

# The Evolution of Hospital Designations and Payment in the U.S.: Implications for Rural Hospitals

---

## *Principal Authors*

Onyinye Oyeka, MPH

A. Clinton MacKinney, MD, MS

Keith J. Mueller, PhD (Panel Chair)

## *Prepared by the RUPRI Health Panel*

Alva O. Ferdinand, DrPh, JD

Alana D. Knudson, PhD

Jennifer P. Lundblad, PhD, MBA

Timothy D. McBride, PhD

---

DECEMBER 2022



## ACKNOWLEDGEMENTS

This report was supported through a cooperative agreement with the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), US Department of Health and Human Services (HHS), under cooperative agreement/grant #U18RH30805. The information, conclusions and opinions expressed in this report are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.

## Introduction

Between 2005 and 2022, 181 rural hospitals in the U.S. closed\*.[1] Hospital closures are often caused by inadequate operating margins to cover fixed costs.[2] The financial viability of a rural hospital is dependent on several factors, including Medicare payment rates implemented by the Centers for Medicare & Medicaid Services (CMS).[3] Due to Medicare's status as the principal payer of rural hospitals, Medicare payment policy plays a predominant role in rural hospitals' financial viability.[4] Payment systems are fundamental to a rural hospital's financial viability and capacity to fulfill its mission.

When Medicare and Medicaid were first implemented, hospitals were reimbursed for patient care under a retrospective cost-based reimbursement system. Hospital costs under this system increased dramatically, from \$3 billion in 1967 to \$37 billion in 1983.[5] To control the growth of hospital spending and incentivize hospitals to operate efficiently, Congress established the Medicare Inpatient Prospective Payment System (Inpatient PPS) in 1983. Inpatient PPS substituted a predetermined, standardized payment for an entire inpatient episode rather than a payment based on the cost of providing care.[6] Inpatient PPS was based on state demonstrations led by the then Health Care Financing Administration (HCFA), now the Centers for Medicare & Medicaid Services (CMS) Office of Research and Demonstration. Inpatient PPS demonstrations primarily occurred in urban hospitals, with minimal rural testing before nationwide implementation.[7]

However, the original Inpatient PPS did not adequately consider the unique environment in which most rural hospitals operate.[8] In the early years of Inpatient PPS, rural hospitals, especially small rural hospitals, frequently experienced financial losses when treating Medicare patients because payments were inadequate to cover the cost of providing care.[9] Consequent to inadequate payment, rural hospital closures increased from an average of 14 per year in 1980 to more than 40 per year in 1989.[8] In response to rural hospital closures, Congress created a series of special designations for certain rural hospitals (including the Critical Access Hospital [CAH] designation in 1997) and modified the Inpatient PPS to increase payments to rural hospitals at risk for financial distress.[6] Over time, Congress has implemented further statutory provisions and demonstrations that increase Medicare payments to rural hospitals and test innovative delivery and value-based payment models designed to improve rural hospitals financial sustainability and maintain access to essential rural health care services.

---

\* Hospital closure because the facility no longer provides health care services, or it ceases to provide inpatient services but continue to provide some health care services (i.e., primary care). Hospital closures can be complete closures or converted closures.

The past is a prologue for the future; therefore, this paper aims to provide an overview of historic and current Medicare rural hospital payment policies and alternative payment models to understand their impact on rural hospitals and the communities they serve. We first describe the realities of rural hospitals that should be considered when designing payment systems and discuss the historical context leading to the implementation of the Inpatient PPS. We then describe special rural hospital payment provisions and designations, including legislative modifications to the Inpatient PPS. Finally, we describe current federal payment models that are of importance to rural hospitals and potential revenue streams that support rural hospitals.

## **Background**

Rural hospitals play a vital role in the health and health care of rural communities. Rural hospitals also may serve as a major employer in the community,[10, 11] generating jobs and a tax base that supports the local economy. However, despite multiple legislative interventions, rural hospitals continue to face multiple exogenous and endogenous threats to financial viability that consequently risk the delivery of essential rural health care services.[11] Factors that potentially create challenges for rural hospitals include the following:

- **Low Patient Volume**

By definition, most rural hospitals operate in low population density areas. Furthermore, the rural percentage of the U.S. population has steadily declined for decades.[12] Thus, compared to urban hospitals, rural hospitals may not have sufficient patient volume to achieve the economies of scale required to cover fixed operating costs.[2, 13] As a result, low patient volume has been linked with a higher risk of hospital closure in rural areas<sup>[14]</sup> because the average cost per rural hospital patient is significantly higher than the average cost per patient in larger hospitals. Payment policies inadequately account for this difference.[15]

- **Patient Mix**

Rural hospitals often provide services to a population that is older, sicker, and poorer compared to urban hospitals.[2] Although more than 14 percent of the total U.S. population is aged 65 and above, this group accounts for 23 percent of the population in rural areas.[16] Rural demography significantly determines rural hospital patient mix, but rural geography plays a part too. Due to long travel time to rural providers, which may be exacerbated by difficult terrain and/or inclement weather, rural residents often delay accessing health care, thus worsening illness or injury severity. Greater illness or injury acuity often requires more costly level-of-care or transfer to an urban-based health care facility.[17]

- **Payer Mix and Characteristics**

A hospital's overall profitability is determined by the relative size of each payer's contribution to the hospital's total margin.[15] In part because rural hospitals are more reliant on public payers (e.g., Medicare and Medicaid) than are urban hospitals,[15, 18] Congress created a series of special designations for certain rural hospitals and modified the Inpatient PPS to increase payments to rural hospitals at risk for financial distress.<sup>6</sup> For example, CAHs receive cost-based reimbursement at 101 percent of reasonable costs rather than Inpatient PPS (and Outpatient PPS – see below) payments.[6] Reasonable costs are costs that are necessary and proper to provide services and must be related to patient care. To be paid, costs must be properly documented in the cost report.[19] However, Medicare sequestration has reduced payment by 2 percentage points, meaning that Medicare pays CAHs at 99 percent of cost.[20] Conversely, Medicare Advantage (MA) plans and other commercial plans are not required to pay CAHs based on cost. MA payers negotiate directly with health care organizations, and may offer payments at varying rates that may or may not cover costs.[21]

Medicaid payment is generally lower than Medicare and commercial insurance payments. The proportion of Medicaid business has become more relevant to a rural hospital's financial performance since the implementation of the Affordable Care Act and consequent Medicaid expansion.[22] However, Medicaid programs often strain state budgets, and therefore, state legislators and regulators may try to contain Medicaid spending by reducing covered services.[20] In addition, commercial insurance payers, including Medicare Advantage plans, pay less than the cost to deliver health care services in small rural hospitals.[15] Therefore, rural hospitals often have limited ability to cross-subsidize money-losing services such as emergency[11] and obstetric services,[23-25] which further stresses financial sustainability.[26]

Taken together, these payment conditions suggest that, although no individual payer is the sole cause of financial losses or profits at small rural hospitals, the relative size of payer contributions to hospitals' total margins (i.e., the payer-specific payment amount relative to the hospital's cost to provide the services) and the volume of patients and services that are paid for by a payer influence rural hospital profitability. Reduced total margins have been estimated to be 5 percent related to self-pay patient care, 3 percent related to uncompensated care, and 1 percent related to Medicaid patient care.[3, 15]

- **Geographic Isolation**

Rural patients often travel longer distances than urban patients, navigate difficult terrains, encounter inclement weather, and face barriers to reliable transportation to access common health care services.[9] Furthermore, rural patients travel longer distances for specialty care than urban patients due to the large population base required to support such care. A recent Government Accountability Office study reported that recent rural

hospital closures have increased the median distance to the most common health care services by 20 miles. The report noted that the median distance an urban Medicare beneficiary traveled for an evaluation and management visit with a specialist was about 9 miles, compared with 26 miles to 58 miles for rural beneficiaries.[27] Low-income and elderly rural residents are more likely to delay or forgo care after a rural hospital closes if they have to travel longer distances to access hospital services.[2]

- **Workforce Challenges**

Rural hospitals are often located distant from population centers, making it difficult for hospitals to recruit and retain health care professionals.[28] Even though 23 percent of the U.S. population lives in rural areas, less than 10 percent of U.S. physicians practice in these communities.[16] Rural areas face significant limitations in both primary and specialty care physician workforce. For example, in 2019 there were 50 general internal medicine physicians per 100,000 population in urban areas compared to 12 per 100,000 in rural areas. While the ratio of family physicians is higher in rural areas (49 per 100,000 population) than in urban areas (42 per 100,000 population), about 5 percent of rural counties, mostly noncore rural counties, have no family physicians.[29] Recent increases in hospital closures have further exacerbated the health care workforce shortage.[30]

- **Policy and Regulatory Changes**

In addition to demographic and social challenges, rural hospitals must also navigate policy and regulatory changes that impact health care delivery and payment. Understanding and responding to rapidly changing policies and regulations can be challenging for under-resourced rural hospitals. For example, the 1983 implementation of Inpatient PPS dramatically altered hospital payment.[9] In response, many rural hospitals closed.[31] Although Congress created special rural hospital designations to maintain access to rural health care services,[6] the myriad of hospital designations and associated regulations presents significant compliance challenges. Implemented in 1986, Conditions of Participation (CoP) are federal health and safety requirements developed by CMS to ensure high-quality care for all patients. Hospitals and CAHs must meet CoP to participate in the Medicare and Medicaid programs.[32] Over time, some CoP requirements have become duplicative and burdensome, specifically for small rural hospitals with limited resources. However, efforts are being made to modify, streamline, or repeal redundant regulations. For example, CoP require that diagnostic and therapeutic, laboratory, radiology, and emergency services be provided by CAH staff on-site, exacerbating staffing challenges. In response, CoP modification allowed CAHs flexibility to affiliate with other providers, as well as use temporary entities, to address efficiencies and alleviate work force shortages.[33]

## **Hospital Payment Evolution**

The creation of the Medicare and Medicaid programs in 1965 expanded access to health care benefits for a large portion of the American population and increased demand for health care services, particularly inpatient hospital services.[7] Initial Medicare payment for inpatient hospital services was based on the “reasonable cost” of delivering services. The motivation for the “reasonable cost” payment methodology was to establish acceptability of, and participation in, the Medicare and Medicaid programs among providers (specifically hospitals) to ensure an adequate number of providers willing to deliver services to beneficiaries.[7] When implementing and defining “reasonable cost,” Medicare intended it to mean the payment of actual costs, however widely they varied from one hospital to another. The only limit on the magnitude of the cost difference was that a hospital’s cost had to be equivalent to the costs at other hospitals in the same area of comparable size, scope of service, utilization, and other relevant factors. Providers were incentivized to expand services without an incentive to contain costs.[34] As a result, Medicare expenditures increased rapidly due in part to growing hospital care costs driven by increased health care utilization and new technological advances.[34, 35]

Given the inherent inflationary incentives in Medicare’s payment methods, in 1983 Congress replaced the retrospective, cost-based payment system for inpatient hospital services provided to Medicare beneficiaries with Inpatient PPS.[36] However, adoption of Inpatient PPS was based primarily on research and demonstrations that occurred in urban hospitals, with minimal rural testing before implementation. Based on alternate payment demonstrations conducted by the HCFA Office of Research and Development, now CMS, in several states (Connecticut, Maryland, Massachusetts, New Jersey, New York, Rhode Island, Washington, and Wisconsin), an Inpatient PPS that paid hospitals at a predetermined rate based on the patient’s diagnosis was implemented as a key price-setting device.[7, 36]

After implementation of the Inpatient PPS, the growth rate for Medicare hospital payments initially declined.[5] Changes to the payment system impacted both rural and urban hospitals; hospitals that were able to maintain costs below the Inpatient PPS payments were more likely to realize a profit, while those with costs above the Inpatient PPS payments were more likely to experience a loss. During the first three years of Inpatient PPS, urban hospitals averaged higher Medicare profits than rural hospitals. By Year 4 of the Inpatient PPS, rural hospitals began experiencing losses on their Medicare patients, particularly small rural hospitals with fewer than 50 beds. Urban hospitals continued to be profitable, although significantly less so than in previous years.[14, 37] Among other medical environmental challenges, changes to the Medicare payment system placed rural hospitals under financial pressures and increased their risk of closure. Many closed.[2]

Studies showed that Inpatient PPS base payment amounts for rural hospitals were 20 percent less than the base payment amounts for urban hospitals because the payment amounts were established with 1981 Medicare cost report data submitted by hospitals to HCFA. The

differences in the base payment amounts reflected unexplained cost differences between urban and rural hospitals. Despite the cost differences, two separate base payment amounts were established; one rate for urban areas with populations of more than 1 million and another rate for other urban and rural areas.[4] This methodology placed rural hospitals at a disadvantage because the lower base payments resulted in limited or reduced revenues to invest in new technologies or expand services.[8, 38]

The Inpatient PPS pays hospitals a fixed base amount for inpatient services, adjusted for each inpatient stay by the weighted Diagnosis Related Group (DRG), regardless of patient length of stay or resources used. This payment methodology provides an incentive for hospitals to increase the volume of admissions since hospitals can generate additional revenue from each additional admission.[9] However, low-volume rural hospitals are financially disadvantaged because they have relatively fewer patients over which to spread fixed costs and therefore achieve economies of scale. In addition, payment is often insufficient to cover the average cost per inpatient case.[4, 8, 9] Furthermore, the Inpatient PPS requires hospitals to code patient diagnoses in order to be paid. Hospitals with sophisticated systems are able to code a Medicare claim to generate the highest possible DRG weight, which in turn generates higher payment.[39] Rural hospitals, however, often lack adequate human resource capacity, revenue cycle management, and cost-reporting expertise to maximize rural hospital financial performance.[19] Also, rural hospitals may be less able to invest in coding software or personnel that could optimize payment. Rural hospital billing and coding staff may not be current with code and description changes, and systems may not be updated to appropriately bill for health care services rendered.

The Medicare Inpatient PPS paid rural hospitals less than the cost to provide health care services. As a result, many rural hospitals experienced financial distress, and a significant number closed.[8] In response, Congress legislated additional payments for certain hospital designations, including Sole Community Hospital (the only hospital in its geographic area), Medicare Dependent Hospital (the hospital serves a large proportion of Medicare patients), and Rural Referral Center (a larger hospital that serves a wide geographic area and frequently cares for patients referred from other hospitals).[3, 8] The Medicare Rural Hospital Flexibility (Flex) Program and the associated CAH designation were created as a rural initiative in the Balanced Budget Act of 1997 (BBA-97). The Flex program and CAH designation were based on the experiences of the Medical Assistance Facility (MAF) program in Montana and the Essential Access Community Hospital and Rural Primary Care Hospital (EACH-RPCH) program.[40] MAF was a demonstration led by HCFA and the state of Montana that paid small, isolated rural hospitals based on reasonable cost for both inpatient and outpatient services, and the EACH-RPCH was a demonstration project in seven states that linked each RPCH into a network tied to a larger supporting EACH.[41] BBA-97 grandfathered certain MAFs and RPCHs and certified them as CAHs.[42] The CAH designation limited hospitals to 25 beds and allowed them to be



paid on a reasonable cost basis for inpatient and outpatient services, including lab and qualifying ambulance services, provided to Medicare beneficiaries. Some states also chose to pay CAHs on a reasonable cost basis for Medicaid enrollees.[19] The Flex program was created to support designation of CAHs and to improve access to and quality of health services.[43] There are currently 1,360 CAHs,[44] representing over a quarter of all community hospitals in the U.S.[45]

As summarized in Table 1, for over thirty years, new or adjusted federal hospital payment systems have been implemented to preserve patient access to rural hospital services.

**Table 1: Key Rural Hospital Medicare Payment Legislation, 1965-2021**

<b>Date</b>	<b>Legislation</b>	<b>Payment Policies of Rural Interest</b>
1965	<i>Social Security Act</i> amended in 1965 PL 89-97	Creates the Medicare and Medicaid Programs. Hospitals paid based on “reasonable cost.”
1983	<i>Social Security Act</i> amended in 1983 PL 98-21	Creates the Inpatient PPS that pays a prospective payment per admission based on diagnosis-related groups. The Sole Community Hospital (SCH) designation existed before Inpatient PPS. SCHs are now paid on either the Inpatient PPS or cost-based reimbursement, whichever is more favorable.
1983	<i>Social Security Act</i> amended in 1983 PL 98-21	Creates the Rural Referral Center (RRC) designation. RRCs qualify for urban standardized payment rates and urban wage indices. RRCs receive higher disproportionate share payments.
1985	<i>Consolidated Omnibus Budget Reconciliation Act of 1985</i> PL 99-272	SCHs are paid for additional costs due to new inpatient facilities and/or decreased discharges beyond hospital control.
1989	<i>Omnibus Budget Reconciliation Act of 1989</i> PL 101-239	Creates the Essential Access Community Hospital and Rural Primary Care Hospitals (EACH/RPCH) Demonstration. EACH is paid as per Sole Community Hospital and RPCH is paid on cost. Creates the Medicare-dependent Hospital (MDH) designation. MDHs are paid the higher of the Inpatient PPS and the Inpatient PPS plus an additional payment calculated as 75 percent of the difference between the Inpatient PPS payment and the hospital’s payment rate also known as the hospital-specific rate.[46]
1990	<i>Omnibus Budget Reconciliation Act of 1990</i> PL 101-508	Separate standard rates for urban and rural hospitals are phased out and replaced by a single standard rate for rural and other urban hospitals. A slightly higher rate is paid for hospitals in large urban areas.[38]
1997	<i>Balanced Budget Act of 1997</i> PL 105-33	Establishes the Medicare Rural Hospital Flexibility Program and creates the Critical Access Hospital (CAH) designation. CAHs are paid via cost-based reimbursement.[40]
1999-2000	<i>Balanced Budget Refinement Act of 1999</i> PL 106-113	Implements payment extensions: <ul style="list-style-type: none"> <li>• Hospitals with less than 100 beds are paid cost for outpatient services.[4]</li> <li>•</li> </ul>

	<i>Medicare and Medicaid and SCHIP Benefits Improvement and Protection Act of 2000 PL 106-554</i>	<ul style="list-style-type: none"> <li>• CAHs are paid for covered skilled nursing facility (SNF) services on a reasonable cost basis.[47]</li> <li>• MDH designation is extended.[4]</li> </ul> <p>Inpatient and outpatient hospital services payments are increased.[48]</p>
2003	<i>Medicare Modernization Act of 2003 PL 108-173</i>	<p>CAH cost-based reimbursement is increased to 101 percent.[49] CAH bed limit is increased to 25, with no restriction on the number of beds that can be used for acute or swing beds.. Establishes CAH option for up to 10-bed inpatient psychiatry or rehabilitation units. Creates the Low Volume Hospital (LVH) designation that is paid an additional 25 percent for each Medicare discharge.[6] Sunsets authority for states to designate hospitals less than 35 miles from the next-nearest hospitals as necessary providers and therefore eligibility to be CAHs.[49]</p> <p>Creates the Rural Community Hospital Demonstration (RHCD) for eligible hospitals not eligible for the CAH designation, located in rural areas with fewer than 51 beds, and maintains a 24-hour emergency department. RHCD is a five-year renewable program. Qualified hospitals are paid at the hospital specific cost for the first year of the program and the lesser of cost or target amount per discharge plus adjustments for years two through five.[50]</p> <p>Modifies the formulas used to calculate the DSH payment adjustment for certain hospitals. Adjusts and caps the DSH payment at 12 percent for sole community hospitals (SCH), other rural hospitals and urban hospitals with less than 500 and 100 beds, respectively.[6, 51, 52] Modifies DSH payment adjustment for rural referral centers (RRC), however, they are exempt from this 12 percent cap.</p>
2007	<i>Medicare, Medicaid, and SCHIP Extension Act of 2007 PL 110-173</i>	Modifies the disproportionate share hospital payment formulas for SCHs, RRCs, small rural hospitals, and urban hospitals with fewer than 100 beds.[6]
2008	<i>Medicare Improvements to Patients and Providers Act of 2008 PL 110-275</i>	CAH outpatient laboratory services are paid based on costs.[47] Authorizes the Frontier Community Health Integration Project demonstration.[53]
2010	<i>Patient Protection and Affordable Care Act of 2010 PL 111-148</i>	<p>Extends MDH classification through 2012.[54] Increases LVH payment.[54]</p> <p>Expands 340B program eligibility to include: (1) children’s hospitals; (2) critical access hospitals (CAH); (3) free standing cancer centers; (4) rural referral centers; and (5) sole community hospitals. Sets the minimum DSH adjustment percentage requirement to greater than or equal to 8 percent for hospitals designated as RRC and SCH. CAHs do not have a minimum DSH adjustment percentages.[52]</p>
2018	<i>Bipartisan Budget Act of 2018 PL 115-123</i>	Extends MDH designation through 2022.[46]
2021	<i>Consolidated Appropriations Act of 2021 PL 116-260</i>	Creates the Rural Emergency Hospital Services (REH) provider designation. Increases REH payment for outpatient services by five percent. REHs also receive an additional facility payment, also called the Medicare subsidy.[55] REHs do not provide inpatient services.

## Medicare Rural Community Hospital Designations\*

- **Acute Care Hospital**

Acute care hospitals provide inpatient care and other related services for surgery, medical conditions, and injury—usually for a short-term illness or condition. Hospitals contract with Medicare to deliver acute inpatient hospital care and agree to accept predetermined acute Inpatient PPS rates as payment in full. However, for many rural acute care hospitals, the Inpatient PPS has been modified to offer some financial protection. For designation purposes, CAHs are not considered acute care hospitals (see CAH description below). In 2020, there were 1,924 acute care hospitals receiving Inpatient PPS payment (as of December, 2020).[56]

- **Sole Community Hospital (SCH)**

An SCH must be located at least 35 miles from similar hospitals paid under the Inpatient PPS. A hospital may also qualify as an SCH if it is located fewer than 35 miles from the nearest hospital and is located in a rural area, and if it meets additional criteria, including (1) no more than 25 percent of Medicare beneficiaries in the service area admitted to other like hospitals within 35 miles, (2) less than 35 miles from nearest hospital but inaccessible for at least 30 days in each 2 out of 3 years due to local topography or prolonged severe weather conditions, or (3) travel time between the hospital and the nearest like hospital is at least 45 minutes due to distance, posted speed limits, or predictable weather conditions.[9, 57] As of 2021, there are 301 hospitals designated as SCH (as of December, 2020).[56, 58]

- **Medicare Dependent Hospital (MDH)**

An MDH must be located in a rural area, have 100 or fewer beds, show that at least 60 percent of their inpatient days or discharges are for beneficiaries entitled to Medicare Part A, and not be classified as an SCH. The MDH program is a temporary program and must be extended periodically by Congress to continue. The Bipartisan Budget Act of 2018 included a provision to extend the MDH program through fiscal year 2022.[6, 46] There are 139 hospitals designated as MDHs in 2021 (as of December, 2020).[56, 58]

- **Low Volume Hospital (LVH)**

An LVH must be located more than 15 miles from another hospital, excluding CAHs and Indian Health Service hospitals, and have fewer than 3,800 total discharges annually.[59] The LVH designation and payment adjustment are temporary and have been extended and

---

\* The American Hospital Association defines community hospitals as nonfederal, short-term general hospitals that may include academic medical centers, teaching hospitals, and specialty hospitals such as obstetrics and gynecology, rehabilitation, and other types of specialty services.

modified over the years.[60] There are 621 hospitals with LVH designation in 2021 (as of January 1, 2021).[58]

- **Rural Referral Center (RRC)**

There are three pathways for hospitals to be classified as an RRC:[6, 61]

- **Pathway 1:** A hospital may be classified as an RRC if it is located in a rural area and has at least 275 beds.
- **Pathway 2:** A hospital may be classified as an RRC if at least 50 percent of its Medicare patients are referred from other hospitals or physicians, not on the hospital staff, and at least 60 percent of the hospital's Medicare patients live more than 25 miles from the hospital, and at least 60 percent of all the services that the hospital provides to Medicare patients are patients who live more than 25 miles from the hospital.
- **Pathway 3:** A hospital may be classified as an RRC if it is located in a rural area and meets the case-mix index criteria as established by CMS, and its number of discharges is at least 5,000 (3,000 discharges if an osteopathic hospital recognized by the American Osteopathic Healthcare Association), and it meets at least one of the following criteria:
  - More than 50 percent of the hospital's active medical staff are certified specialists.
  - At least 60 percent of its discharges are for inpatients who reside more than 25 miles from the hospital.
  - At least 40 percent of all inpatients are transferred from other hospitals or physicians not on the hospital's staff.

There are 739 hospitals with RRC designation including dual RRC/SCH, RRC/EACH, and RRC/MDH in 2021 (as of January 1, 2021).[62]

- **Critical Access Hospital (CAH)<sup>†</sup>**

CAHs are small rural hospitals that must (1) provide 24-hour emergency services necessary for ensuring access, (2) be located in a rural area or an area treated as rural under a special provision that allows treating qualified hospital providers in urban areas as rural, \* (3) have no more than 25 acute care inpatient beds, (4) have no more than 4 days of inpatient stay on average annually, (5) be located either more than 35 miles from the nearest hospital or

---

<sup>†</sup> A CAH must be located in a nonmetropolitan area, as defined by the U. S. Office of Management and Budget, or in a rural census tract of a metropolitan statistical area (MSA).

A PPS hospital that is located in an urban area may be reclassified as a rural hospital if it is located in a rural census tract of a Metropolitan Statistical Area (MSA) as determined under Rural-Urban Commuting Area (RUCA) codes, as determined by the Federal Office of Rural Health Policy (FORHP) of the Health Resources and Services Administration.

CAH or more than 15 miles in areas with mountainous terrain or only secondary roads. Initially, states had the authority to waive the CAH 35/15-mile location-relative-to-other-facilities requirement by designating a CAH as a necessary provider. As of January 1, 2006, Congress rescinded the states' waiver authority. However, existing necessary provider CAHs were grandfathered into the program.[63] CAHs must have no more than 25 inpatient beds that can be used for either inpatient or swing-bed (post-acute care) services. CAHs may establish separate inpatient rehabilitation or psychiatric care units with no more than 10 beds.[6, 64, 65] There are 1,360 hospitals with CAH designation in 2022 (as of July 7, 2022).[44]

- **Rural Emergency Hospital (REH)**

REH is a new provider type created to address the concerns of rural hospital closures. An REH is a CAH or rural PPS hospital with no more than 50 beds that converts to provide outpatient services only, including emergency department services and observation care that does not exceed an annual per patient average of 24 hours. REHs (1) cannot provide inpatient services, (2) must have a transfer agreement with a level I or II trauma center, (3) must be staffed 24 hours a day, 7 days a week by a physician, nurse practitioner, clinical nurse specialist, or physician assistant, (4) may provide skilled nursing facility (SNF) services in a distinct part unit, and (5) meet the licensure requirements and staffing responsibilities of an emergency department.[55, 66] REHs are scheduled to begin January 1, 2023.

## **Current Medicare Rural Hospital Payment Systems**

### **Baseline Payment Systems**

Rural hospitals face unique challenges that can make them vulnerable to financial distress. Therefore, CMS designed and implemented payment methods for the traditional fee-for-service Medicare program to support rural access to health care.

- **Inpatient Prospective Payment System (PPS)**

Inpatient PPS pays a fixed per discharge rate that covers operating and capital expenses incurred during an inpatient episode. To set the payment rates, separate operating and capital base payment rates or standardized payment amounts are adjusted by (1) an area wage index that reflects the expected differences in local market prices for labor and labor-related costs, (2) cost of living that reflects the higher costs of supplies and other nonlabor resources in Hawaii and Alaska, and (3) case mix to reflect the patient's condition and costliness. The case mix adjustment is based on clinical diagnoses classified as DRGs. Because the original DRGs were limited to only categorization of illness severity, Medicare updated the DRG methodology to Medicare Severity-Diagnosis Related Groups (MS-DRGs) to allow hospitals to categorize patients more accurately. The three levels of severity in the MS-DRG system include the following: (1) major complication/comorbidity, the highest level

of severity; (2) complication/comorbidity; and (3) non-complication/comorbidity. Each MS-DRG has a relative weight that reflects the treatment cost for patients in each group relative to the treatment cost across all groups.[59, 67] In addition, payments are adjusted using the CMS Hierarchical Condition Categories to capture variation in the expected health care costs for beneficiaries with varying health status.[68, 69] Other adjustments may be made for cases with exceptionally high costs (outlier payments) or for new technologies.[59]

- **Outpatient Prospective Payment System (PPS)**

BBA-97 established the hospital Outpatient PPS, although it was not initiated until 2000, with a transition period for most hospitals through 2003.[70] Under Outpatient PPS, payment is based on ambulatory payment classifications (APCs) that classify services by clinical and cost similarity. To set the payment rate, each APC is multiplied by the relative weight for the service APC, which reflects the cost of resources in the APC relative to the cost in other APCs. Relative weights are translated into payment rates using a conversion factor. The payment rates are also adjusted for geographic differences in input prices by adjusting the labor portion of the conversion factor by the hospital wage index.[71] To receive payment based on the full conversion factor, hospitals are required to submit data on a set of standardized quality measures. Failure to submit the data results in a two percent reduction of the conversion factor. Other adjustments may be made for cases with exceptionally high costs (outlier payments) or for new technologies.[71]

- **Cost-Based Reimbursement (CBR)**

Under CBR, health care services provided to Medicare patients are paid at a percentage of allowable cost. The cost of treating Medicare patients is estimated using cost data from the Medicare cost reports. BBA-97 created the Medicare Rural Hospital Flexibility Program and the CAH designation to assist hospitals in rural areas that were at risk of financial distress and closure.[4, 72] As such, CAHs were paid 101 percent of allowable costs for all services delivered and billed to Medicare. In 2013, budgetary sequestration reduced the rate to 99 percent of costs. The reduction was temporarily suspended due to the COVID public health emergency but was reinstated beginning July 1, 2022.[73]. CAHs receive CBR for outpatient, inpatient, lab, therapy, and post-acute care in swing beds. While CBR ensures that CAHs will be paid allowable costs for delivering Medicare services, they do not receive payment beyond cost. This means that CAHs cannot make a profit on Medicare patients, potentially limiting accumulation of funds required for capital investments, such as replacing or updating infrastructure and equipment, and investments in new services to meet community needs.[64]

- **Blend (Inpatient PPS + CBR)**

The blended payment system enhances payments to certain hospitals based on both the Inpatient PPS and CBR. SCHs and MDHs receive payment based on the blended payment

system for inpatient services.[46, 74] Potential payments to an individual hospital are calculated on historic inpatient operating costs trended forward to adjust for inflation and other factors. If the payment calculated on historic costs is higher than what the hospital receives under Inpatient PPS, the hospital receives an additional payment.

### **Baseline Payment System Adjustments**

- **Area Wage Index**

Inpatient and Outpatient PPS Medicare payments are adjusted to reflect variation in labor costs. The wage index reflects average hospital wages in each geographic area compared to average hospital wages nationally. Therefore, payment to hospitals in areas where hospital wages are below the national average is lower compared to payment to hospitals in areas where hospital wages are above the national average. Distinct urban areas are often considered as a single labor market. In contrast, all rural areas within a state are considered a single labor market and therefore assigned the same wage index. If the wage index does not fully account for differences in labor cost, hospitals may qualify for a reclassification to another geographic area.[6, 38]

- **Medicare Payment Adjustments**

Medicare calculates Inpatient and Outpatient PPS payment to hospitals through a series of adjustments applied to the base payment rates or standardized payment amounts. These adjustments consider either the operating or capital expense incurred by the hospital. These adjustments are also used to address variation in labor costs, patient population, and other costs that are beyond the control of the hospital and unrelated to efficiency.[59]

- **Disproportionate Share Hospitals (DSH)**

Medicare provides additional payments to hospitals that treat a disproportionate number of low-income patients to offset the cost of treating these patients. To qualify for DSH payment, the share of low-income patients treated by the hospital must be equal to or greater than a predetermined threshold. The amount of Medicare DSH payment adjustment varies by hospital location and size.[6] Medicaid also provides DSH payments to hospitals that serve large numbers of Medicaid beneficiaries and the uninsured to offset the hospitals uncompensated care costs and maintain the financial stability of safety-net hospitals.[75]

- **340B Drug Pricing Program**

The federal 340B drug pricing program, created in 1992, allows qualifying hospitals and clinics that treat low-income and uninsured patients to purchase outpatient prescription drugs at a discount. The program enables participating providers “to stretch scarce federal resources to reach more eligible patients or provide more comprehensive services.”[76]

Hospitals and clinics in this program can achieve estimated savings of 20 to 50 percent of the cost of drugs. Savings generated from the program can be used to provide free care and other unreimbursed care provided to uninsured or underinsured patients.[77] Other types of non-hospital entities, also referred to as federal guarantees, are eligible for the 340B program. These include federally qualified health centers (FQHC), community-based health care providers (FQHC look-alikes), tribal/urban Indian clinics, Native Hawaiian health centers, Ryan White HIV/AIDS program grantees, and five types of specialized clinics (black lung clinics, comprehensive hemophiliac diagnostic centers, family planning clinics, sexually transmitted disease clinics, and tuberculosis clinics).[78]

Generally, qualifying hospitals comprise hospitals that serve a “disproportionate” share of low-income patients sufficient to be designated as Disproportionate Share Hospitals (DSH). DSH qualification is based on a formula using the percent of Medicare Supplemental Security Income (SSI) days and Medicaid patient days (or, for large urban hospitals, the percent of uncompensated care when it exceeds 30 percent of total net patient care revenues).[79] In addition, qualifying hospitals must fall under one of three classifications: (1) state or local government-owned or -operated hospitals; (2) nonprofit corporations formally granted state or local governmental powers; or (3) private nonprofit hospitals with government contracts to provide health care services to low-income individuals not eligible for Medicaid or Medicare.[52]

Since the beginning of the 340B program, general acute care hospitals with a DSH payment adjustment of 11.75 percent or higher of operating inpatient payments and meeting the other program requirements have been eligible to participate. This requirement precluded smaller hospitals with DSH payments capped at 5.25 percent of operating inpatient payments from participating in the program. Rural hospitals with 500 or more beds and urban hospitals with more than 100 beds<sup>‡</sup> did not have a DSH payment adjustment cap and have been eligible to participate in the 340B drug pricing program.[52] However, the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 modified the formulas used to calculate the DSH payment adjustment for certain hospitals, thereby increasing payments to these hospitals. Specifically, MMA adjusted and capped the DSH payment at 12 percent for sole community hospitals (SCH) and other rural and urban hospitals with less than 500 and 100 beds, respectively.[6, 51, 52] MMA also modified the DSH payment adjustment for rural referral centers (RRC); however, they are exempt from this cap. While the MMA did not change the eligibility for the 340B drug pricing program, it expanded the number of hospitals that could qualify for it.[80, 81] Nevertheless, the 2003 Medicare DSH cap may have financially impacted more rural hospitals than urban hospitals.

---

<sup>‡</sup> An alternative method for qualifying for the DSH adjustment applies to hospitals that are located in an urban area, have 100 or more beds, and can demonstrate that more than 30 percent of their total net inpatient care revenues come from state and local government sources for indigent care (other than Medicare and Medicaid).



One study reported that compared with urban hospitals, rural hospitals were more likely to lose higher DSH payment amounts.[82]

In 2010, the Patient Protection and Affordable Care Act (ACA) expanded program eligibility to include other types of hospitals, including: (1) children's hospitals, (2) critical access hospitals (CAH), (3) free-standing cancer centers, (4) rural referral centers, and (5) sole community hospitals. All 340B-eligible hospitals must meet the statutorily specified minimum DSH adjustment percentages, except CAHs. ACA set the minimum DSH adjustment percentage requirement to greater than or equal to 8 percent for hospitals designated as RRC and SCH. The DSH adjustment percentage requirement remains greater than 11.75 percent for other PPS hospitals (and children's hospitals). CAHs do not have a minimum DSH adjustment percentage. ACA's expansion of the 340B program increased the number of participating hospitals from 1,465 in 2011 to 2,399 in 2016. Specifically, by 2016, 995 CAHs, 41 RRCs, and 129 SCHs participated in the 340B program.[52] The savings generated through the 340B program have been particularly vital for hospitals in rural areas. One study reported estimated savings between \$500,000 to \$1 million a year among rural hospitals. Similarly, 75 percent of CAHs said 340B savings help them remain open.[83-86]

- **Uncompensated care payments**

Uncompensated care was expected to decline following insurance coverage expansion (Medicaid expansion and marketplace enrollment). In 2014, ACA changed the formula used to determine Medicare DSH payments. Under the new formula, DSH hospitals receive 25 percent of the amount they would have previously received from the traditional Medicare DSH formula. The remaining 75 percent is used to make an additional payment for uncompensated care after adjusting for changes in the percentage of uninsured individuals. The uncompensated care amount is distributed based on a formula that includes three factors: (1) 75 percent of the amount DSH hospitals would have received under the traditional Medicare DSH formula; (2) 1 minus the percent change in under 65-year-old uninsured rate (minus 0.1 percentage points in 2014, and minus 0.2 percentage points from 2015 to 2017; and (3) the hospital's share of the total amount of uncompensated care provided nationally.[6, 87, 88] Though the DSH payment formula change was intended to target uncompensated care payments to hospitals with higher levels of uncompensated care, some rural hospitals may have been impacted.[89-91]

- **Graduate Medical Education/Indirect Medical Education (GME/IME)**

Medicare provides additional payments to teaching hospitals and academic medical centers to cover the costs associated with their residency training programs. Payments cover the direct cost of training such as salaries and benefits (GME), and indirect costs such as the

higher patient care cost associated with training (IME). GME payments are determined by a statutory formula based on a hospital's costs for a full-time equivalent (FTE) resident in a base year, usually FY1984 or FY1985 and updated by the Consumer Price Index for All Urban Consumers. IME payments are implemented through adjustments to inpatient operating and capital PPS.[92, 93] The size of the adjustment depends on teaching intensity and the number of residents per bed.[6]

- **Quality Reporting**

CMS uses the Inpatient Quality Reporting and Outpatient Quality Reporting programs to reward quality performance reporting for Inpatient PPS hospitals. Thus, these are pay-for-reporting programs. Rural Inpatient PPS hospitals must participate if they meet minimum case thresholds and measures. While CAHs are not eligible to participate in the PPS quality reporting programs, they are encouraged to voluntarily report quality performance through the Hospital Inpatient Quality Reporting Program.[94, 95]

- **Value-Based Purchasing (VBP)**

The Hospital VBP program adjusts hospital Inpatient PPS payments based on a set of quality and efficiency measures. The program is designed to incentivize Inpatient PPS hospitals to improve the quality and safety of care that patients receive during acute-care inpatient stays. A hospital's performance is based on its achievements and improvement scores for each VBP measure, including clinical outcomes, person and community engagement, patient safety, and cost reduction. Achievement points are awarded by comparing an individual hospital's rates to all hospitals' rates in a performance period from the baseline period. Improvement points are awarded by comparing the individual hospital's rate to itself in a performance period compared to a baseline period. The VBP is funded through a two percent reduction in DRG payment from participating hospitals for each fiscal year. Withheld funds are redistributed to hospitals based on their total performance scores.[59, 96]

- **Readmissions and Hospital-Acquired Conditions Penalties**

Medicare financially penalizes Inpatient PPS hospitals that have excessive hospital readmissions for selected conditions and excessive hospital-acquired conditions such as falls and surgical site infections. Hospitals receive up to a three percent reduction in the Inpatient PPS operating base payment for excessive readmissions and up to one percent reduction in all inpatient payments for excessive hospital-acquired conditions. Rural PPS hospitals are required to report these measures if they meet the minimum number of cases threshold.[59, 96]

- **Promoting Interoperability Program**

The Promoting Interoperability Program incentivizes hospitals through attestation to adopt, implement, upgrade, and demonstrate meaningful use of certified electronic health record technology. PPS hospitals and CAHs incompletely complying with program requirements are subject to a downward payment adjustment.[97]

## **Commercial (Including Medicare Advantage – MA) Plans and Medicaid Payments**

Although this paper primarily considers Medicare payment systems, commercial (including MA) plan payments are important to rural hospitals. MA insurers are Medicare-approved commercial insurers that provide health insurance coverage for Medicare beneficiaries (in 2021, approximately 35 percent of rural beneficiaries are enrolled in MA plans).[21] MA insurers receive capitated payments from Medicare to cover the cost of care provided to Medicare beneficiaries.[98] Payments from MA and other commercial plans to providers may not align with federal payment systems. Instead, MA and other commercial insurers negotiate payment rates with hospitals individually or in groups. The negotiated payment rates may or may not be comparable to Medicare payments. Rural providers may accept or refuse the terms of payment.[21] In the case of CAHs which are paid at 99 percent of cost (i.e., no profit) by Medicare, low payments from MA and other commercial plans may have a significant impact on a rural hospital's financial viability.[15] Medicaid payments are another important revenue source for rural hospitals, particularly for those hospitals located in very low-income counties. Both the level of Medicaid payment and the method used to calculate Medicaid payment vary across states. Furthermore, states increasingly contract with managed care organizations to administer Medicaid programs and negotiate Medicaid payment rates with health care providers.

## **Value-Based Payment Models Important to Rural Hospitals**

Traditional Medicare reimburses providers in acute care hospitals, CAHs, SCH, and MDH based on a fee-for-service (FFS) methodology that encourages the health care delivery system to provide more services and receive increased payments.[99] To address high and increasing health care spending, Medicare and other payers have begun to shift payments that reward volume (i.e., FFS) to payments that reward value.[100] Value-based payments pay for care that improves quality of care while keeping costs constant, decreases costs while keeping quality constant, or ideally both improves quality and reduces health care costs.[101] An emerging value-based payment model is the global budget:

- **Global Budget**

Under a hospital global budget payment system, a hospital receives a fixed budget to care for its service-area population. The budget covers all hospital-based services, including

inpatient, emergency department, and hospital-affiliated outpatient facilities, which include ambulatory surgery centers and clinics.[102] The global budget may be applied to either all payers in a jurisdiction or only some payers. Global budgets are most often set based on the hospital's historic revenue, though budgets could be based on other approaches such as capitation, rate-setting, or expected volume. Budgets may be adjusted by factors such as current-year costs or fee-for-service (FFS)-equivalent billing, medical cost inflation, market shifts, and service area population changes.[103]

In Medicare, changes to the traditional FFS payment system may be tested initially as time-limited "models" (previously named "demonstrations") or established in law by Congress (named "programs"). In 2010, the Patient Protection and Affordable Care Act (ACA) created and funded the Center for Medicare & Medicaid Innovation (CMMI) to design and test new models of payment and care delivery. CMMI also partners with states to test rural care and payment innovations that further CMS's goals to improve rural beneficiary health, maintain rural access to health care, and evaluate the impact of alternative payment models (i.e., alternatives to FFS) on rural providers. Thus far, rural providers have generally participated less frequently than urban providers in new payment models.[104] In some cases, rural hospitals types are prohibited from model participation (e.g., CAHs receiving CBR). In other cases, the model design effectively precludes rural hospital participation (e.g., a minimum number of beneficiaries required). Some rural hospitals have participated in models tested by states receiving State Innovation Model awards from CMMI during the years 2013-2018.[105] Standalone models of particular rural-hospital interest include the following:

- **Maryland Total Cost of Care (TCOC) Model**

CMS and Maryland signed an agreement implementing the TCOC Model that holds Maryland accountable for the total cost of health care for its Medicare FFS beneficiaries. The TCOC Model builds on the prior Maryland All-Payer Model for hospitals, which shifted hospital payment to a prospective all-payer global hospital budget for inpatient and outpatient hospital services. TCOC Model global budgets are set across all payers for each hospital at the start of each fiscal year. Global budgets are then adjusted over time based on volume. Global budgets are also adjusted based on hospital quality and financial performance. The Medicare Performance Adjustment either increases or decreases the hospital's Medicare payments by up to one percent if the total Medicare spending of its attributed beneficiaries falls below a benchmark and penalizes the hospital if it spends above the benchmark. This payment system creates strong incentives for hospitals to decrease avoidable or low-value hospital services.[106] Furthermore, holding hospitals accountable for nonhospital spending creates new incentives for hospitals to collaborate with providers and facilities outside the hospital to reduce spending growth and transform care. The TCOC Model began on January 1, 2019, and will conclude on December 31, 2026.

During the final three model years, CMS and the State will negotiate either an expanded model test, a new model test, or a return to PPS.[103]

- **Pennsylvania Rural Health Model (PARHM)**

The PARHM was created to evaluate the impact of a joint health care delivery transformation and a global budget payment mechanism on access to high quality care, growth of hospital expenditures across payers, and the financial viability of hospitals in rural Pennsylvania. Under the PARHM, participating rural hospitals propose a care-delivery transformation plan that must be reviewed and approved by Pennsylvania and CMMI. Prospective all-payer (Medicare, Medicaid, and certain commercial payers) global budgets are set for each participating rural hospital. The global budgets are primarily based on the hospital's historical net revenue for inpatient and outpatient hospital-based services from each participating payer. Each participating payer has two options to make global budget payments to the participating hospital: (1) the fixed global payment option pays a fixed amount at a specified frequency over the course of the year (CMS chose this option for Medicare FFS payments) and (2) the virtual global budget option pays FFS claims for care provided to enrollees and conducts monthly reconciliations to the monthly global budget amount or carries any overages forward to subsequent months (commercial payers chose this option). CAHs receive periodic fixed payments, but total payment is reconciled with the CAH's cost report. The PARHM will run for six years from 2019 through 2024; a pre-implementation period ran from 2017 to 2018.[107, 108]

- **Frontier Community Health Integration Program (FCHIP)**

Congress created the FCHIP demonstration to improve access to health care for Medicare and Medicaid beneficiaries living in the most rural regions of the U.S. The demonstration was specifically designed to increase access to ambulance services, skilled nursing facilities/nursing facilities (SNFs/NFs), telehealth, and home health services; increase the integration and coordination of care among providers in the community; and improve quality of care for beneficiaries. CAHs in counties with a population of fewer than 6 persons per square mile were selected to participate in the demonstration and receive 101 percent of reasonable costs for providing ambulance and telehealth services. CAHs were permitted to increase inpatient bed capacity to 35 beds. Additional beds were to be used for SNF/NF services. The demonstration ran from 2016 through 2019 in 10 CAHs located in Montana, North Dakota, and Nevada. The Consolidated Appropriations Act of 2021 authorized a five-year extension of the demonstration beginning in fiscal year 2022.[109, 110]

## Other Potential Hospital Revenue Streams

Rural hospitals often rely on sources of revenue other than patient service payments to remain operational. Potential additional revenue sources available to rural hospitals are listed below; however, not all rural hospitals can access these additional revenues.

- **Tax support**

Hospitals organized in public hospital districts or owned by a governmental entity may receive revenue from local tax levies to support hospital operations. For example, Holy Cross Medical Center in New Mexico receives property tax revenue equivalent to \$33 for \$100,000 of property valuation.[111]

- **Charitable Income/Endowment**

Charitable contributions are donations or gifts to, or for the use of, qualified organizations such as not-for-profit hospitals.[112] Endowment funds are permanent, ongoing funds that may be established by individuals or corporations to provide hospitals with a long-term financial resource. Endowments are invested, and each year the hospital receives a portion of the value of the fund to provide support for its designated purpose.[113] For example, the State of Georgia implemented the Rural Hospital Tax Credit Program that allows taxpayers to make contributions to qualifying rural Georgia hospitals in exchange for a tax credit for the contributions.[114]

- **Debt Financing**

Debt financing options available to rural hospitals help fund strategic initiatives such as updating aging facilities, operating in competitive markets, and purchasing new equipment and technology.[115] Debt financing opportunities offered through the U.S. Department of Agriculture provide unique opportunities to rural hospitals to access affordable loans with reasonable terms.[116] For example, West Feliciana Parish Hospital in Louisiana received a community facilities direct loan to update the facility with new imaging technology and a fully equipped emergency room.[117]

- **Investment Income**

Investment income includes interest, dividends, and capital gains.[118] An investment income analysis among standalone hospitals in 2018 reported increased balance sheet assets resulting from strong stock market performance. However, hospitals that depend heavily on investment revenue could struggle during an economic downturn.[119]

- **Investor Funding**

U.S. spending on health care in 2020 reached \$4.1 trillion, or 19.7 percent of the nation's Gross Domestic Product.[120] Much of health care spending occurs in nongovernmental,

for-profit and nonprofit, organizations. Thus, there is significant opportunity for investor funding in health care delivery. Health care investment strategies include the following:

- **Private Equity**

Private equity firms invest in industries such as health care using capital provided by pension funds, wealth funds, high net-worth individuals, and university endowments. Because health care delivery is considered relatively inefficient, opportunities exist to reduce costs and generate savings.[121] Private equity firms contend that they can curb costs, improve efficiencies, and infuse capital into a sector where hospitals may need financing for new technologies, upgrading facilities, and consolidating fragmented markets. For example, Apollo Global Management, a \$330 billion investment firm, owns RCCH Healthcare Partners, an operator of 88 rural hospital campuses in West Virginia, Tennessee, Kentucky, and 26 other states.[122] Private investor funding may ease financial pressures due to a changing health care environment and lower payments.

- **Stock Purchases**

A stock purchase agreement is an agreement between two parties when shares of a company are bought or sold. A stock purchase agreement can be used to sell shares of a company to raise money or to transfer ownership of shares. For example, Mountainview Medical Center, a CAH in rural Montana, sold stock to the residents to raise funds for the facility.[123]

- **Venture Capital**

Venture capital is money used to help build organizations that have a strong potential for growth. However, venture capital firms require partial ownership in the company in exchange for funding to ensure some control of the company's future direction. Funding from venture capital includes private and public pension funds, endowment funds, foundations, corporations, and wealthy individuals, both domestic and foreign.[124] For example, the State of Wisconsin's Economic Development Corporation created a \$100 million venture capital fund that requires 20 percent of all investments go to underserved communities, including rural areas, that do not traditionally receive venture capital financing.[125]

## **Discussion**

Congress has established PPS and other Medicare hospital payment policies to incentivize health care cost reduction and quality improvement rather than service volume and intensity growth. The unintended consequence of these policies, among other factors, has been to reduce rural hospital payments to levels insufficient to cover the cost of care provided to Medicare beneficiaries, thereby threatening rural hospital financial viability. As a result, rural hospital closures have increased over the past few decades (although closures declined in 2021

because of COVID funding),[126] and more are at risk for closure. In response, Congress and CMS have passed and implemented programs designed to increase Medicare payment to certain rural hospitals, exempt others from budget cuts, slow the rate of hospital closure, and ultimately facilitate health care access for rural Medicare beneficiaries. CMS and CMMI are also testing various payment and delivery system innovations that consider unique rural hospital and community contexts.

Small, low-volume hospitals are financially challenged by PPS in part because of relatively fewer patients over which to spread fixed costs.[15] Under the original Inpatient PPS, payments to rural hospitals were lower (relative to costs) than payments to urban hospitals, straining rural hospital profitability. Furthermore, the shift to Outpatient PPS financially stressed many rural hospitals where outpatient care revenue markedly exceeds inpatient revenue.[127] Payment policy changes that disproportionately reduce rural hospital payments may negatively affect rural hospital financial viability and access to essential local health care services.[48, 70]

Multiple policies have been designed to reduce rural hospital financial distress, but with varying levels of success. CAHs receive CBR, but by definition CBR is not profitable. Alternative payment model experiments, such as the TCOC Model in Maryland[106] and the PARHM,[108] may benefit rural hospitals in the near term because revenues do not decrease when service volumes decrease. However, rural hospitals that experience higher costs or increased service volumes due to circumstances beyond their control (including inaccurately set global budgets) may be negatively impacted if revenues are not adjusted to cover additional costs.[15] Many rural hospitals remain operational only because they receive significant supplemental funding from grants or local taxes, but such revenue is not guaranteed. Finally, CMS has developed several value-based payment initiatives aimed at care delivery reform.[104] However, many rural hospitals are exempt from participation due to payment methodology (such as CBR for CAHs), while others are unable to participate due to low patient volumes, geographic isolation, and inadequate technology.[128] Therefore, opportunities to take advantage of new value-based payment initiatives may be limited in rural hospitals compared to urban hospitals.

## **Conclusion**

Understanding the legacies of past rural hospital payment systems and the consequences of current rural hospital payment systems is important as future payment innovations are designed. A comprehensive review of the rural hospital-payment landscape enables policymakers, researchers, and other interested parties to transform current payment systems so as to sustain essential rural health care services. Future rural hospital payment systems should ensure continuous opportunities for rural hospitals to remain relevant and viable in their communities and reward rural hospitals for providing high-quality health care services. Furthermore, future rural hospital payment systems should remain flexible with regard to the



ever-changing context in which rural hospitals operate, rather than adapting to payment systems based on urban experiences and capacities.

## References

1. Cecil G. Sheps Center for Health Services Research. *Rural Hospital Closures*. 2021; Available from: <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>.
2. United States Government Accountability Office. *Rural Hospital Closures - Number and Characteristics of Affected Hospitals and Contributing Factors*. 2018; Available from: <https://www.gao.gov/assets/gao-18-634.pdf>.
3. Moscovice, I. and J. Stensland, *Rural Hospitals: Trends, Challenges, and a Future Research and Policy Analysis Agenda*. The Journal of Rural Health, 2002. **18**(5): p. 197-210.
4. McBride, T.D. and K.J. Mueller, *Effect of Medicare Payment on Rural Health Care Systems*. The Journal of Rural Health, 2002. **18**(5): p. 147-163.
5. Office of Evaluations and Inspections. *Medicare Hospital Prospective Payment System: How DRG Rates Are Calculated and Updated*. 2001; Available from: <https://oig.hhs.gov/oei/reports/oei-09-00-00200.pdf>.
6. Government Accountability Office. *Medicare - Legislative Modifications Have Resulted in Payment Adjustments for Most Hospitals*. 2013; Available from: <https://www.gao.gov/assets/gao-13-334.pdf>.
7. Mayes, R., *The Origins, Development, and Passage of Medicare's Revolutionary Prospective Payment System*. Journal of the History of Medicine and Allied Sciences, 2006. **62**(1): p. 21-55.
8. Congressional Budget Office. *Rural Hospitals and Medicare's Prospective Payment System*. 1991 [cited 1991; Available from: <https://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/76xx/doc7653/91-cbo-037.pdf>.
9. United States Government Accountability Office. *Rural Hospital Closures - Affected Residents Had Reduced Access to Health Care Services 2020*; Available from: <https://www.gao.gov/assets/gao-21-93.pdf>.
10. Doeksen, G.A., St.Clair, C. F., Eilrich, F. C. *Economic Impact of Rural Health Care*. 2016; Available from: <http://ruralhealthworks.org/wp-content/uploads/2018/04/Summary-Economic-Impact-Rural-Health-FINAL-100716.pdf>.
11. Wishner, J., Solleveld, P., Rudowitz, R., Paradise, J., Antonisse, L. *A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies*. 2016; Available from: <https://files.kff.org/attachment/issue-brief-a-look-at-rural-hospital-closures-and-implications-for-access-to-care>.
12. Statista. *Size of the urban and rural population of the United States from 1960 to 2020*. Available from: <https://www.statista.com/statistics/985183/size-urban-rural-population-us/>.
13. Department of Health and Human Services. *Prospective Payment System for Hospital Outpatient Services (Final rule with comments)*. 2000 [cited 65 68]; 18501]. Available from: <https://www.govinfo.gov/content/pkg/FR-2000-04-07/pdf/00-8215.pdf#page=110>.
14. United States General Accounting Office. *Rural Hospitals - Factors That Affect Risk of Closure*. 1990; Available from: <https://www.gao.gov/assets/hrd-90-134.pdf>.
15. Miller, H.D. *Saving Rural Hospitals and Sustaining Rural Healthcare*. 2020; Available from: [https://www.chqpr.org/downloads/Saving\\_Rural\\_Hospitals.pdf](https://www.chqpr.org/downloads/Saving_Rural_Hospitals.pdf).
16. Smith, A.S., Trevelyan, E., *The Older Population in Rural America: 2012-2016*, in *American Community Survey Reports*. 2019, United States Census Bureau: Washington, DC.
17. Mueller, K.J., Alfero, C., Coburn, A. F. et al. *Taking Stock: Policy Opportunities for Advancing Rural Health*. 2018; Available from: <https://rupri.org/wp-content/uploads/20180103-TAKING-STOCK-2018.pdf>.

18. National Conference of Statute Legislature. *Improving Rural Health: State Policy Options for Increasing Access to Care*. Available from: <https://www.ncsl.org/research/health/improving-rural-health-state-policy-options-for-increasing-access-to-care.aspx>.
19. National Rural Health Resource Center. *Small Rural Hospital and Clinic Finance 101*. 2018; Available from: <https://www.ruralcenter.org/sites/default/files/Small%20Rural%20Hospital%20and%20Clinic%20Finance%20101.pdf>.
20. Center for Healthcare Quality and Payment Reform. *Saving Rural Hospitals*. Available from: [https://ruralhospitals.chqpr.org/Cost-Based\\_Payment.html](https://ruralhospitals.chqpr.org/Cost-Based_Payment.html).
21. NORC Walsh Center for Rural Health Analysis. *Critical Access Hospitals' Experiences with Medicare Advantage Plans*. 2008; Available from: <https://www.norc.org/PDFs/Walsh%20Center/Main%20Page/CAHExperienceswithMAPPlans.pdf>.
22. Lindrooth, R.C., et al., *Understanding The Relationship Between Medicaid Expansions And Hospital Closures*. *Health Affairs*, 2018. **37**(1): p. 111-120.
23. Lewis, C., Paxton, I., and Zephyrin, L. *The Rural Maternity Care Crisis*. 2019; Available from: <https://www.commonwealthfund.org/blog/2019/rural-maternity-care-crisis#:~:text=First%2C%20hospitals%20are%20closing%20at,rural%20counties%20with%20such%20units>.
24. Kozhimannil, K.B., et al., *Local Capacity for Emergency Births in Rural Hospitals Without Obstetrics Services*. *The Journal of Rural Health*, 2021. **37**(2): p. 385-393.
25. Hung, P., et al., *Why Are Obstetric Units in Rural Hospitals Closing Their Doors?* *Health Services Research*, 2016. **51**(4): p. 1546-1560.
26. Weisgrau, S., *Issues in rural health: access, hospitals, and reform*. *Health care financing review*, 1995. **17**(1): p. 1-14.
27. Medicare Payment Advisory Commission. *Report to the Congress: Medicare and the Health Care Delivery System*. 2021; Available from: <https://www.medpac.gov/document/june-2021-report-to-the-congress-medicare-and-the-health-care-delivery-system/>.
28. Scotti, S. *Tackling Rural Hospital Closures*. 2017; Available from: <https://www.ncsl.org/research/health/tackling-rural-hospital-closures.aspx>.
29. WWAMI Rural Health Research Center. *Supply and Distribution of the Primary Care Workforce in Rural America: 2019*. 2020; Available from: [https://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2020/06/RHRC\\_PB167\\_Larson.pdf](https://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2020/06/RHRC_PB167_Larson.pdf).
30. Germack, H.D., R. Kandrack, and G.R. Martsolf, *When Rural Hospitals Close, The Physician Workforce Goes*. *Health Aff (Millwood)*, 2019. **38**(12): p. 2086-2094.
31. Kaufman, B.G., et al., *The Rising Rate of Rural Hospital Closures*. *The Journal of Rural Health*, 2016. **32**(1): p. 35-43.
32. Centers for Medicare & Medicaid Services. *Conditions for Coverage & Conditions of Participation*. Available from: <https://www.cms.gov/Regulations-and-Guidance/Legislation/CFCsAndCoPs/Hospitals>.
33. Centers for Medicare & Medicaid Services. *Medicare and Medicaid Programs; Reform of Hospital and Critical Access Hospital Conditions of Participation*. 2012 [cited 2012; 77 Fed. Reg. No. 95, Pg 29035]. Available from: <https://www.cms.gov/regulations-and-guidance/legislation/cfcsandcops/downloads/cms-3244-f.pdf>.
34. Weiner, S.M., *Reasonable Cost Reimbursement for Inpatient Hospital Services under Medicare and Medicaid: The Emergence of Public Control*. *American Journal of Law and Medicine*, 1977. **3**(1): p. 1-48.

35. Catlin, A.C., Cowan, C. A. *History of Health Spending in the United States, 1960-2013*. 2015; Available from: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/HistoricalNHEPaper.pdf>.
36. Coulam, R.F. and G.L. Gaumer, *Medicare's prospective payment system: A critical appraisal*. Health care financing review, 1992. **1991**(Suppl): p. 45-77.
37. Rizzo, J.A., *Has Medicare Been a 'Bad Deal' for Rural Hospitals?* The Journal of Rural Health, 1991. **7**(5): p. 599-617.
38. O'Dougherty, S.M., et al., *Medicare prospective payment without separate urban and rural rates*. Health care financing review, 1992. **14**(2): p. 31-47.
39. Altman, S.H., *The Lessons Of Medicare's Prospective Payment System Show That The Bundled Payment Program Faces Challenges*. Health Affairs, 2012. **31**(9): p. 1923-1930.
40. Swendiman, K.S. *Medicare Provisions in the Balanced Budget Act of 1997 (BBA 97, P.L. 105-33) 1997*; Available from: [https://greenbook-waysandmeans.house.gov/sites/greenbook.waysandmeans.house.gov/files/2012/l97-802\\_gb%202012%20%282%29.pdf](https://greenbook-waysandmeans.house.gov/sites/greenbook.waysandmeans.house.gov/files/2012/l97-802_gb%202012%20%282%29.pdf).
41. Wright, G., Felt, S., Wellever, A., Lake, T., and Sweetland, S., *Limited Service Hospital Pioneers: Challenges and Successes of the Essential Access Community Hospital/Rural Primary Care Hospital Program and Medical Assistance Facility Demonstration*. 1995, Health Care Financing Administration. Mathematica Policy Research, Inc.: Baltimore, MD. Washing, DC.
42. *Balanced Budget Act of 1997*. 1997.
43. National Rural Health Resource Center. *Flex Program*. Available from: <https://www.ruralcenter.org/tasc/flex>.
44. Rural Health Information Hub. *Critical Access Hospitals (CAHs)*. Available from: <https://www.ruralhealthinfo.org/topics/critical-access-hospitals>.
45. American Hospital Association. *Fast Facts on U.S. Hospitals, 2021*. Available from: <https://www.aha.org/statistics/fast-facts-us-hospitals>.
46. Government Accountability Office. *Information on Medicare-Dependent Hospitals*. 2020; Available from: <https://www.gao.gov/assets/gao-20-300.pdf>.
47. American Hospital Association. *Critical Access Hospitals: Legislative and Regulatory History*. Available from: <https://www.aha.org/2006-02-27-critical-access-hospitals>.
48. Stensland, J., Moscovice, I., and Christianson, J., *Future Financial Viability of Rural Hospitals*. Health Care Financing Review, 2002. **23**(4): p. 175-188.
49. Tilson, S., Morgan, P.C., Chaikind, H. *Overview of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003*. 2004 [cited RL31966; Available from: [https://greenbook-waysandmeans.house.gov/sites/greenbook.waysandmeans.house.gov/files/2012/documents/RL31966%20v3\\_gb.pdf](https://greenbook-waysandmeans.house.gov/sites/greenbook.waysandmeans.house.gov/files/2012/documents/RL31966%20v3_gb.pdf).
50. Centers for Medicare & Medicaid Services. *Evaluation of the Rural Community Hospital Demonstration Report Covering 2005 – 2017 (Interim Report 1)*. 2021; Available from: <https://innovation.cms.gov/data-and-reports/2021/rchd-1st-interim-report>.
51. Medicare Payment Advisory Commission. *Report to Congress: Rural Payment Provisions in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003*. 2006; Available from: [https://www.medpac.gov/wp-content/uploads/import\\_data/scrape\\_files/docs/default-source/reports/Dec06\\_Rural\\_hospital\\_mandated\\_report.pdf](https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/reports/Dec06_Rural_hospital_mandated_report.pdf).
52. Government Accountability Office. *Drug Discount Program: Characteristics of Hospitals Participating and Not Participating in the 340B Program*. 2018; Available from: <https://www.gao.gov/assets/gao-18-521r.pdf>.

53. U.S. Department of Health and Human Services. *Report to Congress: Demonstration Project on Community Health Integration Models in Certain Rural Counties*. Available from: <https://www.hrsa.gov/sites/default/files/hrsa/ruralhealth/reports/fchip-report-2020.pdf>.
54. Davis, P.A., Hahn, J., Morgan, P. C., Stone, J., and Tilson, S., *Medicare Provisions in the Patient Protection and Affordable Care Act (PPACA): Summary and Timeline*. 2011, Congressional Research Service: Washington, DC.
55. National Rural Health Association. *Rural Emergency Hospital (REH) Model Summary*. 2021; Available from: [https://www.ruralhealth.us/NRHA/media/Emerge\\_NRHA/Advocacy/Government%20affairs/2021/04-15-21-NRHA-Rural-Emergency-Hospital-overview.pdf](https://www.ruralhealth.us/NRHA/media/Emerge_NRHA/Advocacy/Government%20affairs/2021/04-15-21-NRHA-Rural-Emergency-Hospital-overview.pdf).
56. Pink, G.H., Howard, A. *Types of Rural and Urban Hospitals and Counties Where They Are Located* 2022; Available from: <https://www.shepscenter.unc.edu/product/types-of-rural-and-urban-hospitals-and-counties-where-they-are-located/>.
57. Freiman, M.P. and J. Cromwell, *Reimbursement of sole community hospitals under Medicare's prospective payment system*. Health care financing review, 1987. 9(2): p. 39-54.
58. Villagrana, M.A. *Medicare Payment for Rural or Geographically Isolated Hospitals*. 2022; Available from: <https://crsreports.congress.gov/product/pdf/IG/IG10023>.
59. Medicare Payment Advisory Commission. *Hospital Acute Inpatient Services Payment system*. Payment Basics 2021; Available from: [https://www.medpac.gov/wp-content/uploads/2021/11/medpac\\_payment\\_basics\\_21\\_hospital\\_final\\_sec.pdf](https://www.medpac.gov/wp-content/uploads/2021/11/medpac_payment_basics_21_hospital_final_sec.pdf).
60. Federal Register. *Payment Adjustment for Low-Volume Hospitals*. 2021 [cited 86 154]; 45219-45220]. Available from: <https://www.govinfo.gov/content/pkg/FR-2021-08-13/pdf/2021-16519.pdf>.
61. 42 CFR 412.96, *Special treatment: Referral Centers*.
62. Cecil G. Sheps Center for Health Services Research. *List of hospitals in the U.S.* 2021; Available from: <https://www.shepscenter.unc.edu/programs-projects/rural-health/list-of-hospitals-in-the-u-s/>.
63. Center for Medicare & Medicaid Services. *Critical Access Hospitals (CAHs): Distance from Other Providers and Relocation of CAHs with a Necessary Provider Designation* 2007; Available from: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/downloads/SCLetter07-35.pdf>.
64. Medicare Payment Advisory Commission. *Critical Access Hospital Payment System*. MEDPAC Payment Basics 2020; Available from: [https://www.medpac.gov/wp-content/uploads/2021/11/medpac\\_payment\\_basics\\_21\\_cah\\_final\\_sec.pdf](https://www.medpac.gov/wp-content/uploads/2021/11/medpac_payment_basics_21_cah_final_sec.pdf).
65. Centers for Medicare & Medicaid Services. *Critical Access Hospital*. 2022 [cited 2022; Available from: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/CritAccessHospfctsh.pdf>.
66. *The Consolidated Appropriations Act of 2021*. 2020.
67. Medicare Learning Network Education Tool. *Medicare Payment Systems - Acute Care Hospital Inpatient Prospective Payment System*. Available from: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/html/medicare-payment-systems.html#Acute>.
68. Centers for Medicare & Medicaid Services. *Risk Adjustment*. 2021 [cited 2021; Available from: <https://www.cms.gov/files/document/report-congress-risk-adjustment-medicare-advantage-december-2021.pdf>.
69. Centers for Medicare & Medicaid Services, *Marketplace Open Enrollment Period Public Use Files*, CMS, Editor. 2016-2020: Baltimore, MD.

70. Sutton, J.P., Schur, C., and Merrell, K., *ALTERNATIVES TO THE OUTPATIENT PROSPECTIVE PAYMENT SYSTEM: ASSESSING THE IMPACT ON RURAL HOSPITALS*. 2010, NORC Walsh Center for Rural Health Analysis. Rural Health Research and Policy Centers.: Bethesda, MD.
71. Medicare Payment Advisory Commission. *Outpatient Hospital Services Payment System*. 2020; Available from: [https://www.medpac.gov/wp-content/uploads/2021/11/medpac\\_payment\\_basics\\_21\\_opd\\_final\\_sec.pdf](https://www.medpac.gov/wp-content/uploads/2021/11/medpac_payment_basics_21_opd_final_sec.pdf).
72. Campion, D.M. and D.F. Dickey, *Lessons from the Essential Access Community Hospital Program for Rural Health Network Development*. The Journal of Rural Health, 1995. **11**(1): p. 32-39.
73. Centers for Medicare & Medicaid Services. *2% Payment Adjustment (Sequestration) Changes*. 2021; Available from: [https://www.cms.gov/outreach-and-education/outreachffsprovpartprogprovider-partnership-email-archive/2021-12-16-mlnc#\\_Toc90391082](https://www.cms.gov/outreach-and-education/outreachffsprovpartprogprovider-partnership-email-archive/2021-12-16-mlnc#_Toc90391082).
74. Alliance for Rural Hospital Access. *What is an MDH?* 2021; Available from: <https://www.ruralhospitalcoalition.com/what-is-an-mdh>.
75. Medicaid and CHIP Payment and Access Commission. *Disproportionate share hospital payments*. 2022; Available from: [https://www.macpac.gov/subtopic/disproportionate-share-hospital-payments/#:~:text=Medicaid%20disproportionate%20share%20hospital%20\(DSH,stability%20of%20safety%2Dnet%20hospitals](https://www.macpac.gov/subtopic/disproportionate-share-hospital-payments/#:~:text=Medicaid%20disproportionate%20share%20hospital%20(DSH,stability%20of%20safety%2Dnet%20hospitals).
76. Limitation on prices of drugs purchased by covered entities. 42 U.S. Code § 256b.
77. Desai, S.M. and J.M. McWilliams, *340B Drug Pricing Program and hospital provision of uncompensated care*. Am J Manag Care, 2021. **27**(10): p. 432-437.
78. Health Resources & Services Administration. *340B Eligibility*. Available from: <https://www.hrsa.gov/opa/eligibility-and-registration>.
79. Centers for Medicare & Medicaid Services. *Disproportionate Share Hospital (DSH)*. 2022; Available from: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcutelInpatientPPS/dsh>.
80. Schur, C., Cheung, K., Radford, A., Slifkin, R., Baernholdt, M. *340B Drug Pricing Program Results of a Survey of Participating Hospitals*. 2007; Available from: [https://www.norc.org/PDFs/Publications/340BReport\\_May2007.pdf](https://www.norc.org/PDFs/Publications/340BReport_May2007.pdf).
81. Radford, A., Slifkin, R., Baernholdt, M., Schur, M., Cheung, K. *340B Drug Pricing Program Results of a Survey of Eligible but Non-Participating Rural Hospitals*. Available from: [https://www.norc.org/PDFs/Walsh%20Center/Links%20Out/WalshCtr2007\\_WP88.pdf](https://www.norc.org/PDFs/Walsh%20Center/Links%20Out/WalshCtr2007_WP88.pdf).
82. Weigel, R., Ullrich, F., Mueller, K. J. *Impact of the Medicare Disproportionate Share Hospital Payment Cap on Rural and Urban Hospitals*. 2019; Available from: <https://rupri.public-health.uiowa.edu/publications/policybriefs/2019/Medicare%20DSH%20Cap%20Impact.pdf>.
83. Tribble, S.J., Featherson, E. *As Big Pharma and Hospitals Battle Over Drug Discounts, Patients Miss Out on Millions in Benefits*. 2021; Available from: <https://khn.org/news/article/340b-big-pharma-hospitals-battle-over-drug-discounts-patients-miss-out-on-millions-in-benefits/>.
84. Gillard, A., Shelby, D., White, K. *Utilization of the 340B Drug Pricing Program in Rural Practices Policy Paper*. 2019; Available from: [https://www.ruralhealth.us/NRHA/media/Emerge\\_NRHA/Advocacy/Policy%20documents/2019-NRHA-Policy-Paper-Utilization-of-the-340B-Drug-Pricing-Program-in-Rural-Practices.pdf](https://www.ruralhealth.us/NRHA/media/Emerge_NRHA/Advocacy/Policy%20documents/2019-NRHA-Policy-Paper-Utilization-of-the-340B-Drug-Pricing-Program-in-Rural-Practices.pdf).
85. 340B Health. *2020 340B Health Annual Survey: 340B Hospitals Use Savings to Provide Services and Improve Outcomes for Low-Income and Rural Patients*. 2020; Available from: [https://www.340bhealth.org/files/340B\\_Health\\_Survey\\_Report\\_2020\\_FINAL.pdf](https://www.340bhealth.org/files/340B_Health_Survey_Report_2020_FINAL.pdf).
86. National Association of Community Health Centers. *340B: A Critical Program for Health Centers*. 2022; Available from: [https://www.nachc.org/wp-content/uploads/2022/06/NACHC-340B-Health-Center-Report\\_-June-2022-.pdf](https://www.nachc.org/wp-content/uploads/2022/06/NACHC-340B-Health-Center-Report_-June-2022-.pdf).

87. Mueller, K.J. *The Patient Protection and Affordable Care Act: A Summary of Provisions Important to Rural Health Care Delivery*. 2010; Available from: [https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/07/s\\_mdfis02c02.pdf](https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/07/s_mdfis02c02.pdf).
88. DeLeire, T., Joynt, K., McDonald, R. *Impact Of Insurance Expansion On Hospital Uncompensated Care Costs In 2014*. 2014; Available from: [https://aspe.hhs.gov/sites/default/files/migrated\\_legacy\\_files/44411/ib\\_UncompensatedCare.pdf](https://aspe.hhs.gov/sites/default/files/migrated_legacy_files/44411/ib_UncompensatedCare.pdf).
89. Thompson, K., Reiter, K., Whitaker, R., Thomas, S. *Does ACA Insurance Coverage Expansion Improve the Financial Performance of Rural Hospitals?* 2016; Available from: [https://www.shepscenter.unc.edu/wp-content/uploads/dlm\\_uploads/2016/04/Effects-of-ACA-on-Uncompensated-Care-1.pdf](https://www.shepscenter.unc.edu/wp-content/uploads/dlm_uploads/2016/04/Effects-of-ACA-on-Uncompensated-Care-1.pdf).
90. Kaufman, B.G., et al., *Medicaid Expansion Affects Rural And Urban Hospitals Differently*. Health Affairs, 2016. **35**(9): p. 1665-1672.
91. Nikpay, S., *The medicaid windfall: Medicaid expansions and the target efficiency of hospital safety-net subsidies*. Journal of Public Economics, 2022. **208**: p. 104583.
92. Medicare Payment Advisory Commission. *Medicare Payment Advisory Commission Releases Report on Medicare and the Health Care Delivery System*. 2021; Available from: [https://www.medpac.gov/wp-content/uploads/import\\_data/scrape\\_files/docs/default-source/press-releases/june-2021-medpac-report-press-release-final.pdf](https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/press-releases/june-2021-medpac-report-press-release-final.pdf).
93. Congressional Research Service. *Medicare Graduate Medical Education Payments: An Overview*. 2019 [cited 2019; Available from: <https://sgp.fas.org/crs/misc/IF10960.pdf>.
94. Centers for Medicare and Medicaid Services. *Fiscal Year 2021 Hospital Inpatient Quality Reporting Program Guide*. 2021; Available from: [https://www.qualityreportingcenter.com/globalassets/iqr\\_resources/june-2019/hospital-iqr-fy-2021-program-guide-june-2019\\_vfinal508.pdf](https://www.qualityreportingcenter.com/globalassets/iqr_resources/june-2019/hospital-iqr-fy-2021-program-guide-june-2019_vfinal508.pdf).
95. Health Resources & Services Administration. *Medicare Beneficiary Quality Improvement Project*. Available from: <https://www.hrsa.gov/rural-health/rural-hospitals/mbqip>.
96. Rural Health Information Hub. *Rural Healthcare Quality*. Available from: <https://www.ruralhealthinfo.org/topics/health-care-quality#medicare-reporting>.
97. Centers for Medicare & Medicaid Services. *Promoting Interoperability Programs*. Available from: <https://www.cms.gov/regulations-guidance/promoting-interoperability/2021-program-requirements>.
98. Agarwal, R., et al., *Comparing Medicare Advantage And Traditional Medicare: A Systematic Review*. Health Affairs, 2021. **40**(6): p. 937-944.
99. Medicare Payment Advisory Commission. *Realizing the promise of value-based payment in Medicare: An agenda for change*. 2020; Available from: [https://www.medpac.gov/wp-content/uploads/import\\_data/scrape\\_files/docs/default-source/reports/jun20\\_ch1\\_reporttocongress\\_sec.pdf](https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/reports/jun20_ch1_reporttocongress_sec.pdf).
100. Crook, H.L., Saunders, R. S., Roiland, R., Higgins, A., McClellan, M. B., *A Decade of Value-Based Payment: Lessons Learned And Implications For The Center For Medicare And Medicaid Innovation, Part 1*. 2021, Health Affairs Blog.
101. Jain, S.H. and W.H. Shrank, *The CMS Innovation Center: Delivering on the Promise of Payment and Delivery Reform*. Journal of General Internal Medicine, 2014. **29**(9): p. 1221-1223.
102. Roberts, E.T., et al., *Changes In Hospital Utilization Three Years In to Maryland's Global Budget Program For Rural Hospitals*. Health Affairs, 2018. **37**(4): p. 644-653.
103. Machta, R., Peterson, G., Rotter, J., Stewart, K., Heitkamp, S., Platt, I., et al., *Evaluation of the Maryland Total Cost of Care Model: Implementation Report*. 2021, U.S. Department of Health and Human Services. Centers for Medicare & Medicaid Services. Mathematica.: Washington, DC.

104. Centers for Medicare and Medicaid Services. *Innovation Models*. Available from: <https://innovation.cms.gov/innovation-models#views=models>.
105. Rural Health Value. *State Innovation Model Testing Awards From the Center for Medicare & Medicaid Innovation: Highlighting Rural Focus*. 2017; Available from: <https://ruralhealthvalue.public-health.uiowa.edu/files/RHV-SIM-Profiles.pdf>.
106. Center for Medicare and Medicaid Services. *Maryland Total Cost of Care Model*. Available from: <https://innovation.cms.gov/innovation-models/md-tccm>.
107. NORC, *The Pennsylvania Rural Health Model (PARHM) First Annual Report*. 2021, Center for Medicare & Medicaid Innovation .NORC at the University of Chicago.
108. Center for Medicare and Medicaid Services (CMS). *Pennsylvania Rural Health Model*. Available from: <https://innovation.cms.gov/innovation-models/pa-rural-health-model>.
109. Center for Medicare & Medicaid Services. *Frontier Community Health Integration Project Demonstration*. Available from: <https://innovation.cms.gov/innovation-models/frontier-community-health-integration-project-demonstration>.
110. Romaine, M., Rutledge, R., Haque, S., Moore, P., Banger, A., DeStefano, S., *Frontier Community Health Integration Project (FCHIP) Demonstration Evaluation*. 2020, Centers for Medicare and Medicaid Services. Center for Medicare and Medicaid Innovation. RTI International.: Research Triangle Park, NC.
111. HolyCross Medical Center. *Facts about the 2020 Mill Levy*. 2020; Available from: <https://holycrossmedicalcenter.org/general/facts-about-the-2020-mill-levy/>.
112. Internal Revenue Service. *Charitable Contributions*. 2020 [cited Publication 526 Cat. No. 15050A]; Available from: <https://www.irs.gov/pub/irs-pdf/p526.pdf>.
113. Duke Health. *How Endowments Work*. Available from: <https://giving.dukehealth.org/ways-to-give/endowment-giving/how-endowments-work>.
114. Apenteng, B.A., et al., *Assessment of the Financial Health of Rural Hospitals After Implementation of the Georgia Rural Hospital Tax Credit Program*. JAMA Network Open, 2021. **4**(7): p. e2117791.
115. Kaufman Hall & Associates Inc. *A Guide to Financing Strategies for Hospitals With Special Consideration for Smaller Hospitals*. 2010; Available from: <https://www.aha.org/system/files/2018-02/guide-financing-strategies-hospitals-special-consideration-smaller-hospitals-2010.pdf>.
116. Rural Health Information Hub. *Capital Funding for Rural Healthcare*. Available from: <https://www.ruralhealthinfo.org/topics/capital-funding#low-interest>.
117. Council of Development Finance Agencies and Bank of New York Mellon, *Development Finance Webcasr Series*, in *Financing Rural Healthcare*.
118. Internal Revenue Service. *Investment Income and Expenses*. 2020 [Publication 550]; Available from: <https://www.irs.gov/publications/p550>.
119. Juniper Advisory. *Analysis: Hospitals Buoyed by Tenuous Investment Income*. Maximizing Value in Healthcare Mergers and Acquisitions 2018; Available from: <https://www.juniperadvisory.com/wp-content/uploads/2018/12/Reliance-on-Investment-Income.pdf>.
120. Centers for Medicare & Medicaid Services. *National Health Expenditure Data - Historical*. Available from: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>.
121. Bruch, J., S. Gondi, and Z. Song, *COVID-19 and Private Equity Investment in Health Care Delivery*. JAMA Health Forum, 2021. **2**(3): p. e210182.
122. Morgenson, G., and Saliba, E. *Private equity firms now control many hospitals, ERs and nursing homes. Is it good for health care?* 2020; Available from:



- <https://www.nbcnews.com/health/health-care/private-equity-firms-now-control-many-hospitals-ers-nursing-homes-n1203161>.
123. Mountainview Medical Center. *The History of Our Rural Hospital in Meagher County, Montana*. Available from: <https://www.mvmc.org/about-us/>.
  124. Business News Daily. *What is Venture Capital?* ; Available from: <https://www.businessnewsdaily.com/4252-venture-capital.html>.
  125. State of Wisconsin. *Budget in Brief*. 2021; Available from: <https://doa.wi.gov/budget/SBO/2021-23%20Budget%20in%20Brief.pdf>.
  126. Pink, G.H., and Holmes, M. G. *Rural Hospital Closures and an Overview of the Rural Emergency Hospital (REH)*. 2022; Available from: [https://www.ncleg.gov/documentsites/committees/BCCI-6770/Meetings/2022.02.18/Item%206%20-%20Rural%20Hospitals\\_G%20Pink\\_2-18-2022.pdf](https://www.ncleg.gov/documentsites/committees/BCCI-6770/Meetings/2022.02.18/Item%206%20-%20Rural%20Hospitals_G%20Pink_2-18-2022.pdf).
  127. Sana, P., Pink, G. H. *Medicare Covers a Lower Percentage of Outpatient Costs in Hospitals Located in Rural Areas* 2021; Available from: <https://www.ruralhealthresearch.org/publications/1451>.
  128. Joynt, K.E., Nguyen, N., Samson, L. W., Snyder, J. E., Lechner, A., Ogunwumiju, O. *Rural Hospital Participation and Performance in Value-Based Purchasing and Other Delivery System Reform Initiatives*. 2016; Available from: [https://aspe.hhs.gov/sites/default/files/migrated\\_legacy\\_files//156066/RuralHospitalsDSR.pdf](https://aspe.hhs.gov/sites/default/files/migrated_legacy_files//156066/RuralHospitalsDSR.pdf).