



August 2018

# RURAL HOSPITAL CLOSURES

## Number and Characteristics of Affected Hospitals and Contributing Factors

# GAO Highlights

Highlights of [GAO-18-634](#), a report to congressional requesters

## Why GAO Did This Study

Research has shown that hospital closures can affect rural residents' access to health care services and that certain rural residents—particularly those who are elderly and low income—may be especially affected by rural hospital closures.

This report describes (1) how HHS supports and monitors rural hospitals' financial viability and rural residents' access to hospital services and (2) the number and characteristics of rural hospitals that have closed in recent years and what is known about the factors that have contributed to those closures.

GAO reviewed documents and interviewed officials from HHS and HHS-funded research centers; analyzed data compiled by HHS and an HHS-funded research center, with a focus on 2013 through 2017—the most recent year with complete data; reviewed relevant literature; and interviewed experts and stakeholders. GAO identified hospitals as rural if they met the Federal Office of Rural Health Policy's definition of rural.

GAO provided a draft of this report to HHS for comment. The Department provided technical comments, which GAO incorporated as appropriate.

View [GAO-18-634](#). For more information, contact James Cosgrove at (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov).

August 2018

# RURAL HOSPITAL CLOSURES

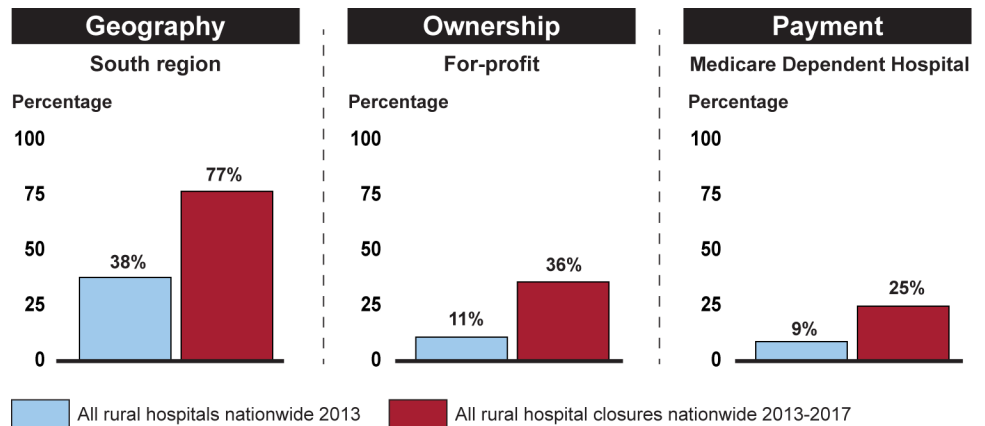
## Number and Characteristics of Affected Hospitals and Contributing Factors

### What GAO Found

The Department of Health and Human Services (HHS) administers multiple payment policies and programs that provide financial support for rural hospitals and funds research centers to monitor closures and study access. Among the payment policies administered by HHS are special payment designations for rural hospitals in which rural hospitals that meet certain criteria receive higher reimbursements for hospital services than they otherwise would receive under Medicare's standard payment methodology. HHS-funded research centers monitor rural hospitals' profitability and other financial indicators, and study access to facilities and specific services. HHS uses the results of monitoring activities to inform future areas of research and disseminate information.

GAO's analysis of data from HHS and an HHS-funded research center shows that 64 rural hospitals closed from 2013 through 2017. This represents approximately 3 percent of all the rural hospitals in 2013 and more than twice the number of closures of the prior 5-year period. GAO's analysis further shows that rural hospital closures disproportionately occurred in the South, among for-profit hospitals, and among hospitals that received the Medicare Dependent Hospital payment designation, one of the special Medicare payment designations for rural hospitals.

**Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Selected Characteristics**



Source: GAO analysis of Department of Health and Human Services (HHS) and HHS-funded data. | GAO-18-634

According to literature GAO reviewed and stakeholders GAO interviewed, rural hospital closures were generally preceded and caused by financial distress. In particular, rural hospitals that closed typically had negative margins that made it difficult to cover their fixed costs. According to these sources, financial distress has been exacerbated in recent years by multiple factors, including the decrease in patients seeking inpatient care and across-the-board Medicare payment reductions. In contrast, according to the literature GAO reviewed and stakeholders GAO interviewed, rural hospitals located in states that increased Medicaid eligibility and enrollment experienced fewer closures.

---

# Contents

---

---

Letter		1
	Background	3
	HHS Administers Multiple Payment Policies and Programs That Support Rural Hospitals and Funds Research Centers to Monitor Closures and Access	6
	Recent Increases in Rural Hospital Closures Have Disproportionately Occurred in the South, With Multiple Factors Likely Contributing to These Closures	16
	Agency Comments	27
Appendix I	Rural-Specific Payment Policies and Programs That Provide Key Support to Rural Hospitals	29
Appendix II	GAO Contact and Staff Acknowledgments	35
Tables		
	Table 1: Rural-Specific Department of Health and Human Services (HHS) Payment Policies and Programs Identified by HHS as Providing Key Support to Rural Hospitals	7
	Table 2: Medicare Rural Hospital Payment Designations	29
	Table 3: Rural Grants, Cooperative Agreements, and Contracts Identified by the Department of Health and Human Services (HHS) as Providing Key Support to Rural Hospitals	32
	Table 4: New Approaches in Rural Health Care Delivery and Payment Identified by the Department of Health and Human Services (HHS) as Providing Key Support to Rural Hospitals	34
Figures		
	Figure 1: Nationwide Rural Hospital Closures from 2008 through 2012 and from 2013 through 2017	17
	Figure 2: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Region and State	19

---

---

Figure 3: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Medicare Rural Hospital Payment Designation	21
Figure 4: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospitals Closures from 2013 through 2017, by Ownership Type	22
Figure 5: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Medicaid Expansion Status	27

---

### Abbreviations

CMS	Centers for Medicare & Medicaid Services
FORHP	Federal Office of Rural Health Policy
HHS	Department of Health and Human Services

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



August 29, 2018

The Honorable Claire McCaskill  
Ranking Member  
Committee on Homeland Security and Governmental Affairs  
United States Senate

The Honorable Timothy Walz  
House of Representatives

Research has shown that hospital closures can affect rural residents' access to services. For example, a 2018 study found that, of the rural hospitals that closed from 2005 through 2017, 43 percent were more than 15 miles away from the next closest hospital.<sup>1</sup> In addition, a 2016 study found that rural residents—particularly those who are elderly and low-income—were more likely to delay or forgo care after a rural hospital closed if they had to travel longer distances to access hospital services.<sup>2</sup>

In 1987, the Federal Office of Rural Health Policy (FORHP)—an office overseen by the Department of Health and Human Services (HHS)—was established to advise HHS on the effects that federal health care policies and regulations have on the financial viability of small rural hospitals and access to health care in rural areas, among other things.<sup>3</sup> Both FORHP and another agency within HHS, the Centers for Medicare & Medicaid Services (CMS), administer payment policies and programs that support rural hospitals.

To better understand and respond to challenges facing rural hospitals, you asked us to describe HHS payment policies and programs focused on ensuring rural residents have access to necessary hospital services and what is known about recent rural hospital closures. This report describes

---

<sup>1</sup>See M. Clawar et al., *Range Matters: Rural Averages Can Conceal Important Information* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2018), 2.

<sup>2</sup>See J. Wishner et al., *A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies* (Menlo Park, Calif.: Kaiser Family Foundation, 2016), 8.

<sup>3</sup>See 42 U.S.C § 912. FORHP is located in the Health Resources and Services Administration, an agency within HHS.

- 
1. How HHS supports and monitors rural hospitals' financial viability and rural residents' access to hospital services; and
  2. The number and characteristics of rural hospitals that have closed in recent years and what is known about the factors that contributed to those closures.

To identify how HHS supports and monitors rural hospitals' financial viability and rural residents' access to hospital services, we reviewed documents and interviewed officials from HHS and HHS-funded research centers, including the University of North Carolina's and the University of Iowa's rural health research centers.<sup>4</sup> HHS officials identified HHS payment policies and programs that provide key support to rural hospitals, and we reviewed laws, regulations, and HHS documents related to those policies and programs.

To identify the number and characteristics of rural hospitals that closed in recent years, we analyzed data on rural hospital closures compiled by the North Carolina rural health research center, and hospital-level data from CMS.<sup>5</sup> We also used these data to analyze and compare the characteristics of all rural hospitals, as of 2013, and rural hospitals that closed during the 5-year period from calendar years 2013 through 2017—the most recent years with complete data.<sup>6</sup> To assess the reliability of these data, we reviewed relevant documentation, interviewed

---

<sup>4</sup>In fiscal year 2017, HHS funded 9 rural health research centers, which are dedicated to producing policy-relevant research on health care and population health in rural areas.

<sup>5</sup>Specifically, we used CMS's Provider of Service files and Inpatient Prospective Payment Impact files.

<sup>6</sup>We limited our analysis to general acute care hospitals in the U.S. (i.e., we excluded federal hospitals, such as Indian Health Service hospitals; specialty and cancer hospitals; and hospitals in U.S. territories). We defined rural using FORHP's definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3). The Rural-Urban Commuting Area codes are used by the United States Department of Agriculture to classify U.S. census tracts as urban or rural based on measures of population density, urbanization, and daily commuting. We defined a hospital closure as cessation of inpatient services. For context, we also analyzed the North Carolina rural health research center's data from the prior 5-year period (from 2008 through 2012); calculated the share of urban hospitals that closed from 2013 through 2017 using data from the North Carolina rural health research center, CMS, and Medicare Payment Advisory Commission publications describing annual hospital closures nationwide; and determined the number of rural hospitals that opened from 2014 through 2016 using Medicare Payment Advisory Commission publications (which defined rural as non-urban counties).

---

knowledgeable officials from FORHP and the North Carolina rural health research center, and performed electronic data tests to check for missing data and consistency with other published data. We determined the data were reliable for the purposes of our report. To identify additional information on the characteristics of the rural hospitals that closed and what is known about the factors that have contributed to those closures, we conducted a literature review. We identified literature through searching several bibliographic databases, including EconLit, MEDLINE, Scopus, and Social SciSearch. We identified additional literature through, for example, citations included in the literature we reviewed. We focused our review on literature published between 2013 and 2018, but also included some earlier literature for additional contextual information. Additionally, our literature review included research based on analysis of primary data sources, systematically summarized interviews, and case studies. In total, we identified and reviewed 17 relevant publications that met our standard for methodological rigor. We reviewed the degree of rigor across these studies and interpreted their findings based on this review. We also identified 17 additional publications that discussed contextual information related to rural hospitals that closed. For additional viewpoints on the characteristics of the rural hospitals that closed and the factors that contributed to those closures, we interviewed several stakeholders and experts: officials from FORHP and CMS and representatives from the American Hospital Association, the National Advisory Committee on Rural Health & Human Services, the National Rural Health Association, and the University of North Carolina's and University of Iowa's rural health research centers.

We conducted this performance audit from December 2017 to August 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

## Background

---

### Rural Hospitals and Areas

In 2017, about 2,250 general acute care hospitals in the United States were located in areas that met FORHP's definition of rural; these rural hospitals represented approximately 48 percent of hospitals nationwide and 16 percent of inpatient beds. These hospitals were spread across the

---

84 percent of the United States land area that FORHP classified as rural, and served the 18 percent of the United States population that lived in these areas.<sup>7</sup>

While there are significant differences across rural areas and populations, as a whole they differ from their urban counterparts in several ways. For example, rural areas have the following characteristics:

- **Higher percentage of elderly residents.** In 2014, 18 percent of the population was aged 65 or older in rural counties, compared with 14 percent in urban counties.<sup>8</sup>
- **Higher percentage of residents with limitations in activities caused by chronic conditions.** In 2010-2011, 18 percent of adults in rural counties had limitations in activities caused by chronic health conditions, compared with 13 percent in large, central urban counties.<sup>9</sup>
- **Lower median household income.** In 2014, the median household income in rural counties was approximately \$44,000, compared to \$58,000 in urban counties.<sup>10</sup>

Rural areas have also experienced several changes in recent years that have exacerbated these differences. For example, according to research by the United States Department of Agriculture, rural areas have experienced the following changes:

- **Decreasing population.** From 2010 through 2015, the population in rural areas declined, on average, by 0.07 percent per year, while the population in urban areas increased, on average, by 0.9 percent per year.

---

<sup>7</sup>These estimates are of the 2010 Census, and somewhat smaller than those classified as rural by the Census Bureau (95 percent of land area and 19 percent of population) and somewhat larger than those classified as rural by the Office of Management and Budget (72 percent and 15 percent, respectively). There are various ways to define a rural area, and no consistent definition is used across government programs. See Health Resources & Services Administration, *Defining Rural Population*, accessed December 26, 2017, <https://www.hrsa.gov/rural-health/about-us/definition/index.html>.

<sup>8</sup>See North Carolina Rural Health Research Program, *Rural Health Snapshot (2017)* (Chapel Hill, N.C.: University of North Carolina at Chapel Hill, 2017).

<sup>9</sup>See M. Meit et al., *The 2014 Update of the Rural-Urban Chartbook* (Bethesda, Md.: Rural Health Reform Policy Research Center, 2014), 115.

<sup>10</sup>See North Carolina Rural Health Research Program, *Rural Health Snapshot (2017)*.



- 
- **Slow employment growth.** From 2010 through 2015, rural employment grew at 0.8 percent per year, less than half that of urban areas (1.9 percent per year).<sup>11</sup>

---

## Federal Response to Rural Hospital Closures in the 1980s

Rural hospital closures are not a recent phenomenon. For example, we previously reported that between 1985 and 1988, 140 rural hospitals closed—approximately 5 percent of the rural hospitals in 1985.<sup>12</sup> The large number of closures in the 1980s was preceded by a change in how Medicare paid hospitals. Specifically, in 1983, Medicare’s inpatient prospective payment system was created, whereby predetermined rates were set for each Medicare hospital discharge. The intent was to control Medicare costs by giving hospitals financial incentives to deliver services more efficiently and reduce unnecessary use of inpatient services by paying a hospital a predetermined amount. However, one consequence of the new payment system was that some small, rural hospitals experienced large Medicare losses and increased financial distress.

Partially in response to the number of rural hospital closures, FORHP was established in 1987 to, among other things,

- advise the Secretary of HHS on the effects of current and proposed policies on the financial viability of small rural hospitals and on access to and quality of health care in rural areas;
- establish and maintain a clearinghouse for information on rural health care issues;
- coordinate rural health activities within HHS; and
- administer grants and other instruments to fund activities to improve health care in rural areas.<sup>13</sup>

---

<sup>11</sup>See United States Department of Agriculture, Economic Research Service, *Rural America at a Glance*, Economic Information Bulletin 182 (November 2017), 3.

<sup>12</sup>We published a series of products on the increase in rural hospital closures during the late 1980s: GAO, *Rural Hospitals: Federal Efforts Should Target Areas Where Closures Would Threaten Access To Care*, [GAO/HRD-91-41](#) (Washington, D.C.: Feb. 15, 1991), *Rural Hospitals: Factors that Affect Risk of Closure*, [GAO/HRD-90-134](#) (Washington, D.C.: June 19, 1990), and *Rural Hospitals: Federal Leadership and Targeted Programs Needed*, [GAO/HRD-90-67](#) (Washington, D.C.: June 12, 1990). These reports defined rural as non-metropolitan counties.

<sup>13</sup>See Pub. L. No. 100-203, § 4401, 101 Stat.1330, 1330-225 (1987) (codified as amended at 42 U.S.C § 912).

---

---

**HHS Administers  
Multiple Payment  
Policies and  
Programs That  
Support Rural  
Hospitals and Funds  
Research Centers to  
Monitor Closures and  
Access**

---

**HHS Administers Payment  
Policies and Programs  
That Provide Financial  
Support to Rural  
Hospitals, Including  
Medicare Rural Hospital  
Payment Designations**

HHS officials identified several rural-specific HHS payment policies and programs as providing key financial support to rural hospitals, and in turn, rural residents' access to hospital services. These key HHS payment policies and programs may be placed into three categories: (1) Medicare rural hospital payment designations; (2) rural grants, cooperative agreements, and contracts, and (3) new approaches in rural health care delivery and payment (see table 1).

**Table 1: Rural-Specific Department of Health and Human Services (HHS) Payment Policies and Programs Identified by HHS as Providing Key Support to Rural Hospitals**

Category	Specific payments and programs
Medicare rural hospital designations	<ul style="list-style-type: none"> <li>• Critical Access Hospital</li> <li>• Sole Community Hospital</li> <li>• Medicare Dependent Hospital</li> <li>• Low Volume Hospital</li> <li>• Rural Referral Center</li> </ul>
Rural grants, cooperative agreements, and contracts	<p><i>Grants</i></p> <ul style="list-style-type: none"> <li>• Medicare Rural Hospital Flexibility</li> <li>• Rural Health Network Development</li> <li>• Rural Health Care Services Outreach</li> <li>• Small Rural Hospital Improvement Program</li> <li>• Delta States Rural Development Network</li> <li>• Small Health Care Provider Quality Improvement</li> <li>• Rural Health Network Development Planning</li> </ul> <p><i>Cooperative agreements and contracts</i></p> <ul style="list-style-type: none"> <li>• Delta Region Community Health Systems Development</li> <li>• Information Services / Technical Assistance Center</li> <li>• Medicare Rural Hospital Flexibility Evaluation</li> <li>• Rural Health Value</li> <li>• Small Rural Hospitals Transition Project</li> <li>• Rural Quality Improvement technical assistance</li> <li>• Frontier Community Health Integration Project Demonstration technical assistance</li> </ul>
New approaches in rural health care delivery and payment	<ul style="list-style-type: none"> <li>• Accountable Care Organization Investment Model</li> <li>• Rural Community Hospital Demonstration</li> <li>• Frontier Community Health Integration Project Demonstration</li> <li>• Pennsylvania Rural Health Model</li> </ul>

Source: GAO interviews with HHS officials. | GAO-18-634

Note: These rural-specific payment policies and programs administered by HHS are targeted at areas that are rural or isolated. Because of different definitions of rural, not all hospitals designated as one of the Medicare rural hospital designations are in areas that would meet the definition of rural used by the Federal Office of Rural Health Policy. Because the Low Volume Hospital designation is based on the volume of services provided and does not require formal certification, it is more likely than other payment designations to be applied to a hospital one year and not the next.

- **Medicare rural hospital payment designations.** CMS administers five rural hospital payment designations, in which rural or isolated hospitals that meet specified eligibility criteria receive higher reimbursement for hospital services than they otherwise would have

---

received under Medicare’s standard payment methodology.<sup>14</sup> A rural hospital may qualify as a Critical Access Hospital, Sole Community Hospital, or Medicare Dependent Hospital—each of which has different eligibility criteria and payment methodologies. With the exception of Critical Access Hospitals, rural hospitals may also qualify as Low Volume Hospitals and Rural Referral Centers, in which eligible hospitals receive additional payments or exemptions.<sup>15</sup> The largest of the five designations is the Critical Access Hospital program, which represented 56 percent of rural hospitals in 2017 and pays eligible small, rural hospitals based on their reported costs (instead of the standard rates under the inpatient prospective payment system). (See app. I, table 2, for a description of each of the five Medicare rural hospital payment designations.) CMS was unable to provide estimates of the additional Medicare payments rural hospitals received from each designation in 2017. According to CMS officials, CMS generally does not model the amount of additional Medicare payments resulting from rural hospital payment designations, except in years when there is a related payment policy change going through rulemaking.

- **Rural grants, cooperative agreements, and contracts.** FORHP administers multiple grant programs, cooperative agreements, and contracts that provide funding and technical assistance to rural hospitals. The largest of these is the Medicare Rural Hospital Flexibility grant program, in which FORHP provides funds to states to support Critical Access Hospitals to stabilize their finances, foster innovative models of care, and support other improvement activities. In 2017, 45 states received \$25 million in Flex grants. FORHP officials noted that they can provide information to help states determine how to best target Flex grant funds, as there is not enough funding to financially assist all Critical Access Hospitals that are at risk of closing. (See app. I, table 3, for a description of the rural grants, and cooperative agreements and contracts identified by HHS officials.)

---

<sup>14</sup>These hospital designations are targeted at areas that are rural or isolated. Because of different definitions of rural, not all hospitals designated as one of the 5 Medicare rural hospital designations are in areas that would meet the definition of rural used by FORHP.

<sup>15</sup>Rural hospitals that do not qualify as a Critical Access Hospital, Sole Community Hospital, or Medicare Dependent Hospital are still eligible for these additional designations. Because the Low Volume Hospital designation is based on the volume of services provided and does not require formal certification, it is more likely than other payment designations to be applied to a hospital one year and not the next.

- 
- **New approaches in rural health care delivery and payment.** CMS’s Center for Medicare & Medicaid Innovation (Innovation Center) tests new ways to deliver and pay for health care—including some focused on rural areas—with the goal of reducing spending and preserving or enhancing the quality of care for beneficiaries enrolled in Medicare, Medicaid, and the Children’s Health Insurance Program.<sup>16</sup> As of June 2018, the largest of these rural models and demonstrations was Medicare’s Accountable Care Organization Investment Model. Groups of providers in rural and underserved areas participating in this model, potentially including small hospitals, agree to be held accountable for the cost and quality of care to their Medicare patients. The model tests providing pre-paid shared savings as an incentive for providers in rural and underserved areas to form Accountable Care Organizations and for these organizations to transition to arrangements with greater accountability for financial performance. For fiscal years 2012 through 2018, \$96 million had been obligated to organizations participating in the model. Forty-five Accountable Care Organizations were participating in this model as of 2018.<sup>17</sup> (See app. I, table 4, for a description of the new approaches in rural health care delivery and payment identified by HHS officials.)

In addition to the HHS payment policies and programs specifically targeting rural areas, HHS officials also identified broader payment policies and programs that they stated can provide key support to rural hospitals and rural residents’ access to hospital services. These HHS payment policies and programs may be placed in four categories:

- **Medicare and Medicaid base payments.** These consist of the standard payments for hospitals services.
- **Medicare and Medicaid uncompensated care payments.** Both Medicare and Medicaid provide multiple types of additional payments to support hospitals that incur costs for services provided to uninsured and other low-income individuals for which the hospitals are not fully compensated. Medicare also provides bad debt payments to hospitals

---

<sup>16</sup>The Children’s Health Insurance Program is a federal-state program that provides health care coverage to children 18 years of age and younger living in low-income families whose incomes exceed the eligibility requirements for Medicaid.

<sup>17</sup>Of the 45 participating organizations in the Accountable Care Organization Investment Model, 27 include a hospital (which, per investment model eligibility requirements must have 100 or fewer beds), and 36 have at least 65 percent of their delivery sites in rural areas.

---

to reimburse them for a portion of Medicare’s beneficiaries’ unpaid deductibles and coinsurance, as long as the hospital makes a reasonable effort to collect the unpaid amounts.<sup>18</sup>

- **Other targeted HHS payment policies and programs.** HHS administers other targeted payment policies and programs that support specific types of providers and areas, including, but not limited to, rural hospitals and areas. In particular, the Health Resources & Services Administration, an HHS agency, administers a drug discount program targeted at certain hospitals and other safety net providers. In addition, CMS administers bonus payments for certain physician services provided to Medicare beneficiaries in areas with a shortage of health professionals.<sup>19</sup>
- **State Innovation Models Initiative.** The Center for Medicare & Medicaid Innovation’s State Innovation Models aim to achieve better quality of care, lower costs, and improve health for the population of the participating states or territory. Some states’ plans include testing new delivery and payment models specifically targeting rural areas.<sup>20</sup>

---

## HHS Funds Research Centers That Monitor Rural Hospital Closures and Study Access

HHS monitors rural hospitals’ financial viability and rural residents’ access to hospital services, primarily by funding rural health research centers that track rural hospital closures and study rural residents’ access to hospital services.

To monitor rural hospitals’ financial viability, HHS funds and conducts several activities:

- **Tracking rural hospital closures and monitoring profitability.** The North Carolina rural health research center, a FORHP-funded rural health research center, tracks rural hospital closures and monitors rural hospitals’ profitability and other financial indicators. North Carolina’s researchers identify rural hospital closures through a multi-

---

<sup>18</sup>Specifically, HHS officials identified Medicare’s bad debt, disproportionate share hospital, and uncompensated care payments, and Medicaid’s disproportionate share hospital payments, upper payment limits, and uncompensated care demonstration payments as providing key support to rural hospitals.

<sup>19</sup>These two programs are the 340 Drug Pricing Program and Health Professional Shortage Area physician bonus payments.

<sup>20</sup>See Rural Health Value, *State Innovation Model Testing Awards from the Center for Medicare & Medicaid Innovation: Highlighting Rural Focus* (Iowa City, Iowa: University of Iowa, July 2017).

---

party agreement with FORHP, the American Hospital Association, and the National Rural Health Association, each of which alerts the research center once one learns about a closure. Research center staff then confirm the closure and ascertain whether the hospital converted to another facility type by searching the hospital website and calling a community leader, such as the mayor. The North Carolina rural health research center publishes a list of rural hospital closures since 2010 on its website.<sup>21</sup> It also publishes reports on rural hospitals' profitability, including the extent to which profitability varies by rural hospitals' characteristics, and how rural hospitals' profitability compares to the profitability of their urban counterparts.<sup>22</sup>

- **Monitoring Critical Access Hospitals' financial indicators.** The North Carolina rural health research center, through its role as part of the Flex Monitoring Team, develops and monitors various financial indicators for Critical Access Hospitals.<sup>23</sup> Using the hospitals' Medicare cost reports, the research center currently monitors 22 financial indicators under 6 domains—profitability, liquidity, capital structure, revenue, cost, and utilization. These financial indicator data are available to every Critical Access Hospital through an online tool that also helps those hospitals compare their financial performance to peer hospitals.<sup>24</sup> The Flex Monitoring Team also publishes state-level

---

<sup>21</sup>See

<http://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>. The North Carolina rural health research center's list includes all Critical Access Hospitals, regardless of rurality.

<sup>22</sup>For example, see S.R. Thomas et al., *2012-14 Profitability of Urban and Rural Hospitals by Medicare Payment Classification* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016) and G. H. Pink et al., *Geographic Variation in the 2016 Profitability of Urban and Rural Hospitals* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2018).

<sup>23</sup>The Flex Monitoring Team is a consortium of the rural health research centers located at the Universities of Minnesota, North Carolina, and Southern Maine and is funded by FORHP's Medicare Rural Hospital Flexibility Evaluation cooperative agreement. Monitoring Critical Access Hospitals' finances is the primary focus of Flex Monitoring Team staff from the North Carolina rural health research center. Staff from the Minnesota rural health research center focus on quality and staff from the Southern Maine rural health research center focus on community engagement.

<sup>24</sup>The Flex monitoring team produces fiscal year financial indicator data for all Critical Access Hospitals with at least 360 days in their cost report and complete data. Therefore, some hospitals may be missing financial indicator data in certain years, such as if the hospital is new, had a change in ownership, or had very low or no Medicare utilization.

---

summary data on Critical Access Hospitals' finances that are available on its website.<sup>25</sup>

HHS also reviews and estimates the financial effect of policy changes on rural hospitals. In particular, FORHP officials review proposed and final rules for Medicare, Medicaid, and the Affordable Care Act's health insurance exchanges to identify concerns from a rural health perspective. Drawing on the research it funds, FORHP officials may suggest policy modifications to CMS, such as exempting certain Medicare rural hospital designations from a proposed policy change.<sup>26</sup> In addition to FORHP officials' review, as required by statute, CMS conducts regulatory impact assessments that estimate the effect of policy changes on payments to hospitals, including small rural hospitals, and publishes key results as part of proposed and final rules.<sup>27</sup> For example, as part of the fiscal year 2018 final rule on Medicare payment for hospital inpatient services, CMS estimated that the expiration of the Medicare Dependent Hospital designation would have decreased the payments to rural hospitals with that designation by 0.9 percent, or approximately \$119 million.<sup>28</sup> Subsequent to the final rule, the Medicare Dependent Hospital and Low Volume Hospital designations were both extended.<sup>29</sup>

To monitor rural residents' access to hospital services, HHS relies on research conducted by the FORHP-funded research centers. Examples of recent research on rural residents' access to hospital services conducted by FORHP-funded research centers include the following:

---

<sup>25</sup>For example, see Flex Monitoring Team, *CAH Financial Indicators Report: Summary of 2016 Indicator Medians by State (Data Summary Report #26)* (Chapel Hill, N.C: University of North Carolina, 2018).

<sup>26</sup>For example, FORHP officials noted that they and other colleagues communicated concerns over the effect of proposed Medicare Part B payment cuts for drugs acquired under the 340B drug pricing program on rural hospitals. CMS excluded rural Sole Community Hospitals from such payment cuts in the final rule. See 82 Fed. Reg. 59216, 59222, 59482 (Dec. 14, 2017).

<sup>27</sup>See 42 U.S.C. §§ 912(b)(1), 1302(b). These regulatory impact assessments estimate the effect of regulatory changes, but do not make assessments on hospitals' financial viability.

<sup>28</sup>See 82 Fed. Reg. 37990, 38558 (Aug. 14, 2017).

<sup>29</sup>See, Bipartisan Budget Act of 2018, Pub. L. No. 115-123, §§ 50204, 50205, 132 Stat. 64, 181, 182 (codified at 42 U.S.C. §§ 1395ww(d)(12) (low-volume hospitals) and (d)(5)(G) (Medicare Dependent Hospitals)).



- 
- **Research on rural residents’ access to hospitals.** In 2018 the North Carolina rural health research center published an analysis of populations in rural counties without access to an acute care hospital or other types of primary care facilities. North Carolina’s researchers estimated that about 4.4 million rural residents currently live in a county without an acute care hospital.<sup>30</sup>
  - **Research on access to specific hospital services.** The Minnesota rural health research center conducted a body of research on declining access to obstetric services in rural counties. These researchers found that between 2004 and 2014, the percent of rural counties without hospital obstetric services increased from 45 to 54 percent, through a combination of hospital and obstetric-unit closures.<sup>31</sup>
  - **Research on options for ensuring rural residents’ access after a hospital closure.** The Iowa rural health research center published a summary of currently available options for ensuring rural residents’ access to hospital services after a hospital closure, and additional policy options under consideration.<sup>32</sup> The National Advisory Committee on Rural Health and Human Services, a 21-member citizens’ panel of nationally recognized rural health experts that advises HHS, also examined this topic, with a focus on alternative models to preserve rural residents’ access to emergency care in light of the recent surge in rural hospital closures. The committee noted that payments and grants to support rural hospitals were largely effective and stabilized rural hospital financial operations until 2013, when a new wave of rural hospital closures began. The report included recommendations regarding the design of alternative models, including that HHS seek public comments on the use of a

---

<sup>30</sup>See M. Clawar et al., *Access to Care: Populations with Counties with no FQHC, RHC or Acute Care Hospital* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2018), 2.

<sup>31</sup>See P. Hung et al., *Closure of Hospital Obstetric Services Disproportionately Affects Less-Populated Rural Counties* (Minneapolis, Minn.: University of Minnesota Rural Health Research Center, 2017), 1; and P. Hung et al., “Access to Obstetric Services in Rural Counties Still Declining, with 9 Percent Losing Services, 2004-2014,” *Health Affairs*, vol.36, no. 9 (2017), 1667.

<sup>32</sup>See, K.J. Mueller et al., *After Hospital Closure: Pursing High Performance Rural Health Systems without Inpatient Care* (Iowa City, Iowa: Rural Policy Research Institute, 2017).

---

combination of geographic distance and demographic or social determinants of health when setting eligibility criteria.<sup>33</sup>

To supplement the monitoring by FORHP-funded research centers, FORHP officials also track recent rural developments and reports from rural health stakeholders. FORHP officials said this monitoring adds a qualitative component to the quantitative research conducted by research centers. In particular, these activities often provide the first notice of a rural hospital closure or pending closure, and also help track changes to the status of former hospitals over time.

---

### HHS Uses the Results of Its Monitoring Activities to Inform Future Research and Grant Awards, and Disseminates This Information

HHS uses the results of its monitoring activities on rural hospitals' financial viability and rural residents' access to inform related research, primarily conducted by HHS-funded research centers, and to determine future areas of research. For example, the North Carolina rural health research center has used the list of rural hospital closures it compiles and its monitoring of profitability to conduct research on predictors of rural hospitals' financial distress.<sup>34</sup> In addition, FORHP officials stated that, based on this monitoring, they have added topics to research centers' agendas for subsequent years to gather more information on regulatory changes identified in its review of policy changes. Each year, specific research projects for the rural health research center are selected jointly by the center directors and FORHP. Topics are selected to have a timely impact on policy debates and decisions at both federal and state levels. Examples of added topics include North Carolina's research on the financial importance of the Sole Community Hospital and Low Volume Hospital designations and Iowa's research on the engagement of rural providers in Accountable Care Organizations.<sup>35</sup>

---

<sup>33</sup>See National Advisory Committee on Rural Health and Human Services, *Alternative Models to Preserving Access to Emergency Care* (2016).

<sup>34</sup>For example, see B.G. Kaufman et al., *Trends in Risk of Financial Distress among Rural Hospitals* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016).

<sup>35</sup>See, S. R. Thomas et al., *The Financial Importance of the Sole Community Hospital Payment Designation* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016), R.G. Whitaker et al., *The Impact of the Low Volume Hospital (LVH) Program on the Viability of Small, Rural Hospitals* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016), and A. Salako et al., *Characteristics of Rural Accountable Care Organizations (ACOs) – A Survey of Medicare ACOs with Rural Presence* (Iowa City, Iowa: Rural Policy Research Institute, 2015).

---

HHS has also used the results of its monitoring activities to update the types of services offered by certain grants and create new cooperative agreements for technical assistance. Specifically, for fiscal year 2016, FORHP officials updated the list of activities that Rural Health Network Development Planning grantees can spend funds on to include implementing innovative solutions to alleviate the loss of local services and enhance access to care in communities that have or are at risk of losing their local hospital. According to FORHP officials, the addition of this activity to the scope of the grant led to 11 of the 47 applicants from fiscal years 2016 and 2017 to come from rural communities with a recent rural hospital closure or perceived risk of closure. As another example, in response to increased funding, in 2018 FORHP announced a new cooperative agreement to provide targeted in-depth assistance to vulnerable rural hospitals within communities struggling to maintain health care services. The awardee of the Vulnerable Rural Hospitals Assistance Program must work with vulnerable hospitals and their communities on ways to ensure hospitals and communities can keep needed care locally, whether it is with a more limited set of services provided by the hospital, or by exploring other mechanisms for meeting community health care needs.

FORHP disseminates the results of this research and successful rural health grants and other projects by funding cooperative agreements to maintain clearinghouses of information about rural health issues.<sup>36</sup> These clearinghouses were originally designed to efficiently disseminate research findings from rural health research centers to the public and to help rural communities identify opportunities and information to provide better healthcare to their residents. According to one of these clearinghouses, since then, the focus has grown to developing evidence-based resources on rural health to share what works in rural communities, including toolkits and case studies.

---

<sup>36</sup>Most FORHP-funded monitoring and related research is publicly available on the Rural Health Research Gateway (<https://www.ruralhealthresearch.org/>), which is hosted at the University of North Dakota Center for Rural Health with FORHP funding, and includes research and findings of the FORHP-funded Rural Health Research Centers, 1997-present. The Rural Health Information Hub (<https://www.ruralhealthinfo.org/>), formerly the Rural Assistance Center, is funded by FORHP to be a national clearinghouse for information, opportunities, and resources on rural health, including, but not limited to, those funded by FORHP.

---

---

## Recent Increases in Rural Hospital Closures Have Disproportionately Occurred in the South, With Multiple Factors Likely Contributing to These Closures

---

From 2013 through 2017, More than Twice as Many Rural Hospitals Closed than in the Prior 5 Years

Our analysis of data from the North Carolina rural health research center and CMS shows that, from 2013 through 2017, 64 of the approximately 2400 rural hospitals in the United States closed.<sup>37</sup> These 64 rural hospital closures represented the following:

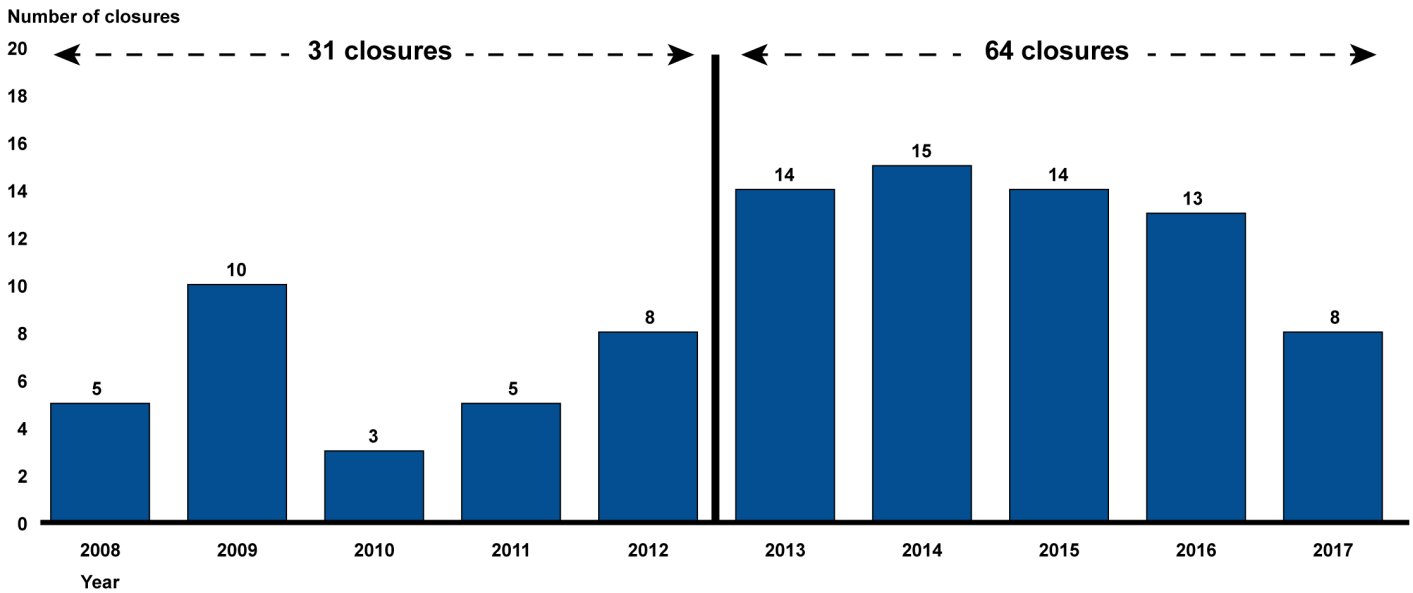
- **More than twice the number of rural hospitals that closed during the prior 5-year period.** From 2008 through 2012, 31 rural hospitals closed (see fig. 1).
- **More than the share of urban hospitals that closed.** The 64 rural hospital closures from 2013 through 2017—approximately 3 percent of all rural hospitals in 2013—exceeded the 49 urban hospital closures during the same time period—approximately 2 percent of all urban hospitals in 2013.
- **More than the number of rural hospitals that opened.** The 42 rural hospitals closed from 2014 through 2016 exceeded the 3 rural hospitals opened during the same time period.<sup>38</sup>

---

<sup>37</sup>The 64 hospitals that closed did not include the 8 hospitals that both closed and reopened between 2013 and 2017.

<sup>38</sup>The Medicare Payment Advisory Commission published rural hospital openings for 2014-2016. The Medicare Payment Advisory Commission defined rural as non-urban counties. In comparison, from 2014 through 2016, there were 30 hospital openings in urban counties.

**Figure 1: Nationwide Rural Hospital Closures from 2008 through 2012 and from 2013 through 2017**



Source: GAO analysis of Department of Health and Human Services-funded data. | GAO-18-634

Note: Hospitals were defined as general acute care hospitals in the United States, and a hospital closure as a cessation of inpatient services. Rural was defined using the Federal Office of Rural Health Policy’s definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3).

Approximately half of the rural hospitals that closed from 2013 through 2017—47 percent—ceased to provide any type of services. The remaining hospitals that closed during this period converted to other facility types, providing more limited or different services, such as urgent care, emergency care, outpatient care, or primary care.

**Rural Hospitals with Certain Characteristics—Including Those Located in the South—Accounted for a Disproportionate Share of Closures from 2013 through 2017**

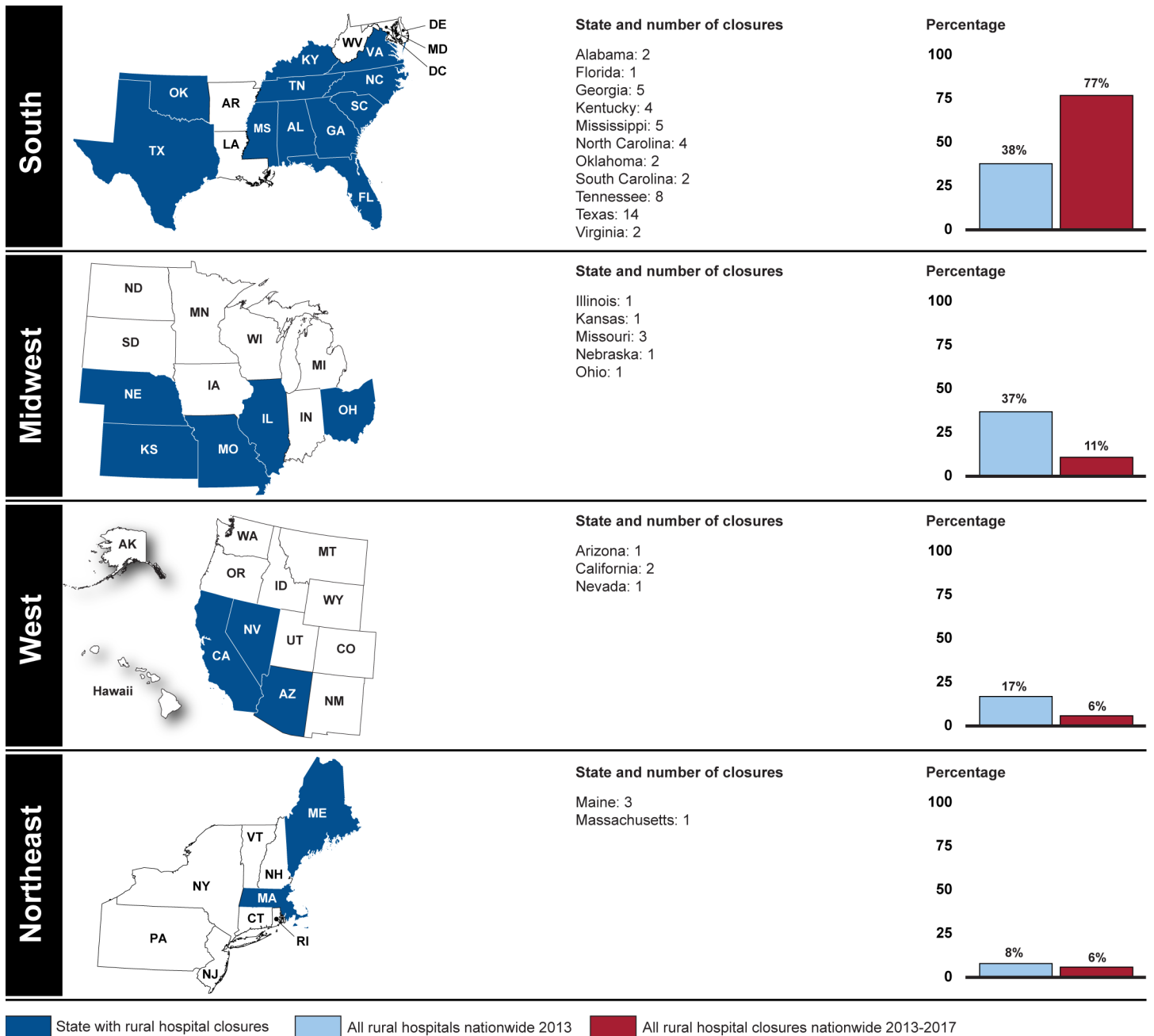
Our analysis of data from the North Carolina rural health research center and CMS shows that rural hospitals with certain characteristics—including those located in the South—accounted for a disproportionate share of the 64 closures that occurred from 2013 through 2017.

- **Geography.** Rural hospitals located in the South represented 38 percent of the rural hospitals in 2013, but accounted for 77 percent of the rural hospital closures from 2013 through 2017 (see fig. 2). Texas, one southern state, represented 7 percent of the rural hospitals in

---

2013, but accounted for 22 percent of the rural hospitals closures from 2013 through 2017.

**Figure 2: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Region and State**



Source: GAO analysis of Department of Health and Human Services (HHS) and HHS-funded data. | GAO-18-634

---

Note: Hospitals were defined as general acute care hospitals in the United States, and a hospital closure as a cessation of inpatient services. Rural was defined using the Federal Office of Rural Health Policy's definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3).

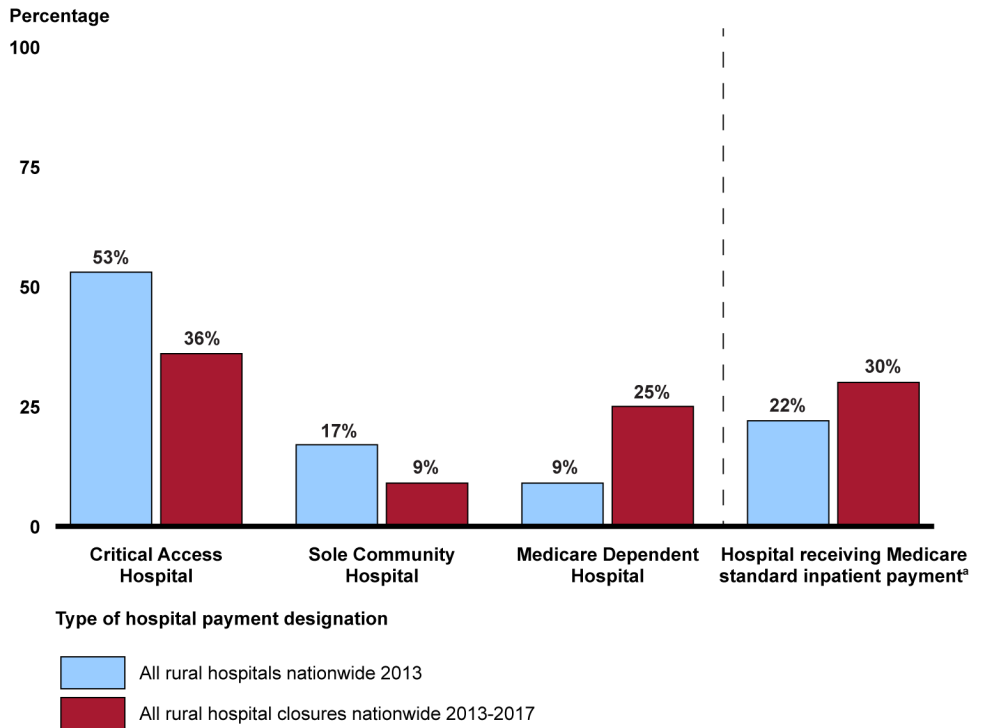
- **Medicare rural hospital payment designations.** Medicare Dependent Hospitals – one of three Medicare rural hospital payment designations in which hospitals were eligible to receive a payment rate other than standard Medicare inpatient payment rate – were disproportionately represented among hospital closures. Specifically, Medicare Dependent Hospitals represented 9 percent of the rural hospitals in 2013, but accounted for 25 percent of the rural hospital closures from 2013 through 2017. Rural hospitals that did not receive one of these three Medicare rural hospital payment designations also represented a disproportionate share of the closures (see fig. 3). In addition, hospitals designated as Low Volume Hospitals had a disproportionate share of the rural hospital closures.<sup>39</sup>

---

<sup>39</sup>Specifically, we found that hospitals designated as Low Volume Hospitals in 2013 represented 22 percent of the rural hospitals in 2013 but accounted for 42 percent of the rural hospital closures from 2013 through 2017. In contrast, hospitals designated as Rural Referral Centers represented 10 percent of all rural hospitals in 2013 but only 2 percent of the rural hospital closures from 2013 and 2017.



**Figure 3: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Medicare Rural Hospital Payment Designation**



Source: GAO analysis of Department of Health and Human Services (HHS) and HHS-funded data. | GAO-18-634

Note: Hospitals were defined as general acute care hospitals in the United States, and a hospital closure as a cessation of inpatient services. Rural was defined using the Federal Office of Rural Health Policy's definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3)

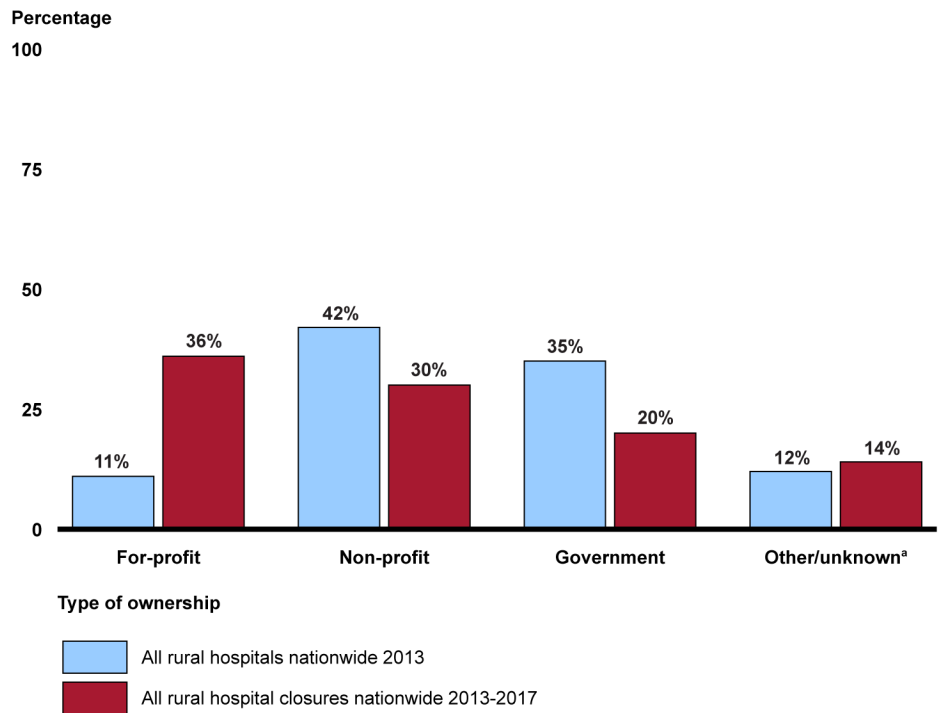
Percentages may not sum to 100 percent due to rounding.

<sup>a</sup>Hospitals that did not qualify as a Critical Access Hospital, Sole Community Hospital, or Medicare Dependent Hospital are included in this figure as hospital receiving Medicare standard inpatient payment. Medicare paid these hospitals for inpatient services based on the inpatient prospective payment system methodology.

- **Ownership.** For-profit rural hospitals represented 11 percent of the rural hospitals in 2013, but accounted for 36 percent of the rural hospital closures from 2013 through 2017 (see fig. 4). According to literature we reviewed, hospitals with for-profit status had a higher probability of financial distress and were more likely to close. For example, a 2017 study found that for-profit hospitals were more than

twice as likely to experience financial distress relative to government-owned and non-profit hospitals from 2000 through 2013.<sup>40</sup>

**Figure 4: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospitals Closures from 2013 through 2017, by Ownership Type**



Source: GAO analysis of Department of Health and Human Services (HHS) and HHS-funded data. | GAO-18-634

Note: Hospitals were defined as general acute care hospitals in the United States, and a hospital closure as a cessation of inpatient services. Rural was defined using the Federal Office of Rural Health Policy's definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3).

<sup>a</sup>The other ownership type code in the Provider of Services files does not specify ownership.

- **Bed size.** Rural hospitals with between 26 and 49 inpatient beds represented 11 percent of the rural hospitals in 2013, but accounted for 23 percent of the rural hospital closures from 2013 through 2017. Critical Access Hospitals have 25 acute inpatient beds or less and make up a majority of the rural hospitals, but were less likely than

<sup>40</sup>See G.M. Holmes et al., "Predicting Financial Distress and Closure in Rural Hospitals" *The Journal of Rural Health*, vol. 33 (2017), 244.

---

other rural hospitals to close. FORHP officials identified the Critical Access Hospital payment designation – in which Medicare pays designated hospitals based on their costs – paired with the related Medicare Rural Hospital Flexibility grant program as the most effective HHS payment policy and program to support rural hospitals’ financial viability and rural residents’ access to hospital services.<sup>41</sup>

---

### Fewer Patients Seeking Inpatient Care and Reductions in Medicare Payments Have Likely Contributed to Rural Hospital Closures

According to literature we reviewed and stakeholders we interviewed, rural hospital closures were generally preceded and caused by financial distress. In particular, rural hospitals that closed typically had negative margins which made it difficult to cover their fixed costs. For example, one 2016 study found that rural hospitals that closed from 2010 through 2014 had a median operating margin of -7.41 percent in 2009. In contrast, rural hospitals that remained open during the same time period had a median operating margin of 2.00 percent in 2009.<sup>42</sup> In addition, there is evidence that for-profit hospitals have been more sensitive to changes in profitability and more likely to experience financial distress, which could explain the disproportionate number of closures among rural hospitals with for-profit ownership type.<sup>43</sup>

The literature we reviewed and stakeholders we interviewed identified multiple factors that likely contributed to increased financial distress and

---

<sup>41</sup>According to FORHP officials, from fiscal year 2003 through fiscal year 2007, the percentage of Critical Access Hospitals with a positive operating margin increased steadily. There was a slight decline starting in fiscal year 2008, the same year as the recession, and the percentage leveled out again in fiscal year 2010. See app. I table 2 for a description of the Critical Access Hospital Payment Designation and app. I, table 3, for a description of the Medicare Rural Hospital Flexibility grant program.

<sup>42</sup>Critical Access Hospitals were separated out from these operating margin medians, but were similar. The study found that closed Critical Access Hospitals had a median operating margin of -7.56 percent and those that remained open had a median operating margin of 0.46 percent. According to this study, the operating margin was one of the two variables used to measure profitability in this study and according to this study one of the most consistent predictors of closure and financial distress. See B.G. Kaufman et al., *The Rising Rate of Rural Hospital Closures* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016), 40.

<sup>43</sup>A 2005 study noted that all hospitals must earn sufficient profits to operate, but found that for-profit hospitals were more likely to respond to the level of profitability than the other types of hospitals. This is consistent with our analysis of rural hospitals’ ownership type, which found that for-profit hospitals represented 11 percent of the rural hospitals in 2013, but accounted for 36 percent of the rural hospital closures from 2013 through 2017. See J.R. Horwitz, “Making Profits and Providing Care: Comparing Nonprofit, For-Profit, and Government Hospitals,” *Health Affairs*, vol.24, no.3 (2005), 796.

---

closures among rural hospitals. One such factor was a decrease in patients seeking inpatient care at rural hospitals due to the following:

- **Increased competition for the small volume of rural residents.** Rural residents may choose to obtain services from other health care providers separate from the local rural hospital, for example from an increasing number of federally qualified health centers or newer hospital systems outside of the area. The competition for the small volume of rural residents between rural hospitals and other health care providers potentially increased due to the shift to paying for value instead of volume, and technology changes.<sup>44</sup> This increased competition for a small volume of rural residents could explain disproportionate closures among hospitals receiving the Low Volume Hospital Medicare payment designation, hospitals that by definition have a low Medicare volume and that research has found have lower margins than other rural hospitals.<sup>45</sup> In addition, representatives from the American Hospital Association told us that technological advances have allowed more services to be provided in outpatient settings.<sup>46</sup> For example, changes in health care technology have expanded the provision of outpatient surgical procedures.
- **Declining rural population.** The years 2010 through 2016 marked the first recorded period of rural population decline.<sup>47</sup> According to

---

<sup>44</sup>The transition to paying for value instead of volume involves two shifts: (1) increasing accountability for quality and total cost of care, and (2) a greater focus on population health management as opposed to payment for specific services. A 2016 study found that this shifted investment away from inpatient care and toward outpatient settings, such as preventive and primary care. See J. Wishner et al., *A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies* (Menlo Park, Calif.: Kaiser Family Foundation, 2016), 6.

<sup>45</sup>Low Volume Hospitals—one of the Medicare’s additional rural hospital payment designations—are required to have less than 1,600 Medicare inpatient discharges per year. For margins, see Whitaker et al., *The Impact of the Low Volume Hospital (LVH) Program on the Viability of Small, Rural Hospitals* (Chapel Hill, N.C.: North Carolina Rural Health Research Program, 2016), 4. See app. I, table 2, for a description of each of the five Medicare rural hospital payment designations.

<sup>46</sup>Representatives from the American Hospital Association told us that technological advances have affected urban hospitals as well, but urban hospitals, due to their volume of services, have more capability to adjust services, such as by reducing inpatient beds.

<sup>47</sup>Recent population estimates show signs of population recovery in rural area in the United States (2015-2016). Other factors that led to population decline in rural areas include continuous outmigration of young adults, which ages the population, and increased mortality among working-age adults. See U.S. Department of Agriculture, Economic Research Service, “Rural America at a Glance,” *Economic Information Bulletin* 182 (November 2017), 2.

---

literature we reviewed and stakeholders we interviewed, the recent population decline in rural areas was likely associated with the recent decline in rural residents seeking inpatient services.

Another factor highlighted by literature we reviewed and stakeholders we interviewed as contributing to rural hospitals' increased financial distress was across-the-board Medicare payment reductions. Rural hospitals are sensitive to changes to Medicare payments because, on average, Medicare accounted for approximately 46 percent of their gross patient revenues in 2016.<sup>48</sup> A 2016 study found that Medicare Dependent Hospitals' operating margins decreased each year from 2012 through 2014, which could explain the disproportionate number of closures among the Medicare Dependent Hospital payment designation.<sup>49</sup> The literature we reviewed and stakeholders we interviewed highlighted the recent Medicare payments cuts as contributing to rural hospital closures, which included the following:

- **Reductions in nearly all Medicare reimbursements.** Under sequestration – the cancellation of budgetary resources under presidential order implemented pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985, as amended – each fiscal year since 2013, nearly all Medicare's budget authority is subject to a reduction not exceeding 2 percent, which is implemented through reductions in payment amounts.<sup>50</sup> According to stakeholders we interviewed, these payment reductions have contributed to negative margins for rural hospitals.
- **Reductions in Medicare bad debt payments.** Under the Middle Class Tax Relief and Job Creation Act of 2012, Medicare bad debt reimbursements for hospitals were reduced beginning in fiscal year

---

<sup>48</sup>Revenue estimate is from the American Hospital Association, which defined rural as non-metropolitan counties. In comparison, Medicare accounted for approximately 43 percent of urban hospitals' gross revenues in 2016.

<sup>49</sup>One of the eligibility requirements for the Medicare Dependent Hospitals is the hospital must have greater than or equal to 60 percent of inpatient days or discharges from Medicare beneficiaries. See app. I, table 2, for a description of each of the five Medicare rural hospital payment designations. See S.R. Thomas et al., *2012-14 Profitability of Urban and Rural Hospitals by Medicare Payment Classification* (Chapel Hill, N.C.: North Carolina Rural Health Research Program. 2016), 3.

<sup>50</sup>See 2 U.S.C. § 901a(6). Under current law, sequestration of direct spending to achieve budgetary goals may be required every year through fiscal year 2027.

---

2013.<sup>51</sup> According to stakeholders, Medicare bad debt cuts have been one of the most important factors contributing to the recent increase in rural hospital closures.

The literature we reviewed and stakeholders we interviewed also identified factors that likely strengthened the financial viability of rural hospitals. Chief among these factors was the increased Medicaid eligibility and enrollment under the Patient Protection and Affordable Care Act.<sup>52</sup> A 2018 study found that Medicaid expansion was associated with improved hospital financial performance and substantially lower likelihood of closure, especially in rural markets and counties with large numbers of uninsured adults before Medicaid expansion.<sup>53</sup> Another 2017 study found that from 2008-2009 and 2014-2015 the drop in uninsured rates corresponded with states' decisions to expand Medicaid on or before January 1, 2014. The increase in Medicaid coverage and decline in uninsured were both largest in the small towns and rural areas of those expansion states.<sup>54</sup> Additionally, our analysis of data from the North Carolina rural health research center and CMS shows that from 2013 through 2017, rural hospitals in states that had expanded Medicaid as of April 2018 were less likely to close compared with rural hospitals in states that had not expanded Medicaid (see fig. 5).

---

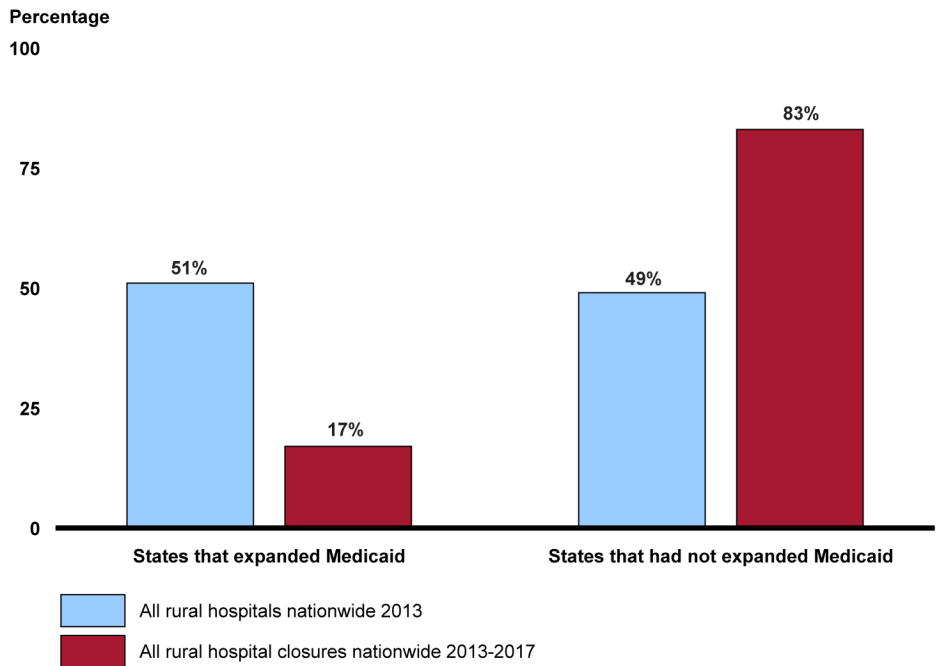
<sup>51</sup>See Pub. L. No. 112-96, § 3201, 126 Stat.156,192 (2012) (codified at 42 U.S.C § 1395x(v)(1)(T), (W)). For most hospitals, reductions in payments for allowable bad debt amounts were increased from 30 to 35 percent beginning in fiscal year 2013. In the case of Critical Access Hospitals, such reductions were subject to a phased increase from 12 to 35 percent over fiscal years 2013 to 2015. See 42 C.F.R. § 413.89(h)(1), (4) (2017).

<sup>52</sup>Beginning in 2014, states could expand Medicaid eligibility under their state plans to nonpregnant, nonelderly adults who were not eligible for Medicare and whose income did not exceed 133 percent of the federal poverty level. See 42 U.S.C. § 1396a(a)(10)(A)(i)(VIII).

<sup>53</sup>This same study reported that rural hospitals experienced better total margins, operating margins, and Medicaid and uninsured margins because of Medicaid expansion. See R.C. Lindrooth et al., "Understanding the Relationship Between Medicaid Expansions and Hospital Closures," *Health Affairs*, vol.37, no.1 (2018), 116-117.

<sup>54</sup>Specifically, the rate of uninsured adults in rural and small-town counties fell by 11 percent in states that expanded Medicaid on or before January 1, 2014, but only 6 percent in states that did not expand Medicaid. In contrast, during the same time period the rate of uninsured adults in urban areas fell by 9 percent in states that expanded Medicaid on or before January 1, 2014. See J. Hoadley et al., *Medicaid in Small Towns and Rural America: A Lifeline for Children, Families, and Communities* (Washington, D.C.: Georgetown University Center for Children and Families and North Carolina Rural Health Research Program, 2017), 9.

**Figure 5: Percentage of Rural Hospitals in 2013 Relative to Percentage of Rural Hospital Closures from 2013 through 2017, by Medicaid Expansion Status**



Source: GAO analysis of Department of Health and Human Services (HHS) and HHS-funded data. | GAO-18-634

Note: Hospitals were defined as general acute care hospitals in the United States, and a hospital closure as a cessation of inpatient services. Rural was defined using the Federal Office of Rural Health Policy's definition (areas in (i) a non-metropolitan county, (ii) a metropolitan county, but with a Rural-Urban Commuting Area code of 4 or higher, or (iii) in one of 132 large and sparsely populated census tracts with a Rural-Urban Commuting Area code of 2 or 3).

Medicaid expansion status is as of April 2018.

## Agency Comments

We provided a draft of this report to HHS for comment. The Department provided technical comments, which we incorporated as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the appropriate congressional committees, the Secretary of Health and Human Services, the Administrator of Health Resources & Services Administration, the Administrator of CMS, and other interested parties. In

---

addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

A handwritten signature in black ink, appearing to read 'James Cosgrove', with a stylized flourish at the end.

James Cosgrove  
Director, Health Care



# Appendix I: Rural-Specific Payment Policies and Programs That Provide Key Support to Rural Hospitals

Officials from the Department of Health and Human Services (HHS) identified several rural-specific HHS payment policies and programs as providing key support to rural hospitals, and in turn, rural residents' access to hospital services. These key HHS payment policies and programs may be placed into three categories:

- Medicare rural hospital payment designations (table 2);
- Rural grants, cooperative agreements and contracts (table 3); and
- New approaches in rural health care delivery and payment (table 4).

**Table 2: Medicare Rural Hospital Payment Designations**

Name	Eligibility requirements	Payment methodology adjustments	Number of rural hospitals (2017)
Critical Access Hospital <sup>a</sup>	Geographic: meets all of the following requirements: In state with Medicare rural hospital flexibility program Located in rural area or reclassified as rural Either of: (i) > 35 miles from nearest hospital, (ii) > 15 miles via mountainous or secondary roads, or (iii) prior to 2006, deemed by the state as a necessary provider Size: < = 25 acute inpatient beds Other: meet conditions of participation, including 24/7 emergency care and average annual acute care length of stay < 96 hours	Inpatient services: Generally 101 percent of reasonable costs <sup>b</sup> Other services: Generally 101 percent of reasonable costs	1250
Sole Community Hospital <sup>c</sup>	Geographic: meets any of the following requirements: > 35 miles from like hospital; <sup>d</sup> or located in rural area or reclassified as rural, 25-35 miles from like hospital, and <= 25 percent of residents or Medicare beneficiaries who become inpatients in hospitals' service area are admitted to other like hospitals (or admitting criteria would have been met if not for unavailability of necessary specialty services, and hospital has < 50 beds); or located in rural area or reclassified as rural, 15-35 miles from like hospital, and because of topography or weather conditions, like hospitals are inaccessible for at least 30 days in each of 2 out of 3 years; or located in rural area or reclassified as rural, >= 45 minutes travel time to nearest like hospital, because of distance, posted speed limits, and predictable weather conditions	Inpatient: Operating payments based on higher of (i) standard prospective payment or (ii) hospital-specific rate based on costs as of 1982, 1987, 1996, or 2006 Additional payment adjustment if experiences a >= 5 percent decline in inpatient volume due to circumstances beyond its control Other services: 7.1 percent additional payment for outpatient services	386

**Appendix I: Rural-Specific Payment Policies  
and Programs That Provide Key Support to  
Rural Hospitals**

Name	Eligibility requirements	Payment methodology adjustments	Number of rural hospitals (2017)
Medicare Dependent Hospital <sup>e</sup>	Geographic: Located in rural area or reclassified as rural Size: <= 100 beds Other: >= 60 percent of inpatient days or discharges were for Medicare beneficiaries	Inpatient: Operating payments based on higher of (i) standard prospective payment or (ii) the standard payment plus 75 percent of the amount by which the standard payment is exceeded by the hospital-specific rate based on costs as of 1982, 1987, or 2002  Same adjustment for decreased volume as Sole Community Hospitals	146
Low Volume Hospital <sup>f</sup>	Geographic: generally > 15 miles from nearest hospital <sup>g</sup> Size: < 1,600 Medicare inpatient discharges per year	Inpatient: Additional percentage based on number of Medicare discharges, up to a maximum of 25 percent for hospitals with <= 200 discharges	529
Rural Referral Center <sup>h</sup>	Geographic: Located in rural area or reclassified as rural Size and referrals: meets any of the following criteria: >= 275 beds Both (i) >= 50 percent of Medicare patients are referred from other hospitals or physicians not on staff of the hospital; and (ii) >= 60 percent of Medicare patients and Medicare services provided to those who live > 25 miles from the hospital >= 50 percent of Medicare staff are specialists, and number of discharges and case-mix exceed certain criteria >= 60 percent of Medicare discharges are for patients who live > 25 miles from the hospital, and number of discharges and case-mix exceed certain criteria >= 40 percent of all patients are referred from other hospitals or physicians not on staff of the hospital, and number of discharges and case-mix exceed certain criteria	Inpatient: Exempt from 12 percent cap on Disproportionate Share Hospital Payments applicable to other rural hospitals Other: Exemptions from certain requirements related to geographic reclassification	223

Source: GAO summary of laws and regulations generally applicable to designated rural hospitals as of 2017, and analysis of Centers for Medicare & Medicaid Services data. | GAO-18-634

Note: These 5 Medicare rural hospital payment designations are targeted at areas that are rural or isolated. A rural hospital may qualify as a Critical Access Hospital, Sole Community Hospital, or Medicare Dependent Hospital. With the exception of Critical Access Hospitals, rural hospitals may also qualify as Low Volume Hospitals and Rural Referral Centers. Because the Low Volume Hospital designation is based on the volume of services provided and does not require formal certification, it is more likely than other payment designations to be applied to a hospital one year and not the next. Because of different definitions of rural, not all hospitals designated as one of the Medicare rural hospital designations are in areas that would meet the definition of rural used by the Federal Office of Rural Health Policy (FORHP). The count of rural hospitals is limited to those that meet FORHP's definition of rural, and include all rural hospitals with each designation (regardless of whether they also received an additional designation). Hospitals were defined as general acute care hospitals in the United States and rural was defined using FORHP's definition of rural. Under sequestration—the cancellation of budgetary resources under presidential order implemented pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985, as amended—each fiscal year since 2013, nearly

---

**Appendix I: Rural-Specific Payment Policies  
and Programs That Provide Key Support to  
Rural Hospitals**

---

all Medicare's budget authority is subject to a reduction not exceeding 2 percent, which is implemented through reductions in payment amounts.

<sup>a</sup>Critical Access Hospital: 42 U.S.C. § 1395i-4, 42 C.F.R. §§ 485.601 et seq. (2017) (eligibility requirements); 42 U.S.C. §§ 1395f(l), 1395m(g), (l)(8), 42 C.F.R. § 413.70 (2017) (payment methodology adjustments).

<sup>b</sup>Critical Access Hospitals are paid based on the relevant standard prospective payment system methodologies for inpatient services provided in distinct part psychiatric and rehabilitation units.

<sup>c</sup>Sole Community Hospital: 42 U.S.C. § 1395ww(d)(5)(D), 42 C.F.R. § 412.92 (2017) (eligibility requirements and payment methodology adjustments); 42 U.S.C. § 1395l(t)(13)(B), 42 C.F.R. § 419.43(g) (2017) (payment methodology adjustments).

<sup>d</sup>"Like" hospitals are those that furnish short-term, acute care paid under the inpatient prospective payment system, and are not Critical Access Hospitals.

<sup>e</sup>Medicare Dependent Hospital: 42 U.S.C. § 1395ww(d)(5)(G), 42 C.F.R. § 412.108 (2017) (eligibility requirements and payment methodology adjustments).

<sup>f</sup>Low Volume Hospital: 42 U.S.C. § 1395ww(d)(12), 42 C.F.R. § 412.101 (2017) (eligibility requirements and payment methodology adjustments).

<sup>g</sup>Low Volume Hospitals may be within 15 miles of certain types of hospitals excluded from Section 1886(d) of the Social Security Act, such as Critical Access Hospitals.

<sup>h</sup>Rural Referral Center: 42 U.S.C. § 1395ww(d)(5)(C)(i), 42 C.F.R. § 412.96 (2017) (eligibility requirements and payment methodology adjustments).

**Appendix I: Rural-Specific Payment Policies  
and Programs That Provide Key Support to  
Rural Hospitals**

**Table 3: Rural Grants, Cooperative Agreements, and Contracts Identified by the Department of Health and Human Services (HHS) as Providing Key Support to Rural Hospitals**

Name and description	FY 2017 Awardee(s)	Total FY 17 Award (dollars in millions)
<b>Grants</b>		
<b>Medicare Rural Hospital Flexibility Grant Program:</b> Supports Critical Access Hospitals by providing funding to state governments to encourage quality and performance improvement activities including: stabilizing rural hospital finance; integrating emergency medical services into their health care systems; incorporating population health; and fostering innovative models of health care.	45 states	25
<b>Rural Health Network Development Program:</b> Supports networks (potentially including hospitals) in combining the functions of the entities participating in the network to: achieve efficiencies; expand access, coordinate, and improve the quality of essential health care services; and strengthen the rural health care system as a whole. One activity awardees can choose is implementing innovative solutions to alleviate the loss of local services and enhance access to care for communities that may have or are at risk of losing their local hospital.	51 networks	15
<b>Small Rural Hospital Improvement Grant Program:</b> Supports small rural hospitals of 49 beds or less, in doing any or all of the following: purchase equipment and/or training to help hospitals participate in the hospital value-based purchasing program; join or become Accountable Care Organizations, or create shared savings programs; and purchase health information technology, equipment, and/or training to comply with meaningful use, ICD-10 standards, and payment bundling.	46 states	14
<b>Rural Health Care Services Outreach Program:</b> Supports consortia (potentially including hospitals) in expanding delivery of health care services in rural communities.	59 consortia	12
<b>Delta States Rural Development Network Grant Program:</b> Supports the development of integrated health care networks (potentially including hospitals) in eight delta states. <sup>a</sup> Due to the high disparities in the region, applicants are required to propose a program based on one of the following focus areas: diabetes; cardiovascular disease; obesity; acute ischemic stroke; or mental including related behavioral health and target the program to the services.	12 networks	10
<b>Small Health Care Provider Quality Improvement:</b> Supports rural primary care providers (such as hospitals) in planning and implementation of quality improvement activities.	32 providers	6
<b>Rural Health Network Development Planning Grant Program:</b> Supports development of integrated healthcare networks (potentially including hospitals). One activity awardees can focus on is alleviating the loss of local services and enhancing access to care for communities that may have or are at risk of losing their local hospital.	23 networks	2
<b>Cooperative agreements and contracts</b>		
<b>Delta Region Community Health Systems Development:</b> Supports Health Resources & Services Administration’s collaboration with the Delta Regional Authority to develop a pilot program to help underserved rural communities in the Delta region identify and better address their health care needs and to help small rural hospitals improve their financial and operational performance.	National Rural Health Resource Center	2

**Appendix I: Rural-Specific Payment Policies  
and Programs That Provide Key Support to  
Rural Hospitals**

Name and description	FY 2017 Awardee(s)	Total FY 17 Award (dollars in millions)
<b>Information Services to Rural Hospital Flexibility Grantees Program Cooperative Agreement</b> (Technical Assistance and Services Center): Provides technical assistance to beneficiaries of Federal Office of Rural Health Policy initiatives (such as hospitals) to improve quality and financial viability in rural communities. Assistance will be provided in the areas of quality improvement, quality reporting, performance improvements and benchmarking, community engagement and population health, provision of rural emergency medical services, and building capacity to participate in alternative payment models.	National Rural Health Resource Center	1
<b>Medicare Rural Hospital Flexibility Program Evaluation Cooperative Agreement:</b> Monitors and evaluates the Medicare Rural Hospital Flexibility grant program, and provides resources for the grantees to support quality improvement, financial and operational improvement, and health systems development in rural America.	Flex Monitoring team, led by University of Minnesota	1
<b>Rural Health Value:</b> Analyzes impacts of changes in the health care delivery system, and provides technical assistance to rural providers (such as hospitals) in identifying potential new approaches to health care delivery in their communities.	Rural Health Value team: (University of Iowa and Stratis Health)	0.5
<b>Small Rural Hospital Transitions Project:</b> Assists small rural hospitals in transitioning to value-based care and Alternative Payment Models, as well as preparing for population health management.	Rural Health Innovations, subsidiary of National Rural Health Resource Center	0.5
<b>Rural Quality Improvement Technical Assistance Cooperative Agreement:</b> Provides technical assistance to beneficiaries of the Federal Office of Rural Health Policy's quality initiatives (such as hospitals) to improve quality and health outcomes in rural communities.	Stratis Health	0.5
<b>Frontier Community Health Integration Project Demonstration Technical Assistance, Tracking, and Analysis Program:</b> Provides technical assistance to ten Critical Access Hospitals participating in a model to test new approaches to health care delivery, reimbursement, and coordination in sparsely populated rural areas.	Montana Health Research and Education Foundation	0.5

Source: Interviews with HHS officials and GAO summary of HHS documents and data. | GAO-18-634

Note: Dollar amounts rounded to nearest million (or, if less than 1 million, to nearest 0.5 million).

<sup>a</sup>The eight delta states include Alabama, Arkansas, Kentucky, Illinois, Louisiana, Mississippi, Missouri, and Tennessee.

**Appendix I: Rural-Specific Payment Policies  
and Programs That Provide Key Support to  
Rural Hospitals**

**Table 4: New Approaches in Rural Health Care Delivery and Payment Identified by the Department of Health and Human Services (HHS) as Providing Key Support to Rural Hospitals**

Name and description	Participants	Total Obligations (dollars in millions)
<b>Accountable Care Organization Investment Model:</b> Tests the effectiveness of pre-paid shared savings in encouraging new Medicare Shared Savings Program Accountable Care Organizations, which can include hospitals, to form in rural and underserved areas and in encouraging current Medicare Shared Savings Program Accountable Care Organizations to transition to arrangements with greater financial risk.	45 organizations	96 <sup>a</sup>
<b>Rural Community Hospital Demonstration:</b> Tests the feasibility and advisability of cost based reimbursement for small rural hospitals that are too large to be Critical Access Hospitals.	30 hospitals	N/A
<b>Frontier Community Health Integration Project Demonstration:</b> Tests new models of integrated, coordinated health care in the most sparsely-populated rural counties with the goal of improving health outcomes and reducing Medicare expenditures.	10 hospitals	N/A
<b>Pennsylvania Rural Health Model:</b> Tests whether multi-payer global budgets will enable participating rural hospitals to invest in quality and preventive care and to tailor the services they deliver to better meet the needs of their local communities.	TBD <sup>b</sup>	TBD <sup>b</sup>

Source: Interviews with HHS officials and GAO summary of HHS documents. | GAO-18-634

Note: amounts rounded to nearest million.

<sup>a</sup>Reflects obligations for fiscal years 2012 through 2018.

<sup>b</sup>Because rural hospitals are scheduled to begin participating in the model in January 2019 and continue through 2024, total hospitals and obligations for this model are not yet finalized. The target is for 6 rural hospitals to participate in the first performance year, increasing to at least 30 rural hospitals by the third performance year of the model.

---

# Appendix II: GAO Contact and Staff Acknowledgments

---

---

## GAO Contact

James Cosgrove, (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov)

---

## Staff Acknowledgments

In addition to the contact named above, Greg Giusto (Assistant Director), Alison Binkowski (Analyst-in-Charge), George Bogart, Zhi Boon, Leia Dickerson, Krister Friday, Mike Hoffman, Peter Mann-King, Beth Morrison, Vikki Porter, Merrile Sing, and Chris Woika made key contributions to this report.

---

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<https://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <https://www.gao.gov> and select "E-mail Updates."

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).  
Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#).  
Visit GAO on the web at <https://www.gao.gov>.

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <https://www.gao.gov/fraudnet/fraudnet.htm>

Automated answering system: (800) 424-5454 or (202) 512-7700

---

## Congressional Relations

Orice Williams Brown, Managing Director, [WilliamsO@gao.gov](mailto:WilliamsO@gao.gov), (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

---

## Public Affairs

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548

---

## Strategic Planning and External Liaison

James-Christian Blockwood, Managing Director, [spel@gao.gov](mailto:spel@gao.gov), (202) 512-4707 U.S. Government Accountability Office, 441 G Street NW, Room 7814, Washington, DC 20548



Please Print on Recycled Paper.