21] Kristie Thompson, Kristen Reiter, Rebecca Whitaker, Sharita Thomas. *Does ACA Insurance Coverage Expansion Improve the Financial Performance of Rural Hospitals?* (NC Rural Health Research Program, April 2016). http://www.shepscenter.unc.edu/product/aca-insurance-coverage-expansion-improve-financial-performance-rural-hospitals-2/

[22] Several of these demonstrations are described at https://www.ruralhealthinfo.org/new-approaches

[23] Kansas Hospital Association Rural Health Visioning Technical Advisory Group. March 2015. Sustaining Rural Health Care in Kansas, The Development of Alternative Models. Topeka, Kansas: Kansas Hospital Association. http://www.healthforum-edu.com/rural/PDF/2016/BendbutDontBreakFlexibleDeliveryModelsforRuralCommunities2.pdf; Susan Morse, *Kansas plan would convert many rural hospitals into primary health clinics*. (Healthcare Finance, August 18, 2015). http://www.healthcarefinancenews.com/news/kansas-plan-would-convert-many-rural-hospitals-primary-health-clinics

[24] The Oregon Health Authority oversees the state's Rural Health Reform Initiative. Information about the plan is available at http://www.oregon.gov/oha/pages/rhri.aspx

[25] Ron Shinkman. *MedPAC suggests alternative models for rural hospitals*. (Fierce Healthcare, October 15, 2015). http://www.fiercehealthcare.com/finance/medpac-suggests-alternative-models-for-rural-hospitals More information on MedPAC's proposals is available at: http://www.medpac.gov/documents/october-2015-meeting-presentation-models-for-preserving-access-to-emergency-care-in-rural-areas-.pdf?sfvrsn=0

[26] Rural Emergency Acute Care Hospital Act. S. 1648. 114th Congress. (2015). https://www.congress.gov/bill/114th-congress/senate-bill/1648

[27] Save Rural Hospitals Act. H.R. 3225, 114th Congress. (2015). https://www.congress.gov/bill/114th-congress/house-bill/3225/text

[28] Lauren Sausser. *Two rural Pee Dee hospitals may close in May*.(The Post and Courier, January 10, 2015). http://www.postandcourier.com/article/20150110/PC16/150119974

[29] Staff report. *Fulton patients to get care at local clinic*. (The Paducah Sun, December 19, 2014). http://www.paducahsun.com/news/local/121914_PS_Fulton-hospital-folo